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THE NEW YORK MEDICAL JOURNAL

A WEEKLY REVIEW OF MEDICINE

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Original Communications.

OBSERVATIONS ON LATERAL CURVATURE OF THE SPINE; PATHOLOGICAL, CLINICAL, MECHANICAL.*

By A. M. PHELPS, M. D.,
NEW YORK.

LATERAL curvature of the spine rises before us each year like a spectre. From every clinic in every country the orthopædic surgeon is deluging societies and medical journals with literature upon the subject. It is interesting to note that, from the earliest records we can find upon the subject down to the present time, the positive position taken by the author is only to be retreated from a year or two later. Then, again, we find in each quarter or half of a century the revival of ideas of the past, which ideas at the time they were published were considered absolutely correct, but after a very short time were relegated to the obscurity which they so justly deserved; only to be revived again by some enthusiastic orthopædic surgeon. Nearly all of the mechanical work, and part of the mechanical methods of support and gymnastics, advocated in this association at the present time are only revivals of ideas which have run the gauntlet in centuries past. They have been tried, found wanting, and discredited, only to be revived again in a later century. I have visited the principal clinics of Europe and this country. I have spent a great deal of time with the various authors. I have found that they all agree and all differ. They all say that they cure these cases, but, upon close investigation, I have yet to see the first case of lateral curvature of the spine, in which bone change had taken place, cured by any plan of treatment known to the scientific world. In these observations I find opinions varying all the way from those who advocate nothing but gymnastics; those who believe in gymnastics and mechanical treatment, to those who believe in mechanical treatment alone. All report equally good results, but I note in most of the writings that the following statement is to be found: "The results were entirely satisfactory." I have often asked myself the question: "To whom?"

Now, here we stand with this problem confronting us —unsolved, treated in an empiric manner, running the same gauntlet of discussion and dispute as did congenital dislocation of the hip and causes of deformity in hip-joint disease.

It is this panorama which has appeared before us that has led me to present to you to-day the result of my observations in this peculiarly obscure deformity. Its cause is obscure, its pathology has been even more so, and its treatment in many instances even worse. I had firmly come to the conclusion that if we ever expected to arrive at a conclusion as regarded the ætiology, pathology, and treatment of lateral curvature of the spine it had to be done with the scalpel. I am frank to state to you that the work which I have done with my assistants in the past two years has amounted to but very little; still, it is something. It is along the lines which should be followed, in my opinion, and which will eventually lead to a solution of this problem.

It is extremely difficult to get subjects of lateral curvature of the spine for dissection, and until a great number have been dissected whose history is well known we shall never advance in our work in lateral curvature of the spine.

FIG. 1.

I desire to-day to give you the work which, with the assistance of my staff at the Post-graduate Medical School and Hospital, we have performed. It is simply preliminary, and should be received for what it is worth, and no more.

Two years ago I secured a specimen of a severe form of lateral curvature of the spine from a patient who died in the workhouse from natural causes. He had been there for many years, and no one could ascertain what caused his deformity. It had been with him as long as he could remember. A few years before he died he was afflicted with chronic rheumatism which resulted in contraction of one of his limbs, but there was no considerable joint disease. This case was taken to the dissecting-room of the

* Read before the American Orthopædic Association, May 1, 2, and 3, 1900.

Post-Graduate, and there, with the assistance of Dr. Hendle, I dissected out the muscles of the back.

We found that the superficial layer of muscles, particularly the latissimus dorsi, trapezius, and the superficial layer of the erector spinæ muscles were in fairly good condition upon the side of concavity, but upon the side of convexity there was not only atrophy but marked degeneration of the muscle. Fig. 1 shows these muscles, and gives a very correct idea of what we found. The superficial group of erector spinæ muscles upon the side of convexity was entirely destroyed by atrophy and fatty degeneration, while those upon the side of concavity were not so much affected. These muscles were dissected away, exposing what remained of the deeper layer of muscle. We found that the quadratus lumborum and the erector spinæ group of muscles of the deeper layers were entirely destroyed by fatty degeneration and atrophy on the side of convexity. On the side of concavity the quadratus lumborum and the erector spinæ muscles, although somewhat degenerated, were not so far advanced as upon the side of convexity. This condition of the deeper layer of muscles was found all along the back to the seventh cervical vertebra—throughout the region of the spine affected by the double curves. Fig. 2 shows a dissection of what was left of the deeper layer of muscles. Nothing but aponeuroses and a few muscle fibres were found. The intercostal muscles on the side of concavity had also undergone fatty degeneration where the ribs were still apart, but on that side the ribs had approximated and even overlapped, destroying entirely the intercostal muscles, binding the ribs together with firm fibrous material—remains of the intercostal muscles. On the side of convexity, however, the intercostal muscles were found to be also degenerated from pressure on account of the ribs being widely separated. This constant pulling upon the intercostal muscles made pressure upon the muscle cells by the approximation of the myolemma, and resulted in atrophy almost if not complete destruction. The intervertebral cartilages upon the side of the convexity were entirely obliterated, the bodies of the vertebræ coming in contact one with the other. The transverse and articular processes were warped and twisted, the ligamentous connection between them being so shortened that dissection of them was practically impossible. Upon the convex side, however, the intervertebral cartilage was not totally destroyed. The transverse processes were widely separated and the articular facets on that side were slipped one by the other to a limited extent. The bodies of the vertebræ at the point of greatest curve upon the concave side were absorbed to one half, and in some instances to the entire thickness of the vertebra. The pressure at these points had been so great that new

FIG. 2.

FIG. 3.

bone had been thrown out to prevent further bending and absorption of the vertebræ. The muscles, or what was left of them, on the concave side of both curves were so shortened that it was an impossibility, with any force that we could apply, to make any perceptible effect upon the curves. It was not until after these fibrous bands, the remains of the muscles, were divided that any effect could be exerted. The thorax had already upon the right side (side of cavity) pressed upon the crest of the ilium as is seen in Fig. 3, bending the ribs upward, forcing them together, lapping one upon the other. The efforts at respiration to increase the capacity of the thoracic cavity had resulted in the bending of the ribs upward anteriorly, which gave space between them in front. Notwithstanding, on the concave side they were tied firmly together and overlapping, while upon the convex side they were widely separated, as is seen in Fig. 4. A side view, however, of the thorax shows the arching upward and bending downward of the lower ribs, produced by pressure upon the crest of the ilium (Figs. 5 and 6). The widely separated condition of these ribs is due to the convex curve of the vertebræ, as is seen in Fig. 5. The vertebra at each curve was rotated upon itself until the transverse processes pointed directly back, as is seen in Fig. 6, taking the normal position of the spinous processes. The bodies of the vertebræ and the spinous processes pointed transversely instead of anteroposteriorly.

Now, the conclusion at which we arrived from this specimen was this:

There had been no evidences of paralysis or brain disease in the case. Therefore, that factor was left out of the question. We found that the superficial group of muscles had acted upon the shoulders and trunk and moved the entire trunk *en masse*. The fatty degeneration and atrophy on the convex side were due to the pressure of the muscles by the bending of the bones of the spinal column, putting these groups of muscles on the stretch, whereas the degeneration and atrophy on the concave side were produced by the contraction of these muscles and their long disuse.

The entire trunk had telescoped together until the ribs rested upon the pelvis, which prevented any normal

Fig. 4.

Fig. 5.

motion of the vertebral column. The bending of the ribs, their overlapping and firmly binding together by the fibrous remains of the intercostal muscles upon the concave side; the atrophy and degeneration of the intercostal muscles upon the convex side between the widely separated ribs, resulting in atrophy, told us that it would be an impossibility to remedy this deformity without first widely separating the ribs upon the concave side, which might allow the curve to be straightened, provided the deformed verterbræ did not prevent.

Assuming the fact that the thorax was not deformed in any way; that the ribs upon the concave side were not

FIG. 6.

firmly bound together, and overlapping, by contracted intercostal muscles which had undergone degeneration, leaving only fibrous tissue, it would then be an impossibility to straighten the curve in any way on account of the destructive changes which had taken place in the vertebræ and intervertebral cartilages, changing the plans of the articular surface of the bodies of the vertebræ. No matter how slight, how little the change in the bones which had disturbed the equilibrium of the spinal column, thereby allowing the approximation of the ribs and shortening of the intercostal muscles upon that side, it would be an impossibility to straighten that curve until every rib had been detached from the other, and even then the spinal column would not stay in the perpendicular position, owing to the fact that the plane of the articular surfaces of the bodies of the vertebræ had been changed to an angle.

It was also observed that in proportion to the amount of curvature we found rotation, and that rotation took place in the direction of the curve, and in the lower curve that rotation had taken place until the vertebræ lay transversely to the body. The vertebræ being in this position, had undergone change by absorption until they were wedge-shaped and warped. No force on earth short of fracturing the spinal column could have in any way changed the position. Now, when lateral curvature of the spine, which is always accompanied by rotation, begins in the dorsal region, a corresponding change takes place in the shape of the ribs. When the change has once taken place, and bone has been destroyed by absorption, producing the curve, no means of which we know could in any way effect a restoration of the parts. It is a mechanical impossibility short of killing the patient.

These are the propositions and conclusions at which we arrived. We know perfectly well that in genu valgum associated with shortening of the external condyle, no bracing, however skilfully applied, can ever remedy that deformity. We also know that after the bones have once become thoroughly consolidated no amount of skilful bracing will cure the bow-leg. While this may be possible during the time that the bones are soft, after they have become once thoroughly consolidated it is a practical impossibility. These facts have led the profession to adopt osteotomy and osteoclasis in remedying these deformities.

We have in the spinal column a complicated column. Instead of a straight shaft of bone, like the femur articulating with its tibia, we have here a combination of bones articulating closely posteriorly and laterally, and then attached to these bones are the ribs, the levers running out on either side from the upper to the lower dorsal vertebræ. The spinal column bends, producing destruction of bone and intervertebral cartilage, and by pressure the ribs are distorted and overlapping, and the muscular elements between the ribs become changed by shortening, atrophy, and degeneration. So, how futile it must be to hope to cure a lateral curve of the spinal column! Not only do we find the resistance offered by the wedge-shaped bones of the vertebral column, but these distorted ribs must be rotated in order to cure the curve.

I leave this problem at this point, and hope at some future date to go on with the work in other cases. Now, the conclusions at which we arrived from these dissections correspond very closely to the clinical observations which we made.

As I remarked at the beginning, I never saw a lateral curve and rotation due to destruction of bone from pressure, with corresponding deformity of rib, removed from the spinal column by any method.

My observations have been made in my own clinic and private practice, and also in the various clinics of this country and Europe, and they are, that the most that we can hope for at the present time from treatment is to prevent (and that is not always possible) the increase of the curve, to remedy the physiological curve, and to give our patients, if possible, strength.

I visited Bernard Roth and spent some time with him in his work. I saw no different results in his work from what I saw in the work of many gentlemen in Europe and this country who advocate that nothing but gymnastics be used in these cases. None of his patients recovered. They grew stronger physically, but the curve remained. In the institution of Schilbaak, at Leipsic, where all sorts of gymnastics are used, and patients are placed in bed for hours each day after the gymnastic work, upon specially constructed beds, none are cured. In this country the gentlemen who have accepted the idea that gymnastics is all that is required in such cases tell me they do not cure their cases, that the most they can hope for is to give their patients strength and arrest the deformity and possibly improve the physiological curve. From the hands of some of these gentlemen many of their cases drift to my office and into my clinic. I find that those who come to me give the history of increased deformity. This leads me to believe that gymnastic treatment alone is one of the greatest fallacies that have ever been taught. So long as the patient is in the upright position the weight falls on the curves and produces further absorption of bone and distortion of the thorax. It is advocated by these gentlemen that gymnastics will strengthen the muscles and hold the spine erect. From this statement I must dissent, because the muscles do not hold the spine erect. The spine is held in the upright position on account of its anatomical construction and ligaments—the muscles balance. Muscles could not stand the strain of holding the spine in the upright position. If the arm is held at a right angle to the body it soon tires and cannot be retained in that position. The muscles of the arm are not different from those connected with the spinal column. Therefore, the idea that the training of muscles will straighten these subjects is erroneous and not proved; it does not even prevent them from growing worse if the deviation from the median line has amounted to more than one half the diameter of the vertebra. All that can be accomplished by gymnastics is upon the constitution of the patient.

Now, in regard to the various machines that have been devised in the past three hundred years, revived from time to time and presented to the profession, I can only say of them as I say of gymnastics: They can have no possible effect upon the curves and the rotations *per se*. The only possible good they can do is to assist in holding up the spine, but so long as the ribs are bound together by contracted intercostal muscles that force can be of but little avail. However, under an anæsthetic, force applied so strongly as to fall short of breaking the ribs might be of some use, provided the vertebral column was held in the corrected position after the force was applied.

This leads me to the consideration of the proper mechanical treatment of lateral curvature of the spine; and, believe me, gentlemen, it is all, or nearly so, a question of mechanics. Under an anæsthetic great force can be applied, so great that the patient could not possibly endure it without. While the patient is under the anæsthetic this tremendous force can be applied to the thorax and spine, either by machinery or by half a dozen hands, and any muscles or fascia which offer resistance can, under these circumstances, be divided with a knife. In this manner I have succeeded in taking a great portion of the curve out of the spinal column; but even with all this, I have never yet succeeded in straightening a curve in which bone change had taken place. After the operation the patients are enveloped in plaster of Paris, put to bed, and kept there for two or three weeks, after which the operation is repeated. This, it seems to me, is the only operation to be advocated in lateral curvature of the spine.

The specimens which I have dissected seem to demonstrate this, and clinical observation verifies it without a doubt. Then comes the question, What is to be done after the curve has been remedied so far as possible by great force under an anæsthetic and the muscles have been divided with the knife? When the patient is convalescing, there is no question in my mind but that the suspension of that patient and the application of a proper support should be the law. Inasmuch as the force of a support must exercise pressure varying from twenty-five to one hundred pounds, depending upon the size of the patient, it would stand to reason that the support which made pressure on the greatest possible surface of the body would be the one to choose. Steel braces could not be borne under these circumstances, and, in my opinion, should not be used. Therefore, any support which has for its object an anteroposterior action is scientifically wrong in any lateral condition, whether in lateral curvature or Pott's disease.

The mechanical support for lateral curvature of the spine should be as rigid as an oak, because it is dealing with a rigid spine. It should be light. It should be porous. It should be durable. The plaster-of-Paris corset comes the nearest to these requirements of any of the cheap dressings. Poroplastic felt, leather, raw hide, and paper do not fill these requirements, because they will change their shape under pressure and moisture. They should never be used for spinal supports. I have tried them all, and I know whereof I speak. I have seen patients shortening in the summer time in a single week. Celluloid is worse, because it will not hold its shape for forty-eight hours; and the wood corset is absolutely worthless. I advise the aluminum corset, which, to my mind, is the most perfect support ever devised. The patient can go in bathing without taking off the support.

Now, in regard to gymnastics. To change the form of the thorax, which will aid materially in somewhat alleviating the curves, breathing exercises which expand the chest, elevating the ribs, which applies a force direct to the spinal column, assist materially. Exercises should be performed while the corset is on. It is wrong to take it off. The physiological curve can be overcome only by constant support and muscular development, and the pathological lateral curve by preventing the patient from assuming the erect position without his corset. Light gymnastics are far preferable to heavy. Heavy gymnastics develop muscle, but no quicker or surer than light gymnastics. We can learn a very important lesson from the sporting world, where heavy gymnastics have been entirely discarded. Muscles developed by heavy gymnastics undergo rapid degeneration when the gymnastics are stopped.

I am sorry that this paper is incomplete. It has told but little. It has told something. It is the beginning of a work which I hope others will assist in. I have no doubt that if these lines are followed out for the next twenty-five years the problem of lateral curvature will be solved.

I offer the aluminum corset, Fig. 7, as a substitute

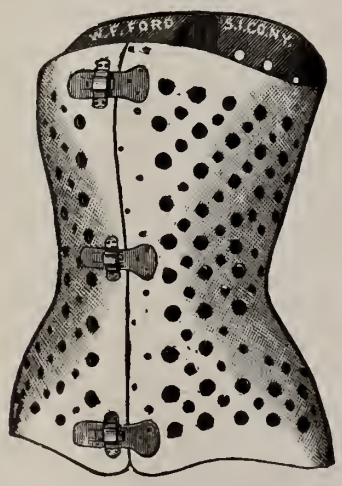

FIG. 7.

for many of the braces and corsets now worn in the acute forms of Pott's disease and lateral curvature; I suggest it to take the place of such braces in cases requiring permanent bracing, or in individuals who are desirous of securing a support at any time which combines durability with lightness and comfort. So soon as a case of lateral curvature has been arrested, or the greatest amount of benefit has been derived from treatment, the aluminum corset will be found a most agreeable, permanent support. The aluminum corset has these qualities to recommend it to the patient:

1. Lightness.
2. Durability.
3. It is thin and does not interfere with the form and clothing.
4. Being extensively perforated makes it the coolest and most agreeable of supports.
5. The patient can wear it during bathing.

An ordinary corset weighs from one to two pounds, depending upon the size. To prevent cracking and to protect it from perspiration, it is covered with a waterproof enamel, which is applied by heat.

The steps of its construction: Make a plaster form of the body; send this form to the foundry and have a cast-iron anvil made; polish this, and then at a certain temperature the workmen will bend on to it two sheets of aluminum representing the two lateral halves. The frequent heating and hammering, together with the cylindrical shape, make the corset almost as strong as steel. The two halves are hinged in the back and closed with automatic clasps in front, which stop at any notch to accommodate the corset to the body before and after eating. This corset completes my armamentarium in cases requiring spinal supports, viz.:

1. Plaster-of-Paris corsets for acute Pott's disease.
2. The Hessing corset for mild forms of lateral curvature, particularly in girls.
3. The aluminum corset for permanent bracing.

The wood, celluloid, paper, wire, leather, and felt corsets are worthless. They change in shape and do not support the spine.

THE MESIAL RELATIONS OF THE INFLECTED FISSURE; OBSERVATIONS UPON ONE HUNDRED BRAINS.

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SEVERAL cerebral morphologists have paid special attention to the so-called inflected fissure. Lussana, of Padua, first named it *solco inflesso,* while in America it was first noted by Professor Wilder (1), in 1885. The latter says of this fissure that it "indents the dorsi-mesal margin just cephalad of the precentral fissure, and paracentral lobule. In the brain exhibited (from an adult mulatto) it is particularly distinct, and is shown in the outline figure in the *New York Medical Journal,* February 23, 1884 (Fig. 42). It seems to have been described by Lussana and Lemoigne (*Fisiologia dei centri nervosi encefalici,* Padova, 1871) under the name of *solco inflesso;* paronymized, in Latin this becomes *fissura inflecta,* and in English the *inflected fissure.*"*

More recently, Eberstaller (2), in his work, *Das Stirnhirn,* gives to this fissure the long name *sulcus praecentralis medialis,* which Wilder (3) considers a "needless and unwarranted change of names," an opinion with which critical students will agree. However, Eberstaller

*Through the kindness of Professor Wilder, I have been enabled to examine the copy of Lussana's *Fisiologia,* belonging to the library of Cornell University. The fissure in question is designated *Solco inflesso* in Fig. 177, and Scissura inflessa in Fig. 179, substantially as in Fig. 1 of this article. It is not described by name in the text, and only a brief allusion to it is made on page 163. I take this opportunity to express my thanks to Professor Wilder for this and other favors.

commits another error, more grave perhaps than the one Professor Wilder has unearthed, inasmuch as it has misled many writers and perpetrated a misinterpretation which has existed in our literature to the present day. His error consists in the identification of Lussana's (4) and Wilder's inflected (or Eberstaller's *sulcus praecentralis medialis*) with the fissure named by Broca *incisure pré-ovalaire,* and by Schwalbe *sulcus paracentralis.*

On referring to the writings of Broca and Schwalbe, it becomes evident that the pre-oval incisure and paracentral sulcus of these two writers do not correspond with the so-called inflected, but that both designations refer to the cephalic limb of Wilder's paracentral, a ramus for which Eberstaller himself suggests the name *preparacentral.* Broca (5) describes it as an "*incisure pré-ovalaire* de la scissure sous-frontale," and the wood-cut illustration which accompanies his article renders his meaning absolutely clear. Schwalbe (6) likewise represents this as a ramus of the calloso-marginal in Fig. 339 of his *Lehrbuch,* and beside the clear and accurate description of his *sulcus paracentralis* as a cephalic limiting ramus (on page 541) he expressly identifies this fissure with Broca's *incisure pré-ovalaire* (in a footnote, page 544). The various synonyms for this ramus may therefore be properly grouped as follows:

Incisure pré-ovalaire.	Broca.
Sulcus paracentralis.	Schwalbe.
Sulcus praeparacentralis.	Eberstaller.
Cephalic paracentral limb.	Wilder.

In only nine per cent. of the brains examined by me did I find this limb separated from the paracentral and usually it was confluent with the *supercallosal* (Fig. 2). In the event of separation the interposed isthmus was in-

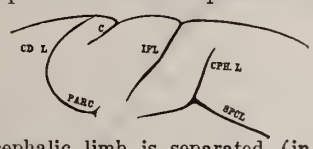

FIG. 2.—The cephalic limb is separated (in 9 per cent.) from the paracentral, generally by a narrow isthmus; when so separated this limb was commonly confluent with the supercentral.

variably very narrow and insignificant and in no case did I observe that this cephalic ramus ever crossed the dorsimesal margin. On the other hand, the true inflected fissure always cuts across the margin to appear on both meson and dorsum, and only in rare instances, contrary to Eberstaller, is it confluent with the paracentral (or "calloso-marginal"). On this point Eberstaller seems to contradict himself, for, after stating that the *sulcus praecentralis medialis* is situated caudad—by the breadth of one gyrus—of his "*Anfangsstück der Pars posterior*" of the "subfrontal," he thereupon says that these two fissures anastomose in fifty-five per cent. of his cases. What error of observation or interpretation underlies the latter statement I cannot say. However that may be, his comments upon Schwalbe's description are based upon a gross misinterpretation, as inconsistent as it is erroneous.

We are dealing, then, with two distinct fissures which have been erroneously identified with each other ever since Eberstaller's work gained its wide circulation. The inflected fissure was probably unknown to Schwalbe under any name whatsoever, and it is unrepresented upon Ecker's diagrams (7). The contributions of Lussana and Wilder have already been mentioned. Flesch (8) in 1885 designated it as the *x-fissure,* and, with Familiant (9), believed it homologous with the *cruciate fissure* of the carnivores. Benedikt's view (10) is that the cruciate fissure is represented in man by both of the fissures discussed in this paper, at least so they are described: (1) on the meson, the anterior limiting fissure of the paracentral lobule; (2) on the dorsum, a transverse fissure which limits the superior part of the precentral gyrus. As Wilder (3) pointed out, one is left "in doubt as to whether the lateral fragment is the inflected fissure or the supercentral or some third fissure."

In opposition to these opinions, Betz is said (11) to favor *Broca's pre-oval incisure* with this claim.

Having shown, then, the importance of distinguishing between these fissures from a physiological as well as morphological standpoint, it will become apparent that the anatomical relations of these fissures are of equal importance, and with this view I carried on the researches* which form the basis of this paper, in the anatomical laboratory of the Columbia College of Physicians and Surgeons. I am indebted to Professor Huntington and Dr. B. B. Gallaudet for their courteous permission to examine one hundred brains of dissecting-room subjects. The brains were hardened in formalin and were in a good state of preservation.

Among the various fissural schemas with which I am acquainted, Professor Wilder's (12) is the *only one which places the inflected cephalad of the cephalic paracentral limb.* Wilder's figure was based upon the brain of the mulatto described by him in the Handbook article and in the *New York Medical Journal,* February 23, 1884. That this extraparacentral position of the inflected is an anomalous and rare one will be seen in the latter part of this paper.

The results obtained by my investigations present many interesting features, but only a brief résumé can be given in these columns.

It was found that in 40 hemicerebrums of the 200 examined, the inflected fissure was wanting; in other words, it was present in eighty per cent. Its absence was symmetrical (*i. e.,* on both halves) in 6 brains, or three per cent., while it occurred 22 times on the left and 18 times on the right half.

All further data are based upon the 160 hemicerebrums, in which the fissure was present, as equivalent to 100.

In ninety-one per cent. the inflected was situated in a

*It is intended to present a detailed account of these investigations, with numerous illustrations, at the fourteenth session of the Association of American Anatomists, held in Baltimore in December, 1900.

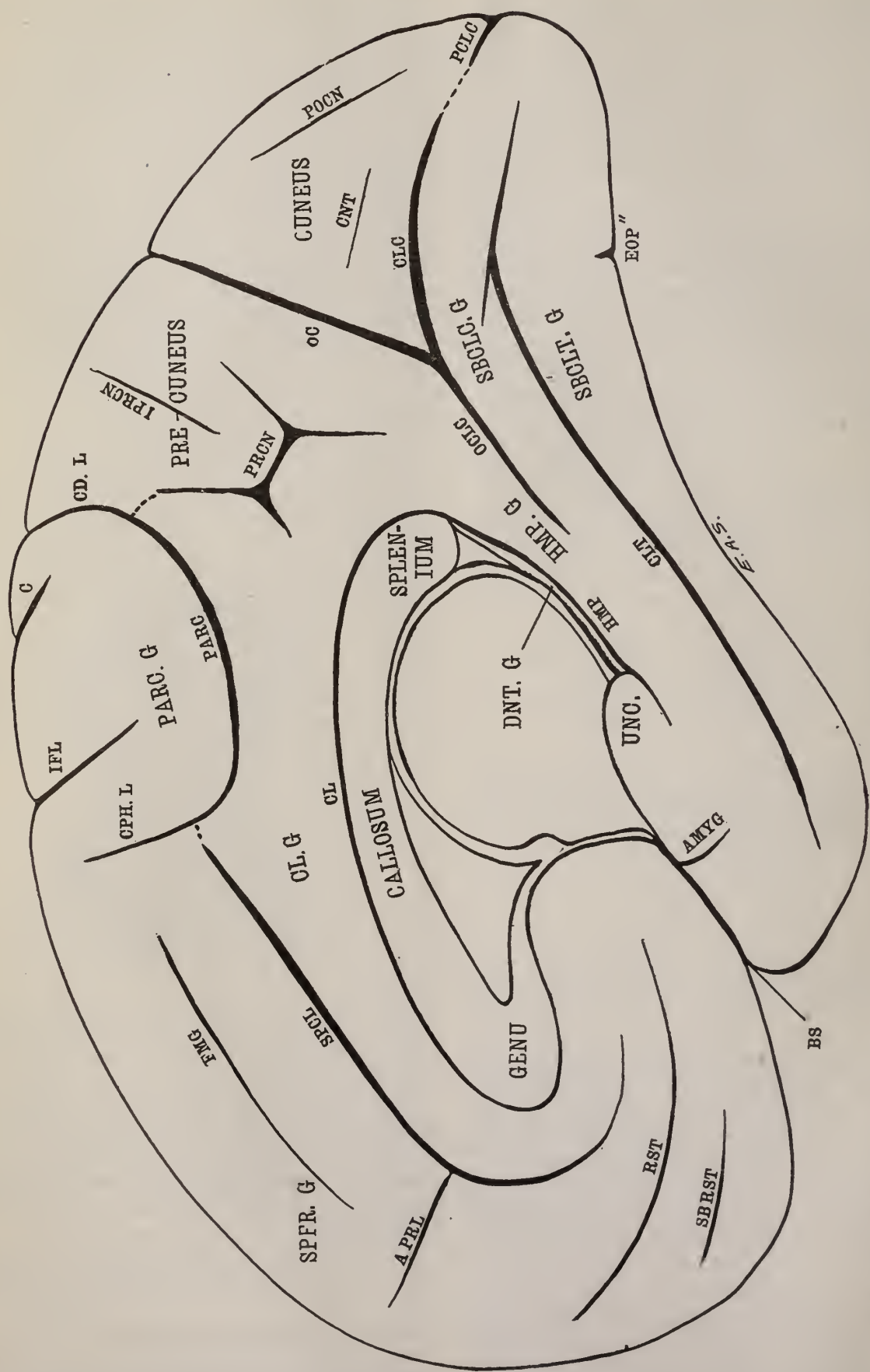

FIG. 5.—This is the writer's provisional scheme of the fissures and gyres of the mesial cerebral surface; the intraparacentral fissural elements are so variable as to be most conveniently omitted.

plane *caudad of an unmistakable cephalic paracentral limb,* while in the remaining nine per cent. this limb had become separated from the main paracentral stem by a narrow isthmus or slight vadum. But in all cases the inflected was situated caudad of this limb, whether separated or confluent, or, in other words, *the inflected indented and lay partly within the paracentral gyrus* (or *oval lobule,* as Broca prefers to call it). The reader will now understand the anomalous appearance of this region in Wilder's mulatto brain.

In sixty-three per cent. of all cases there was only one such limb or ramus, bounding the paracentral gyrus cephalad, as shown in Fig. 1. This arrangement occurred a little oftener upon the left half than upon the right.

In twenty-two per cent. there was an additional

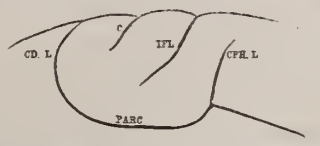

FIG. 1.—This arrangement is most common (63 per cent.). The cephalic limb is the only ramus, and is situated cephalad of the inflected.

ramus, *intraparacentral* in nature, and probably also in origin, situated just caudad of the inflected, between it and the central. Fig. 3 will show how at first glance such a ramus might be mistaken for the true cephalic

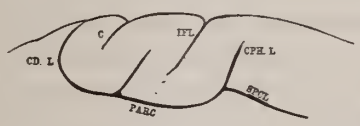

FIG. 3.—An intraparacentral ramus, just caudad of the inflected, was present in 22 per cent.; in all cases, however, the cephalic paracentral limb was also present.

limiting ramus, and one must be guided by its position with reference to the inflected, as well as by the size of the lobule thus marked off. This intraparacentral ramus may afford a possible explanation for the odd arrangement on Wilder's mulatto brain; the small paracentral gyre is limited cephalad by such a ramus, while the true cephalic limb failed to develop (see Wilder's Fig. 4766,

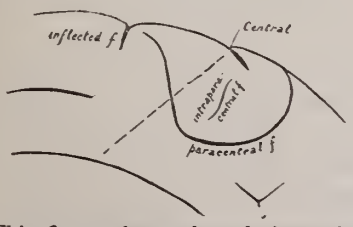

FIG. 4.—This figure shows the relations of the fissures as schematized by Professor Wilder.

Handbook, Vol. viii), so that the inflected fissure appears to lie wholly within the superfrontal gyrus. Fig. 4 is a copy.

In the remaining six per cent. the ramifications and disturbances of fissuration were so varied as not to allow readily of any classification. Sometimes there were two, or even three, intraparacentral rami, or the paracentral itself was broken up into fissural segments.

As cited above, Eberstaller asserts that in fifty-five per cent. of his cases, the inflected (*S. praecentralis medialis*) anastomoses with the cephalic paracentral limb, or as he calls it, *"Anfangsstück der Pars posterior,"* and *"S. praeparacentralis."* I found such confluence *in only two* of the 160 hemicerebrums, both being upon the left half. In nine other cases the inflected traversed the whole gyrus, effecting a conjunction with the paracentral stem; in all 11 cases of junction, or seven per cent. In the comparison of these percentages with Eberstaller's figures, the question of racial peculiarity must be excluded, since the brains which were examined by me were derived from representatives of many different races, white and colored, male and female, and varying in ages from twenty to seventy.

In the large majority of the hemicerebrums examined the inflected fissure ended upon the meson as well as upon the dorsum in a simple manner. In about sixteen per cent. it was observed that the mesial end joined some one of the *intraparacentral fissural elements,* giving the inflected a kind of bifurcated appearance. These intraparacentral elements are of not a little importance. There appear to be at least six fairly definite types, and nearly every lobule is marked by one or several of these. The longitudinal one, first described by Betz (13), and which is commonly bifurcated at one or the other end, is the furrow which is most common, and is most often joined by the inflected.

In the first fifty brains I also made observations upon the dorsal relations of this fissure. In the great majority of cases (eighty per cent.) the inflected was situated *cephalad of the supercentral.* In thirteen per cent. it was observed to indent a well-defined *inflected gyre* (Wilder), embraced by the dorsal radii of a bifurcated supercentral. This condition was symmetrical in three brains, and occurred oftener on the right half. In only six per cent. was the inflected caudad of the supercentral, *i. e.,* between the latter and the central fissure. In a few instances (number not noted) there was a superficial confluence with the supercentral, but a shallow vadum was always demonstrable.

Although Wilder's terminology has been generally employed in this article, there appears to be room for more discussion upon some of the terms. Broca (14), Mickle (15) and others consider *oval lobule* to be less objectionable than *paracentral lobule,* or *gyrus,* because this structure is not really "paracentral." For the terms *cephalic paracentral limb* and *caudal paracentral limb,* we might very well adopt *preparacentral* and *postparacentral,* retaining the name *paracentral* for the longitudinal stem.

In Fig. 5 I present a schema of the fissures and gyres on the mesial surface. It is a modification of Wilder's well-known schema, the changes being based upon the newer features which have become known and more or less accepted in the last decade.

EXPLANATION OF THE FIGURES.

The abbreviations used are the same for all the figures.

FISSURES.

AMYG	Amygdaline f.
APRL	"Ascending" pre-limbic f.
BS	Basisylvian f.
C	Central f.
CD. L	Caudal limb of Parc.
CL	Callosal f.
CLC	Calcarine f.
CLT	Collateral f.
CNT	Cuneate f.
CPH. L	Cephalic limb of Parc.
EOP"	Exoccipital ("Preoccipital") f.
FMG	Frontomarginal f.
HMP	Hippocampal f.
IFL	Inflected f.
IPRCN	Intraprecuneal f.
OC	Occipital f.
OCLC	Occipitocalcarine fissural stem.
PARC	Paracentral f.
PCLC	Postcalcarine f.
POCN	Postcuneal f.
PRCN	Precuneal f.
RST	Rostral f.
SBRST	Subrostral f.
SPCL	Supercallosal f.

GYRES.

CL. G.	Callosal g.
DNT. G.	Dentate g.
HMP. G.	Hippocampal g.
PARC. G.	Paracentral g.
SBCLC. G.	Subcalcarine g.
SBCLT. G.	Subcollateral g.
SPFR. G.	Superfrontal g.
UNC.	Uncus.

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1. B. G. Wilder, On Two Little-known Cerebral Fissures, with Suggestions as to Fissural and Gyral Names. *Amer. Neur. Trans.*, 1885; *Jour. of Nerv. and Ment. Dis.*, xii, 1885, pp. 350-352; Abstr. in *Neurol. Centrlbl.*, December 15, 1885.

2. Oscar Eberstaller, *Das Stirnhirn, ein Beitrag zur Anatomie der Oberfläche des Grosshirns.* Wien und Leipzig, 1890.

3. B. G. Wilder, *Ref. Handbook of the Med. Sciences*, Supplement, p. 108 (1893).

4. Lussana's work is not accessible to me at the present moment. The title of his work is cited in reference No. 1.

5. A. Broca, Anatomie descriptive des circonvolutions cérébrales. *Gaz. hebdom. de méd. et de chir.*, xxviii, 1891, pp. 28-29.

6. G. Schwalbe, *Lehrbuch der Neurologie*, zugl. d. zweiten B'des, zweite Abth. v. Hoffmann's *Lehrb. d. Anat. d. Menschen.* Erlangen, 1891, p. 541.

7. A. Ecker, *Die Hirnwindungen des Menschen.* Braunschweig, 1869.

8. M. Flesch, Zur Casuistik anomaler Befunde an Gehirnen, etc. *Arch. f. Psych.*, Vol. xvi, pp. 689-697, 1885.

9. V. Familiant. *Beiträge zur Vergleichung der Hirnfurchen bei den Carnivoren und Primaten.* Bern, 1885.

10. M. Benedikt. *Jour. of Anat. and Physiol.*, xxv, p. 213.

11. W. J. Mickle, in article, Brain-forms in Relation to Mental Status, *Jour. of Mental Science*, July, 1896, p. 556, says "—— a homology claimed by Betz for the sulcus spoken of as limiting the oval lobule in front." Mickle does not give the source for this information.

12. B. G. Wilder, Fig. 4768, *Ref. Handbook of the Med. Sciences*, Vol. viii, 1889.

13. Betz, Nachweis zweier Gehirncentra. *Centralbl. f. d. med. Wissensch.*, 1874, Nos. 38 and 39 (p. 595).

14. A. Broca (see Note 5), pp. 27 and 28.

15. W. J. Mickle (see Note 11), p. 556.

THE IMPORTANCE OF A KNOWLEDGE OF EAR DISEASE TO THE GENERAL PRACTITIONER.*

BY WILLIAM H. THOMSON, M. D., LL. D.

IT was with great pleasure that I accepted the invitation to read a paper at this first meeting of the Section of Otology. Personally, I regard the institution of this section as an especially fortunate event to mark my term of the presidency of the Academy, because there is every reason in the nature of this important branch of our profession, and in the great progress which has been achieved in it, both to warrant and to welcome its admission into the family of the now eleven sections of the New York Academy of Medicine. With such a list of signatures as that which was appended to the request that this section be instituted, there can be no doubt of its coming success, so that I most heartily congratulate you on your auspicious beginning.

The selection of the subject of my present remarks, The Importance of a Knowledge of Ear Disease to the General Practitioner, is due to recollections from my own experience in general practice for over thirty-five years. It often takes years for us to learn the relative importance of things, and this is particularly so in medicine. Twenty-five years ago I should scarcely have said, what I now most decidedly affirm, that the general practitioner should feel a greater sense of responsibility when called to treat a case of ear disease than he need feel about affections of all the other special-sense organs put together. Thus, though it is a terrible misfortune to lose the eyesight, still, it is then one loss only. But a visit to a deaf and dumb asylum will illustrate the results of an otitis media in often a full half of the inmates, who became not only deaf but mute for life because, while they were children, the attending physician did not know how to treat the ears properly when they had scarlet fever or measles. Like many others, in my time, when I was engaged in family practice, a slight chronic otorrhœa in a child gave me but little anxiety. The mother or nurse was left to attend to that with a few simple and little-studied recommendations. I should no more think of doing so now than I would prescribe an evaporating lotion for an in-

*An address at the first meeting of the Section of Otology of the New York Academy of Medicine, December 12, 1900.

cipient hernia, for such dread consequences I have never seen as those which have come from a chronic slight otorrhœa. I prefer, therefore, to deal with my subject not in a systematic, but in a personal, reminiscent fashion, as it will abundantly prove the truth of Carlyle's saying that "Experience is a great teacher, but, alack, he demands such dreadfully high wages!"

A number of years ago a physician called me to see his young wife. He told me that she was the only child of well-to-do and very indulgent parents, and as a consequence she was ungovernable and emotional, often hysterical, in fact; that now she had headaches with afternoon chills and moderate fever, and that in these malarial attacks she would both cry and laugh and then become wilfully taciturn. I found her with a temperature of 101° F., with pupils natural and a perfectly regular pulse, but with a slowness in answering questions which, if I had had my wits about me, ought to have aroused my suspicions, instead of having them led off by the hysteria hypothesis of her physician, who was her own husband. I therefore instructed her anxious parents that she should go on with quinine, and assured them that her nervous symptoms should not excite alarm, for they were doubtless due to an attack of low malaria. At that time malaria could always be depended upon to come to our help whenever we were put to it for a diagnosis. Two days afterward her father came to my office to say that to ease their minds they had called in a gentleman who was much my senior and who then easily stood at the head of the surgical profession in the city, and, moreover, had attended the mother in her confinement when this patient was born. He was glad to inform me that Dr. —— not only confirmed my diagnosis, but said that if she was his own child he would not have the slightest anxiety about her. That evening we both were hastily summoned to the father's house, which we reached together, and were immediately ushered into the sick room, to witness the patient in a few moments die before our eyes. We then learned for the first time that she had had a chronic discharge from one ear for some years, but that it had been "healed up" for more than a month. It can readily be imagined with what speechless mortification we both withdrew from that chamber of death.

It was not long afterward that I made another mistake in diagnosis from being misled by hysterical symptoms. A young man was admitted to my Bellevue Hospital service who gave an incoherent story of having been struck on the head in a fight in one of the liquor saloons in the unsavory neighborhood of that institution. I could find no evidence of depressed fracture of the skull or even of a bruise; his pupils were slightly contracted, but there were no signs of paralysis anywhere, though he staggered a good deal in his gait. He was not in a state of shock, but, instead, was very talkative, with alternate fits of crying and of laughing, while his breath smelt strongly of liquor. I concluded that he was simply drunk and ordered him to bed. Half an hour later he was found dead. A fracture of the internal table of the right parietal bone, which had lacerated a branch of the middle meningeal artery with an extensive effusion of blood filling the lateral ventricle, explained his death, and, as was afterward learned, he had been struck with a sand-bag, which explained the lack of external evidence of injury. But what I wish to say is that I have now seen too many cases of purely emotional manifestations accompany the gravest organic intracranial lesions, such as abscesses, tumors, and particularly meningeal affections, to believe that in this case his hysterical behavior was solely due to alcohol. I would suggest, therefore, that any marked depression of spirits, with frequent weeping, accompanying persistent headaches in patients who have ear disease, always ought to put the practitioner on his guard and lead him to ask about chilliness, to watch the temperature, to note the pulse for too great slowness or irregularity, and especially to recognize any settled expression of anxiety, which to a practised observer is quite different from the expression of a whining hysteric.

But chronic ear disease may kill without doing so by the formation of an intracranial abscess. A lady, who was an old and valued friend, first consulted me for what she said was an ear trouble which had dated from childhood. I found a large pearly polypus completely blocking the right external ear, and at once advised her going to an aurist for its removal. She positively refused to do so because he would "hurt her so," and insisted that I should burn it out. I destroyed the growth very successfully by injecting it with glacial acetic acid at repeated sittings with a hypodermic syringe, and in the course of time her chronic discharge diminished so much that she ceased to attend, though I warned her not to fail to report every few weeks. Two years afterward, while on a coaching trip, she was exposed one morning to raw wind which set up pain in the ear. She at once returned to me, and I asked expert advice as to the local conditions present in the ear. Nothing but signs of ancient mischief with no new developments were discovered. The pain, however, persisted and extended to the side and back of the head, with occasional attacks of severe vertigo. Thus she went on for many months with every indication of intracranial mischief, but none of the specialists whom I called in consultation could locate the trouble sufficiently to advise any surgical interference. She died after sixteen months' illness, emaciated to a skeleton. Postmortem, the mastoid cells were healthy, but the attic of the tympanic cavity and adjacent portions of the petrous bone were carious, and there were only a few drops of pus found. Beyond was the most extensive development of pachymeningitis that I have ever seen, corresponding to the entire parietal and occipital surfaces.

This leads me to reiterate that it is not inflammation which makes pus, but bacteria, and, according to their kind, multiplying in an otorrhœa, will there be caused by the agency of one form a pervading infiltration which breaks through every barrier, bony or otherwise, and bur-

rows in pockets or enters blood channels for the most distant travels, while with another form its feebler toxine is resisted by Nature's efforts to circumscribe the invader by fibrinous exudates. A diseased ear may be infected by a pneumococcus, a streptococcus or a staphylococcus, a *Bacillus pyocyaneus* or a *Bacillus coli.* In a pleural empyema I always wish to find out whether it is a pneumococcus which has invaded, in which case the prognosis is better, or a streptococcus, in which it is worse. On that account general practitioners should seek the aid of bacteriologists when they find an otorrhœa resisting their measures of treatment, for by such help we may make some progress in the management of obstinate ear discharge, because I am sure that we have yet much to learn about the germicides which should be employed for different infections. Judging from the case of a pleural empyema, the pneumococcus in the ear is the easiest to deal with, and it is curious how often this organism invades the ears of children without any pneumonia being present.

The presence of intracranial organized exudates due to chronic ear disease often leads to serious consequences. One of the earliest manifestations of such, in my experience, has been the development of myoclonus, or persistent muscular twitching in different parts of the body, notably the extremities, and particularly annoying when the patient is dropping to sleep. Some neurologists speak of this myoclonus as spinal in its origin, and term it spinal epilepsy. I think that this view is wholly incorrect and that these muscular twitchings are always indications of a cortical irritation which too often is a precursor of true epilepsy. I feel confident that epilepsy due to ear disease is more common than is usually recognized, and I always keep in mind this possible origin in my first examination of a case of this disease, on account of the bearing it then would have on the treatment. When it is so traceable, the case is then equivalent to epilepsy following trauma in depending primarily on an organic irritation of the cortex by what is virtually cicatricial tissue.

Some cases of otorrhœa exciting acute mastoiditis may then assume disguises which can deceive the very elect. I was called last winter as the third consultant in a case of this kind, the patient having been seen before by two of our most eminent men. She had long suffered from ear disease, and the first gentleman diagnosticated an intracranial abscess and advised an immediate operation. Soon after his visit acute parotiditis developed with extensive swelling, which led the second consultant, as I was told, to pronounce it a case of mumps. Three days afterward, when I was called in, there could be no hesitation about the diagnosis, because of an unmistakable group of basilar and pontine symptoms. I advised an operation, but with little hope of a favorable result, as the fatal sequel showed. I mention this incident, however, mainly in connection with my experience with the supervention of parotiditis in typhoid fever, for so far it has invariably been associated with an antecedent invasion of the ear.

Finally, the subject of vertigo is one about which every practitioner sooner or later will wish to know all he can. I have paid some attention to this subject, and will briefly give my views now for what they are worth, about its chief varieties and their clinical characteristics. I would classify the varieties into

1. The gastric, or digestive.
2. The cardiovascular.
3. The ocular.
4. The aural.

The digestive variety supervenes upon gastro-intestinal derangements, and its peculiarity is that the patient is greatly annoyed and vexed with it, but not much frightened.

The cardiovascular variety, when dependent upon weakness of the heart, always has nausea as its accompaniment. When due to cerebral endarteritis it has not, but, instead, frequently excites a feeling of foreboding of mischief. It is generally very transient.

Ocular vertigo is interesting in having a purely psychical basis. It does not occur in the dark, for to have it come on, the eyes must be open and looking out, and it may be relieved by closing them. It is the vertigo which causes the head to swim at the brink of a precipice. Its explanation is that the general muscular tonus which keeps us in position has for one of its main elements the information which the eyes are constantly, though unconsciously, giving us of our surroundings, and when the eyes suddenly find a lack of surroundings, the muscular system as suddenly fails to receive its customary stimulus to maintain tone, and hence general muscular tremor immediately sets in. It must always come as a surprise, for otherwise we can guard against it, as in the dark, by the help of the muscular sense and of the sense of touch. The most certain place to experience it is on the top of the great pyramid of Egypt. I found there that, though I knew I had below me the most solid building on earth, with a base of twelve acres, yet to right, to left, before, and behind, my eyes for the first time looked into pure nowhere. With shaking legs I sought the centre of the great flat top, which equals this room in area, and there forthwith squatted. It was curious how soon a few steps on the sands below gave me back my former muscular quiet, while I watched a polite French priest, ere he was quite down, try to touch his hat to me, with every symptom of *paralysis agitans.* Derangement of the oculomotor apparatus by disease causes this form of vertigo by its mixing up the images of our surroundings and putting them into unaccustomed relations to us.

The vertiginous sensation, however, which causes the most positive disturbance of all, is the aural variety. In that marvellous mechanism of the semicircular canals we carry with us a fluid level the slightest tip of which is instantly transmitted to the most centric station of nervo-muscular regulation, whereby we know our position in

space and behave accordingly. Hence the least derangement here at once causes alarm. In pronounced cases of aural vertigo there is no scare equal to it for causing a cold sweat. The patient feels as if he were being dropped into a bottomless pit, while catching hold of things, or even lying down, gives but little relief. Everything seems to be giving way or turning around. Its invariable accompaniment, therefore, is fear, which may long outlast the vertigo itself, rendering the patient a chronic coward who dreads all going about. This characteristic is often mistaken for the nervousness of a hypochondriac dyspeptic, and unavailingly prescribed for through the stomach, or else mistaken in adults for some serious condition of the cerebral blood-vessels. All cases of vertigo with a predominant feeling of alarm, or with a story of onset while the patient is recumbent, should lead to a careful examination of the organs of hearing, when a condition may occasionally be found which has nothing to do with organic disease, though usually it has. Thus, a man was once brought to me for locomotor ataxia, as he could not walk across the room without support. I soon found that he did not have a single symptom of tabes, not even in his gait, but both ears were plugged solidly with hardened wax, and so I told his attendant that he could cure this locomotor ataxia with a syringe, which he soon did. Another similar case with the same diagnosis was once sent to me from a neighboring State.

I need not say that throughout these desultory remarks I have not thought of addressing otologists, but rather have kept the general practitioner steadily in view, if only to emphasize his need of a thorough acquaintance beforehand with the critical situations in which he may find himself when dealing with a case of ear disease. At first sight, nothing seems omitted to insure safety for the contents of the cranium, if separate isolation within solid walls, with only the smallest and best-closed apertures, are considered. But, as in the Greek fable which represented Achilles invulnerable except at his heel, where at last he was fatally struck, so by the little passage through the ear we always have a possible hidden inlet for disease and death. When once the enemy makes his lodgment in the intricate recesses of that tract, his further fatal progress may be the most difficult to detect of all the perils that can befall us, for the royal organ threatened cannot be palpated like an abdominal, or listened to like a thoracic, viscus. Both alertness and skill are needed to deal with a process which, on the one hand, may have all the intractability of an infected mucous membrane lining a narrow tube from the Eustachian orifice up, and, on the other, may develop into what is equivalent to a virulent osteomyelitis in the mastoid area, not to mention that in the roof of the tympanic cavity we have the thinnest bony plate in the body to be sometimes the only partition between the brain and a culture teeming with deadly organisms. With our present status in knowledge, every institution of medical education should insist that its students be most practically trained, first in the methods for examination of the ear, and then in the most efficient methods for the early treatment of its affections. We need not be surprised at the imperfect diagnoses of many otherwise experienced practitioners, because a satisfactory inspection of the tympanum alone is neither simple nor easy. It requires a good deal of practice for any one, not so much to see through a speculum into this dark hole, but, what is quite another matter, to *perceive* what he is seeing. Many a physician, when trying it with a screaming and struggling child, makes believe at the end that he has seen it all, when he knows that he has seen nothing except, perhaps, some pus. If, therefore, the general practitioner finds in time that he is making no headway, never can he be morally justified if he fails to ask an otologist to help him.

SOME OBSERVATIONS UPON SPECIALISM IN THE ARTS AND THE SCIENCES GENERALLY, AND UPON SPECIALTIES AND SPECIALISTS IN THE SCIENCE AND THE ART OF MEDICINE PARTICULARLY.

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The subject of specialism is now being discussed *pro et con.* by able writers, and, as it is well worthy of observation, the writer feels disposed on this occasion to present also to the profession some views upon the same subject, *pro tanto.*

Specialism in General.—Now, the fact is familiar to all that civilization, with its accompanying increase of population, wealth and refinement, is universally followed by the microscopical division of labor, and the rending into greater or smaller parts of every art, science, pursuit, or calling. The natural tendency to and the necessity for just such judicious separation are self-evident. The truth is that the most important and most valuable results have been effected by such concentration of purpose and of practice upon one particular subject, part, or point, for it tends greatly to the increase of knowledge, and by improving a part leads to the gradual perfection of the whole. The future, therefore, of specialism generally will continue just so long as civilization and the arts and the sciences themselves exist.

Specialism in the Science and Art of Medicine.—It can be abundantly verified by the writings of Hippocrates and Galen, and especially by those of the latter, that specialties and specialists in medicine and in surgery existed from time immemorial. Indeed, the science and the art of medicine, which embrace all that relates to the human organization, its diseases, injuries, and malformations, have not escaped this natural divisionary law, for even at a very remote period of antiquity the first and grand division of medical science into medicine and surgery took place; the latter, strangely and singularly enough, passed, by hook or by crook, into the hands of the

illiterate knights of the razor, who as barbers and as surgeons practised both shaving and surgery, and who learned and adopted the language of the shambles in giving names to the different anatomical parts of the human body, such as *gut, guts, gutted, gullet, belly, shin-bone, buttocks, fundament, piles,* etc. The use of these vulgar names, which emanate from and savor so strongly of the shambles, by some reputable surgeons of the present day is both disgusting and barbarous, and should be shunned as being a constant and an unpleasant reminiscence of the low estate into which their once beautiful and noble science had fallen. Then, why should we continue to employ these low and vulgar terms when we have such appropriate, elegant, and classical ones as substitutes for them?

Subsequently, however, to this desecration and degradation of surgery, it in process of time was ultimately wrested, as it were, from the barbers and placed in more noble and proper hands; and from that time to this how grand and how brilliant have been its results!

The Surgery of the Present Day.—In Great Britain, more especially perhaps than in any other country, the physician, or doctor, many years ago always looked down upon the surgeon as being beneath him in rank. But the tables are now being turned, and the surgeon of to-day, with his generally superior knowledge of anatomy, which is and always must be the very fundamental part of medical science, is daily encroaching upon some of the physician's claims; these infringements, however, have a certain and a positive limit, beyond which they cannot go; hence the physician is as necessary in his department as the surgeon is in his. Indeed, they can never from necessity be entirely severed; they are like the Siamese twins, and cannot live apart.

Our knowledge of anatomy has now been brought to such a degree of accuracy as to reflect honor upon its promoters. The surgeon now in possession of this valued boon, together with the aid of anæsthesia, is inspired and emboldened to attack viscera or parts which formerly would have been shunned or attacked with the gravest apprehension. The surgeon is now no longer afraid of penetrating as deep as the seat of the disease may require, like a well-skilled pilot; his instrument glides over, between, and around the most essential parts of the body without injuring beyond repair their delicate substance or structure. Indeed, surgery is the most tangible and the most scientific branch of medicine.

Specialism in Medicine is Essential.—Now, the necessity for and the propriety of specialties in medicine are, for the most obvious and cogent reasons, that the science of medicine extends its inquiries over so vast a range of knowledge, and comprehends such a multitudinous mass of detached facts and observations, that it includes a number of distinct departments. In any one of these the medical inquirer may employ his industry to advantage, either in collecting the valuable observations of his predecessors upon the subject or in augmenting them by his own, using his own judgment and discrimination in their selection and arrangement. Now, if any medical man, impressed with such views and possessing a comprehensive knowledge of all the departments of the science, should direct his special attention to such a one as his inclination, genius, and particular circumstances led him to select, he could scarcely fail, by study and by practice, to simplify, to enlarge, and to improve it. But as a necessary consequence, unless he is accurately acquainted with the principles of the entire science, he is utterly incapable of elucidating or practising it successfully in any one of its parts; for it is the establishment of all the principles of the science alone, as a whole, which can be truly serviceable to him in the practice of any one branch, and can alone preserve him from the blunders and the disgrace which inevitably await a partial and a contracted knowledge of it.

It cannot be denied that specialism in medicine is productive of vast good, provided, as has already been observed, the physician or surgeon practising any one branch has in the first place that general knowledge and scientific attainment which are absolutely necessary for the efficient practice of medicine in its most comprehensive sense. Now, as an evidence of its importance and value, there are now, and have been for many years, in the cities of London, Edinburgh, Paris, Vienna, Berlin, Rome, New York, Philadelphia, and Chicago some of the most profound specialists in the world, who are sought after and universally considered superior in their different professional specialties.

Some years ago the writer made the following remarks in a medical journal, and they may be worth repeating here: "It may be well to remark that, with regard to specialism in medicine, the fear is that too many who practise it are not competent, being, as it were, mere specialists. They are not qualified by experience to practise medicine in general, which is positively a prerequisite, a *sine qua non* to the successful practice of a single branch of the science. To render the specialist competent to practise in any one branch of medicine, he requires not only a classical education, and a general knowledge of the various branches of the science, but engrafted upon this a minute, accurate and professional knowledge of the peculiar branch of practice in which he is engaged. Truly, the best specialist is the one who has previously practised medicine in general for some time, or who has taken the advantage of a thorough course of clinical instruction in a postgraduate medical school. The general practitioner, as a rule, is considered to possess greater advantages in general medical knowledge and experience than the mere specialist, and cannot under any consideration be dispensed with; consequently, he is the more important and useful of the two. Now, it is not every upstart that can go through with the eight notes merely, that is competent to teach and to render music scientifically and successfully, or that is capable of constructing a gamut; neither is every medical tyro, who has just passed through

the green-room, qualified to practise a specialty intelligibly and successfully.

Anorectal Specialism.—It has always heretofore been an enigma why the diseases, injuries, and malformations of the anus and the rectum should not be treated as a specialty. Are not these affections as numerous, as important, as painful, and as serious in their consequences as are those of the uterus, the throat, the skin, the lungs, the eye, the ear, etc.; and do they not equally require as intelligent, as scientific, and as skilful medical and surgical treatment as those which are now so successfully and so brilliantly treated by able and expert specialists in their several spheres or departments?

The truth is, and it cannot be denied, that many members of the medical profession, both at home and abroad, as will be shown hereafter, are more or less opposed to anorectal specialism. While they seem to tolerate it in some other branches of the science, they ignore it in that of the anus and rectum, and the singular, unreasonable, and frivolous argument they advance against it is that the rectum is, and always has been, the same "crooked" and obscene domain alone of charlatans of every grade and complexion, and that they do not like the association, etc. But are we never to be relieved of this horrid incubus, or must we expect the survival of this affliction to be forever a permanent souvenir or nuisance? And, furthermore, it is declared that special practice in this dark, obscure, and obscene organ is both disgusting and detestable to men who profess to be scientific and lovers of their profession, the healing art. It is true that this kind of practice is by no means inviting and pleasant, but rather repulsive; yet it must and should be considered and admitted by all to be of the highest importance, for upon it the life, the health, the comfort, and the convenience of so many much depend. No subject, however, of whatever character, should for a moment be considered undignified or unworthy of anxious thought and attention, if it involves such serious consequences or has for its object the improvement of the healing art or the extension of our knowledge of Nature's operations. Indeed, there is no other standard known by which to determine the dignity or respectability of any branch or specialty of medical science than its capability of saving life and relieving pain and suffering. The rectum has for the last forty-five years been gradually cultivated by eminent men of learning, science, and skill, both in Europe and in America, but not wholly or particularly as a specialty, however. Their labor in this field has been of great advantage, for it has incidentally led to and encouraged specialism in this department, which would now seem to be completely specialized, for a society has lately been formed, the first of its kind, for the special medico-chirurgical treatment of the anorectal affections, composed of learned and skilful physicians and surgeons, which they, singularly enough, denominate the "Proctological Society." The writer has not the honor of being a member of this society, but, with a few exceptions, approves most cordially of its objects. He can speak *ex cathedra* upon the subject of the anorectal affections, having for fifty years of his life devoted more or less time to its consideration, as his several treatises upon the subject and his numerous medical journal publications prove.

Now, who will deny that these numerous affections should be entitled to a separate and special consideration; and who will say that those who practise such a specialty have not the privilege, if they choose, of forming themselves into a society?

The writer must observe here that he cannot refrain from calling attention to the unfair remarks on specialism in a highly valued medical journal, as will be explained in what follows.

To prove how opposed some of the medical profession of Great Britain are to specialism in medicine and to its spread, the writer will present what one of the most able and most popular medical journals in Great Britain, the *British Medical Journal,* says, as commented on in the *Journal of the American Medical Association* for May 13, 1899, as follows:

"We are at a loss to know whether or not to feel offended at this sarcastic reference to one of our young societies by the *British Medical Journal.* In its issue for April 29th, under the caption 'Specialism in the United States,' it says: 'The development of medical specialism in the United States suggests that in that enlightened republic a condition of things may in time be brought about like unto that which prevailed in ancient Egypt, where the human body was, as it were, pegged out in claims, each of which was allotted to a particular class of specialists. Among the most recent indications of this tendency may be noted the formation of an "American Association of Proctologists," which is to devote itself to the cultivation of rectal surgery, a field which it appears has been "very much neglected by the physician and the general surgeon." This interesting body is convened for the first time to debate *circa ardua recti* at Columbus, Ohio, during the forthcoming annual meeting of the American Medical Association. A body whose scientific enterprise extends somewhat higher is the American Gastro-enterologic Association, which will hold its second annual meeting in Washington on May 2d, immediately after the meeting of the Association of American Physicians.'"

The writer will say that this satirical effusion of the *British Medical Journal* must evidently have been the emanation of a puny, sarcastic scribbler, fed by the scintillations of his low wit and the distortions of truth. The unfair and the ungrateful allusion to Egypt, the mother of the sciences and the arts, and to the ancient noble Egyptian and Arabian physicians, especially those of the famous cities of Alexandria and Carthage, is equally unjust, undeserved, and unbecoming. We should never forget or lose sight of those ancient, noble Greek, Arabian, Egyptian, and Roman physicians, to whom we owe so much, the representatives in their times of the

most intellectual nations of mankind. The writer will merely remark that the idea of pegging out the human body to infinity in claims for specialists is preposterously absurd, or, in other words, absurdly absurd; hence the *British Medical Journal* may at once dismiss all its idle fears that "the enlightened republic" will ever fall into that journal's absurdity. Common sense teaches us that a just, a rational, and a proper limit must be made to specialism; it cannot be pegged out *ad infinitum.* The writer will now conclude his observations upon specialism by quoting the good old Latin maxim, so replete with truth and so applicable to our subject: *Cuilibet in arte sua credendum est.*

December 15, 1900.

A CONTRIBUTION TO THE SYMPTOMATIC TREATMENT OF PULMONARY TUBERCULOSIS.

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ASIDE from the progress made in the hygienic management of pulmonary tuberculosis, the treatment still remains to a great extent symptomatic. In my experience with this disease in a hospital devoted exclusively to this class of patients there were three symptoms particularly which I found it difficult to control, namely, diarrhœa, certain varieties of cough, and disturbances of the stomach. Of these, I desire to discuss the two latter, as, fortunately, I am able to contribute a few suggestions on their treatment which have proved of value in my hands.

There is a variety of phthisical coughs which heretofore has been most intractable to remedies of all kinds. This is a persistent, hard cough with but little mucus, of a tenacious character, which is expectorated with much difficulty. Owing to its persistence, it is very exhausting, robbing the patient of his night's rest.

After a conscientious trial of various remedies I consider it of importance to call attention to an old drug which I have practically put to a new use. Every physician knows that camphor is a respiratory stimulant, but I have failed to find any special reference to its use in this class of cases. I have found it of advantage to combine camphor with creosote and heroine in the proportion of camphor, two grains, heroine, one twelfth of a grain, and creosote, one drop. The creosote has been added because of its quality as a disinfectant and deodorizer to the respiratory tract. I do not regard the small dose of one drop as sufficient to exert any but a feeble action in this respect, but I have refrained from using more of it because of its tendency to disturb the stomach; however, the breath is rendered less objectionable, this being due in a measure to its antiseptic and deodorant effect. The other constituent of this formula, heroine, was added because of its well-known action in allaying bronchial irritation and regulating the respiratory mechanism by diminishing the frequency of respiration and increasing the volume of inspiration. I have preferred to administer this combination in pill form, because of the volatile nature of camphor, as well as the unpleasant taste of camphor and creosote when taken in solution. These pills have been manufactured for my use by Messrs. Schieffelin & Co., of New York. While in the relief of the milder coughs I have been able to rely upon heroine, I have found that this drug alone does not suffice in the severe variety mentioned above. It is here that this combination afforded me results which I had been unable to obtain previously with any other single remedy or combination of remedies.

Below will be found a description of a few cases which were markedly benefited by this pill. In nearly all the cases cited, as well as in the others in which it was tried, I had previously prescribed several different expectorants and expectorant mixtures, but none with the success which attended the administration of this combination.

CASE I.—The patient had had tuberculosis three years. The most troublesome symptom was the hard, persistent cough, which made it impossible for the patient to sleep except at very infrequent intervals. The usual expectorants were prescribed, including codeine and heroine, as well as inhalations of creosote and benzoin, with but small success. Heroine gave slight relief for a time, but its effect rapidly wore off, and the symptoms became as distressing as before its administration. I then gave one pill of heroine, camphor, and creosote, *t. i. d.* and at midnight, and was glad to find that in two days the cough had lost its hacking character, the mucus was expectorated with ease, and the patient was enabled to enjoy a comfortable night's sleep. This improvement was permanent.

CASE II.—The patient gave a history of tuberculosis for a year and a half, and during that period had a severe cough. At first heroine afforded marked relief, but later on, because of the extension of the process, the cough increased in intensity and became almost continuous, paroxysms occurring about every two hours, with particular severity during the night. As in the last case, the usual expectorants failed to give more than momentary relief, and, having gone almost through the list of remedies indicated, I prescribed the above-described pill, *t. i. d.* and at midnight. This had the desired effect in loosening up the mucus and lessening the paroxysms in frequency and severity.

CASE III.—In this case there was a history of tuberculosis for about two years. The patient complained of inability to bring up mucus, except in very small amounts and only after much effort, and suffered intensely from dyspnœa in consequence. Examination of the chest revealed a large amount of mucus in the bronchi. The administration of the pill of heroine, camphor, and creosote, every five hours, had the desired result in facilitating expectoration and making the cough less troublesome, and, after removal of the mucus, marked relief of the dyspnœa ensued.

CASE IV.—The patient had had tuberculosis a year and a half, and chronic emphysema for six years. The

object in this case was not so much to lessen the severity of the cough as to relieve the dyspnœa due to the emphysema. The pill in this case seemed to be of more benefit than heroine used alone, and this was due no doubt to the stimulating effect of the camphor on the respiration.

Case V.—There was a history of tuberculosis for three years and a half. During most of that time the patient had had cough which gradually became worse, though responding for brief periods to various expectorants. He has been taking the heroine, camphor, and creosote pill for four weeks, and I am pleased to note that since then he has experienced great relief, the cough causing discomfort only in the morning, on rising. Besides the amelioration of the cough, I also noticed that the patient was considerably relieved of that feeling of nervous depression so often found in those suffering from tuberculosis. This of course was due to the camphor in the pill.

Case VI.—There was a history of tuberculosis for four years. Cough had been present for about that length of time, and became more troublesome at intervals. Since taking the pill, the patient has been much more comfortable. I cite this case, not so much on account of the relief from the cough afforded by the pill, but, as in the preceding case, because of the abatement of the nervous depression from which the patient suffered severely.

To sum up, I believe this formula of heroine, camphor, and creosote to be without doubt superior to any I have ever used in the treatment of cough. In most of the cases in which the pill was prescribed the cough was of a very obstinate character, but I see no reason why it could not be used in other cases of cough. I do not believe it is advisable to prescribe this pill in cases in which the stomach is disturbed, because of the stimulating effect of the camphor upon the gastric mucous membrane.

I have referred to the benefit derived from its use in cases of nervous depression found often in those suffering from tuberculosis. This quality of the camphor element in the pill makes it of great value, and, when we have present this condition combined with the distressing cough, I believe the heroine, camphor, and creosote pill to be absolutely the best prescription that can be used.

The other symptom referred to in the beginning of this article, which I have also found extremely difficult to combat in phthisical patients, is disturbance of the stomach. In many cases this disturbance of the stomach is indirectly due to the cough, either by reason of the foul expectoration, causing nausea, or, in cases of severe cough, the effort required to expel the mucus, also causing vomiting. Of course, in this class of cases the logical treatment is to relieve the cough, and no relief can be obtained from the use of remedies given for their local effect upon the stomach; but in most instances, where the cause is a local one, due to disturbance in digestion or ulceration, and the stomach is irritable in consequence, the greatest relief can be obtained from such local remedies as bismuth, cerium oxalate, etc. In such disorders I believe bismuth, owing to its astringent and sedative properties, to be the best remedy of those in use, particularly if employed in combination with others, each being given for some particular effect. That which has given me the best results is one having the following formula:

℞ Bismuth subnitrate..... 15 grains;
Guaiacol carbonate..... 1 grain;
Heroine..... $\frac{1}{32}$ of a grain.
M.

Heroine has been selected as one of the constituents of this formula, because I have found it to be possessed of some analgetic power; the guaiacol carbonate, because in small doses it has a tonic effect upon the stomach, and facilitates the proper action of that viscus. In all, I have used this formula in about forty cases, and to give examples would mean a repetition of symptoms and results. I believe it sufficient to say that in every case in which this tablet was prescribed, when the cause of the disturbance of the stomach was a local one, the result obtained was entirely satisfactory, relief from the nausea and vomiting being afforded after the use of from four to eight tablets, one being given after each meal.

In the use of this tablet care must be taken to prevent the constipation which the bismuth may produce. In cases in which the nausea and vomiting are due to disease of other organs, such as nephritis and cirrhosis, it is of little use to prescribe local medication, as the relief obtained is slight and lasts for only a brief period.

682 Union Avenue.

A CASE OF ACROMIOCLAVICULAR DISLOCATION AND ITS TREATMENT.*

By BERNARD E. HENRAHAN, M. D.,

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Dislocation of the acromioclavicular articulation is usually described as a dislocation of the acromial end of the clavicle, but it is really a displacement of the acromion process of the scapula, the distal bone being the one usually spoken of as the bone dislocated. In the great majority of dislocations of this joint, the acromion process is displaced downward and inward beneath the clavicle, the outer end of the latter bone riding on top of the acromion, and the cases are very rare where dislocation of the acromion takes place upward with the clavicle engaged beneath the process. This fact is readily explained when one studies the structure of the joint and the character of the injury received. The articular ends of the bones are two small plane surfaces that are held in apposition by a capsular ligament, which completely surrounds the articular margins, and is so loose in all positions of the joints that the acromion is not tightly held to the clavicle. The looseness of the capsular ligament

*Read before the New Haven Medical Association, November 7, 1900. Read by title before the New Haven County Medical Society, at New Haven, Conn., October 18, 1900.

permits of a fair range of motion of the scapula upon the clavicle as the former glides upon the thorax, not only in the forward, backward, upward and downward movements, but also in a rotary direction, which is called for in the complex movements of the upper extremity. As the joint is superficially placed, some protection is given to it by the aponeurosis of the trapezius and deltoid muscles, the fibres commingling with those of the upper surface of the ligament, while beneath, the clavicle is firmly bound down to the coracoid process by the short conoid and trapezoid ligaments, which have, however, no relation to the joint proper. In all motions in which the shoulder is engaged, the scapula moves upon the outer end of the clavicle, the latter moving in unison upon the sternum, the function of the acromioclavicular joint being principally to preserve the obliquely forward direction of the glenoid cavity. If there was no such joint, when the scapula slid forward on the thorax, the glenoid cavity and shoulder joint would point upward, and when the scapula slid backward the shoulder joint would move outward. The joint governs the different movements of the scapula, and keeps the glenoid cavity at all times in a forward position. In keeping the joint in position, there is only a small edge-to-edge articulating function of each bone, and when the joint is injured in a manner in which the joint is always exposed from its superficial relations and its position in the body, a disturbance of these small joint relations is easily brought about. The injury that may produce a luxation of this articular union is a blow of sufficient force on the back of the shoulder, as, for example, a heavy weight falling from above and striking the shoulder when the body is bent forward, or an accident in which the body is thrown with more or less violence, striking the back of the shoulder against some solid object. If the blow lands on the front of the shoulder a fractured clavicle is the result, whereas, if the blow is struck posteriorly over the acromion or spine of the scapula, the dislocation under consideration generally takes place. A blow over this particular area is somewhat infrequent. This accounts for the fact that, in the majority of cases, the blows sustained by the shoulder usually result in a fracture of the collar bone. The injury is, however, of sufficient frequency to make it one of the surgical pathological phenomena for which the practitioner must be constantly on the alert. The recognition of the luxation is not difficult, yet it presents, on first sight, a deformity so akin to that of a dislocation of the humerus forward, that an unpractised eye may have some doubt in determining the precise lesion. The rotundity of the shoulder will be destroyed, and the projection of the overriding clavicle may be mistaken for the apparent projection of the acromion in shoulder-joint dislocation. When it is remembered that the shoulder joint is carried slightly forward and inward; that the hand of the injured side may easily be carried to the shoulder of the sound side when the elbow is on the chest; that by following the line of the clavicle the normal relations of this bone with the acromion are disturbed, the clavicle being on top; that there is no marked fossa above the head of the humerus; and that the projection of the clavicle is fully one inch within the line of the humerus, one cannot fail to recognize the actual condition. The treatment of the luxation will necessarily consist in reduction and retaining the limited articular surfaces in position until union of the torn capsular ligament is established. The former is usually easy; the latter most difficult. Reduction can be effected by pushing upward and outward on the arm. This raises the glenoid cavity and scapula, and, by pressing down the overriding end of the clavicle into its normal position and relation with the acromion, the deformity is overcome. This may be done with or without anæsthesia, according to the force-resisting powers of the patient. The retention of the bones in position now becomes a matter of some difficulty. Desault's dressing is usually recommended, but it proves inadequate for the purpose—the deformity being resumed after a lapse of a few hours, when the bandages have stretched and muscles are relaxed. Adhesive plaster dressing has the disadvantage of causing erosion of the skin in most patients before ligamentous union takes place. This erosion is at least a source of great annoyance, and the inefficiency of the method as a curative agent is rendered rather evident by Stimson's information that "recurrence can be readily detected through the plaster by the finger or the eye." Some text-books even go so far as to say that the retention of the bone in place after reduction presents so many difficulties that it is not worth while to attempt it. With this, however, I cannot readily agree. The following is a method of treatment which has worked well in the writer's hands, and seems to meet all requirements. The application may be set forth in the following case:

A. S. B., aged thirty-eight years, of strong muscular development, while in a barroom brawl met with the accident referred to above. A temporary dressing was applied, and the patient transferred to the writer on the following day. Upon examination, there was found considerable swelling, yet not sufficient to mask a marked prominence of the outer end of the clavicle; the acromion could not be felt, and the shoulder was depressed and approximated to the middle line of the body. There was also an apparent lengthening of the right arm. Since it was necessary to determine if there was not a fracture associated with the luxation, and as the patient suffered considerably, an anæsthetic was deemed advisable. No fracture or other lesion was found. The writer is indebted to Dr. Henry H. Smith for kindly advising and assisting in the reduction. A wedge-shaped pad of absorbent cotton rolled in a towel was placed under the arm; the apex was pressed firmly into the axilla, and a Desault bandage applied. This kept the bones in position, and the patient complained very little of pain from the tight dressing. The dressing was reapplied on the seventh and fourteenth days; on the twenty-first day it was discarded altogether and a spica of the shoulder substituted for one more week. All dressings were then removed. Some pain was felt on the right side of the neck after the re-

moval of the dressings. This disappeared on massaging the parts once in two or three days for several weeks, and the patient is now in excellent condition, having full use of his arm, without any pain or deformity in the shoulder.

The good results obtained in this case and the simplicity of the application would recommend the method as a suitable one in the treatment of this refractory lesion. A method of treatment introduced into the Jefferson Hospital by Professor J. H. Brinton, of Philadelphia, is of interest in this connection. It consists of a pad placed in the axilla, a folded towel of heavy texture placed over a broad area at the site of injury, and a strap two inches wide thrown across the shoulder and under the elbow. A pad of absorbent cotton prevents too great pressure on the elbow. The strap is drawn as tightly over the shoulder as the patient can well bear; the point where greatest pressure is exerted is between the articulation and the root of the neck, so as to control both the scapula and clavicle, and the trapezius muscle, without causing the pain of pressure directly over the site of injury. A single retaining bandage passed under the opposite axilla, prevents the strap from slipping off the shoulder. The placing of the wedge-shaped pad under the arm with the broad base downward makes it possible to exert pressure in the line most desirable, upward, outward and backward, raising the glenoid cavity and with it the scapula, while the clavicle is pushed downward by the same force, and thus prevented from again riding up over the acromion. A roller bandage around the chest anchors the arm and elbow to the side, the buckle of the strap not being covered in, so that the strap can be tightened, if necessary, without disturbing the rest of the dressing.

608 Dixwell Avenue.

SEXUAL INTEMPERANCE.

By JENNIE G. DRENNAN, M. D.,
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At the present time we are too apt to confine our remarks to liquor intemperance and overlook the fact that there are other forms of intemperance which are just as pernicious to the welfare of man. Either from ignorance or from false modesty we have allowed this evil of sexual intemperance to pass unmolested. Under the cover of a legal marriage it has been at liberty to cause all manner of suffering without being attacked by those who ought to and do have the health of the world in their hands. Its evils have not been held up to the public gaze like those of drink, food, dress, and pleasure intemperance. Nay, many of the reformers in these other lines are as guilty of this one evil as those who do not in any respect uphold the tenets of temperance. This has been the one condition in which man has been allowed free exercise of his own will. It has been only when such intemperance has occurred outside the sacred precincts of matrimony that the public voice has been raised in disapproval. Two persons legally united are free to injure each other and their offspring as much as they may have a mind to, and it is all right. The legal union covers a multitude of sins. A woman may be invalided for life, may be sent to a lunatic asylum—it is all right. A man may be sexually lower than the most degenerate brute, and yet be all right in the eyes of the public so long as this intemperance is exercised within the pale of holy matrimony. Ignorance is at the root of this evil. Education, as in all other reforms, will alone remedy the evil. Until men and women fully realize the physiological function which they are violating continually, no remedy can be expected. Prohibition, as in all other reforms, will fail. People must be taught that it is a function for the propagation of species alone, and not for pleasure. It is like digestion, a process by which the physical body is supplied with food, which renders it capable of performing its various functions, and not only one by which the palate is tickled and the person pleased. A certain amount of satisfaction must attend these functions, but they were not created for this pleasure alone. A meal under pleasant circumstances is more beneficial than under those that are disagreeable; a sexual union under an atmosphere of love is more beneficial than one under compulsion; but the end of neither is pleasure. Ignorance is at the root of this evil. Two persons utterly devoid of any knowledge of this physical function are united in marriage. Why ignorant? Because knowledge is immodest? Nay, rather, is not such ignorance vulgar? Does it not lead to lower, degenerate, brutish types of humanity? These persons oftentimes having no intellectual or spiritual affinity—for few marriages are sanctioned by the High Courts of Heaven, mercenary plans too often interfere for that—have only a physical affinity, and in the abuse of this function seek that enjoyment which higher sources should provide. Persons satisfied in their intellectual and spiritual life are too free to be slaves to the abuse of a physical function.

This sexual function is one which ought, like all other functions, to be performed in accordance with natural laws. Abnormally exercised, it calls for more and more, and ignorant persons credit this insatiable desire to the strong love of the individuals. As well say that an abnormal stomach, which ever and ever craves for more food, while unable to digest that which it has already received, is a sign of love.

The abuse of this function is one surrounded by so much delicacy that thus far physicians have failed to attack it. They have neglected to look at it from a philosophical standpoint. A certain sacredness — false, though, as it has not striven for the best use of it—has surrounded it. The result of sexual union is sacred in that it embodies the God in man and is full of promise for the future, but the act itself is only a physical one. This sacredness has not been guarded as it ought to have been, for, if this act is carried out under the evils of intemperance, how can the result be perfect? In lower

animal life this function is regularly carried out according to law. Man is the only male who abuses himself and his female. He knows no law in this respect but the dictates of an ignorant desire. If in the lower animals there is a time for sexual union, why not so with man? The physiology of the female generative organs points to such an observance of law. The pregnant woman is, under normal circumstances, incapable of fully engaging in the normal act. She has ovaries which are not functionally active, a uterus which is fully occupied with nourishing and housing the fœtus and sealed to invasion by male germs. Why compel her to engage in that for which her organs are not in a state to reciprocate? Then, after the delivery of her offspring, these organs are still in a state of rest until that offspring is capable of subsisting on other than mother's food. No clearer proof need be advanced than these signs of Nature's desire for sexual rest during this period. What need of the often-asked question, Should intercourse be discontinued during pregnacy? Nature answers it. It is only human selfishness which makes such a question possible.

By observance of this law there will be fewer invalided women, women who say "I have not known a day's health since I was married," fewer inmates for asylums, fewer deformed children, and, on the other side, fewer weak-willed men. As the physical nature is made to obey its laws, it will be healthier, and from its more perfect condition will arise stronger intellectuality and spirituality. The population, instead of decreasing, will increase. Women with healthy bodies will not dread maternity. No longer slaves to an abnormal appetite, they will look on this physical function, as they do on those of eating and walking, as a necessary part of their lives. The physician will no longer be implored to put the stamp of Cain on his brow in order to deliver them from a burden which they are unfitted by a misuse of this function to bear. This desire to rid herself of this function of propagating her species has had most direful effects on woman's nature. It has made her cruel and cunning. Woman has ever sought to defy man's oppressive power by cunning, and as long as she is oppressed she will. Women who would be horrified at a murder are willing to murder that little life within them, pleading that the being is not yet alive. Not woman alone, but man also. A woman will come to a physician, desiring to be relieved of her undesired offspring, with the oft-repeated remark: "My husband does not want me to have any more children." Yes, but that selfish husband has not will power to properly recognize that he is misusing a function. Families can be regulated by an exercise of will and reason. The world to-day is full of those who are trying to regulate family, not by an observance of natural law, but rather by artificial means which are sources of danger. A function can only be regulated by an adherence to the law which governs it. Knowledge alone will be the remedy for this evil, which should be called nothing less than legal prostitution.

Therapeutical Notes.

Huchard's Pills for Hæmoptysis.—The *Presse médicale* for November 21st gives the following formula as particularly recommended by Hecht in the treatment of recurrent hæmoptysis:

℞ Ergotine..... } each..30 grains;
Quinine sulphate..... }
Powdered digitalis leaves } each.. 3 grains.
Extract of hyoscyamus. }

M. Divide into twenty pills. From five to ten to be taken daily.

Naphthalene in Puerperal Endometritis.—Kirsner, of Astrachan (*Semaine médicale,* 1900, No. 28: *Fortschritte der Medicin,* November 28th), disinfects the vagina and the cervix uteri, and then packs the uterine cavity with strips of gauze moistened with a ten-per-cent. solution of ichthyol in glycerin and thickly dusted with finely powdered naphthalene. The patient must absolutely remain in bed so long as the tampon is in the uterus. He recommends also the internal use of ergotine. At the end of from six to twelve hours the tampon is removed, and in a few hours more the temperature will generally be found to have fallen; if not, the packing is to be repeated. The treatment is useless if general infection has occurred.

Capsules for Influenza with High Fever and Nervous Symptoms.—The *Indépendance médicale* for November 21st attributes the following formula to Baccelli:

℞ Quinine salicylate..... 3 grains;
Phenacetine.....2 "
Camphor.....½ grain.

M. Make twelve such capsules. From two to six to be taken in twenty-four hours. .....

An Antiseptic Mixture.—The *Journal des praticiens* for November 28th gives the following formula as emanating from Lacombe and Mercier:

℞ Sulphuric ether.....400 parts;
Acetic ether.....150 "
Alcohol.....300 "
Salol..... 50 "
Crystallized carbolic acid..... 15 "
Oil of lavender..... } each.. 25 "
Oil of wintergreen..... }

M.

For Neuralgic Dysmenorrhœa.—The following prescriptions were much used by the late Dr. Alfred Meadows:

℞ Powdered opium..... ½ a grain;
Extract of cannabis indica..... 1 grain;
Camphor..... 2 grains.

To make one pill. (For the opium, two grains of extract of conium may be substituted.) One pill to be taken at bedtime.

Or this, when the dysmenorrhœa is habitual:

℞ Sulphuric ether..... 2 drachms;
Deodorized tincture of opium.. 45 minims;
Tincture of hyoscyamus..... 3 drachms;
Chloral hydrate..... 1 drachm;
Spirits of chloroform..... 2 drachms;
Water.....to 6 ounces.

M.

Half an ounce may be taken every two hours.

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THE BACTERIAL SELF-PURIFICATION OF STREAMS.

(*First Article.*)

DURING the construction of the Illinois and Michigan Canal, and especially when it was approaching completion and the sewage of Chicago was to be turned into the Mississippi River, many of the people of St. Louis, it will be remembered, were in a state of dread lest their drinking-water, drawn from the Mississippi, should be dangerously contaminated as the result. The flow has now been going on for some months, however, and the alarm appears to have been needless. Given sufficient time and sufficient distance, and flowing water, even water flowing sluggishly, will free itself from pathogenic bacteria. It is of no little importance to know what agencies are at work in any given instance to bring about this spontaneous self-purification. Instructive studies of the waters of various European rivers, such as the Spree, the Pregel, the Danube, the Limmat, the Isar, the Rhine, and the Seine, have been published from time to time during the last few years, and some work in the same direction has been done in this country. The most recent and one of the most notable of American investigations of this sort has been conducted by Edwin Oakes Jordan, Ph. D., of the bacteriological laboratory of the University of Chicago, who contributes a condensed account of his observations to the December number of the *Journal of Experimental Medicine.*

Dr. Jordan summarizes a number of the best-known European investigations, but points out that, while their general purport points unmistakably to a lessening of the bacterial contents of the water, whether it is due to dilution, to sedimentation, or to the action of sunlight, great differences exist in the degree of apparent purification, depending upon the amount of initial pollution, the velocity of the flow, the season of the year, and other elements. Each stream, he remarks, seems to have its own conditions, and conclusions drawn from an examination of any one cannot be applied to another; each stream must be subjected to detailed special observation. His own work, though nominally limited to the Illinois River and its tributaries, really included observations at various points, ending as far away from Chicago as at Chain of Rocks, on the Mississippi, whence the St. Louis water supply is obtained. The results are recorded largely in tabular form. The tables, thirty-eight in number, give each the results of a series of examinations for each locality, in most instances between twenty-five and thirty, made a few days apart during the period from May to December.

At Bridgeport, on the canal itself, the number of bacterial colonies in a cubic centimetre of water, ranged from 225,000 to 1,850,000; at Lockport, also on the canal, from 40,000 to 1,650,000; at the same place, but in water from the Desplaines River, from 1,250 to 34,000; above Joliet, in the same river, from 20,000 to 1,620,000; below Joliet, from 120,000 to 2,540,000: at Wilmington, in the water of the Kankakee River, from 1,400 to 25,700; at Morris, in the water of the Illinois River, from 16,000 to 1,140,000; at Ottawa, in the water of the Fox River, from 450 to 34,500; above Ottawa, in the water of the Illinois River, from 650 to 130,000; at La Salle, in the water of the Big Vermilion River, from 1,400 to 62,000; at the same place, in the water of the Illinois River, from 700 to 228,000; at the same place, in the water of the canal, from 16,000 to 152,000; at Henry, in the water of the Illinois River, from 500 to 74,000; at Averyville, in the water of the same river, from 500 to 19,500; at Wesley City, in the water of the same river, from 5,000 to 3,390,000; at Pekin, in the water of the same river, from 5,000 to 2,030,000; at Havana, in the water of the same river, from 850 to 128,000; at Chandlerville, in the water of the Sangamon River, from 1,200 to 11,600; at Beardstown, in the water of the Illinois River, from 1,500 to 120,000; at Kampsville, in the water of the same river, from 340 to 23,500; at Grafton, in the water of the same river, from 180 to 97,000; at the same place, in the water of the Mississippi River, from 800 to 45,000; at Alton, in the water near the eastern bank of the Mississippi, from 900 to 39,000; at the same place, in the water east of the middle of the river, from 900 to 40,400; at the same place, in midstream water, from 700 to 27,500; at the same place, west of the middle of the river, from 700 to 25,500; at the same place, near the western bank of the river, from 650 to 37,500; at West Alton, in the water of the Missouri River, from 2,100 to 20,900; at Chain of Rocks, in the water of the

Mississippi (eastern bank), from 1,300 to 113,000; at the same place (midstream), from 1,600 to 68,000; at the same place, at the inlet tower of the St. Louis water works, from 1,800 to 69,000; at the same place (western bank), from 2,700 to 57,500; at St. Louis (tap water), from 340 to 2,790; at Jefferson Barracks, in water near the eastern bank of the Mississippi, from 1,000 to 69,000; at the same place, in the water east of the middle of the river, from 1,700 to 42,000; at the same place (midstream), from 2,700 to 56,500; at the same place, in water to the west of the middle of the river, from 3,200 to 91,600; at the same place, in water near the western bank, from 4,900 to 65,300.

It is estimated that eighty-five per cent. of the sewage of Chicago is carried into the Illinois River. Dr. Jordan gives the following averages of the numbers of bacterial colonies found at various points on the canal, the Desplaines River, and the Illinois River: Bridgeport (practically Chicago), 1,245,000; Lockport (29 miles away), 650,000; Joliet (33 miles away), 486,000; Morris (57 miles away), 439,000; Ottawa (81 miles away), 27,400; La Salle (95 miles away), 16,300; Henry (123 miles away), 11,200; Averyville (159 miles away), 3,660; Wesley City (165 miles away), 758,000; Pekin (175 miles away), 492,600; Havana (199 miles away), 16,800; Beardstown (231 miles away), 14,000; Kampsville (288 miles away), 4,800; Grafton (318 miles away), where the junction with the Mississippi River is effected, 10,200. Dr. Jordan's comments on these figures, and his very interesting remarks on the subject in general, we shall refer to in another article.

RECOVERY FROM ACUTE HYDROCEPHALUS.

In an example of this extremely rare occurrence recently reported to the Berlin Society of Internal Medicine by Neumann (*Deutsche Medizinal-Zeitung,* November 12th) the disease was interpreted as a syphilitic manifestation. The patient, a child seventeen months old, was shown at the meeting. It had come under Neumann's treatment when it was five months old, at which time the head had become very large and the mother feared that it contained water. The history given then was that when the child was between two and three months old it had suffered with a cutaneous eruption, and manifestly it had had antisyphilitic treatment. It still had the yellowish-gray tint of skin characteristic of infantile hereditary syphilis. The hydrocephalus was typically developed; the circumference of the head was forty-seven centimetres, the forehead bulged decidedly, the fontanelle was gaping, and the child was backward in mental development.

Syphilis being assumed to be the cause of the disease, treatment with potassium iodide was begun, and the result was astonishing. In so short a time as thirteen days the circumference of the head had decreased by several centimetres, the widened sutures had closed, and the anterior fontanelle, previously prominent, was so sunken that the edges of the surrounding bones stood out, not having been able to recover their proper form fast enough to keep pace with the diminution of the cranial contents. The improvement advanced steadily; the vault of the skull became firm, the fontanelle grew smaller, and the child acquired the mental development proper to its age, being sprightly and cheerful. It began to talk when it was eleven months old, and the teeth made their appearance in due number; at that time there were already two canine teeth.

A syphilitic disease of the eyes accompanied the hydrocephalus; the retina was clouded with white and the pupil was hazy. This affection, too, improved *pari passu* with the hydrocephalus, so that at the time the child was shown only a few little white spots remained on the fundus. Four grains of potassium iodide had been given daily, and a number of inunctions of fifteen grains of mercurial ointment had been employed. Evidently this case may be looked upon as a striking example of the enhanced susceptibility of cure shown by the gravest affections of the central nervous system when they owe their existence to syphilis.

THE NOXIOUSNESS OF THE EUROPEAN PLANE-TREE.

That species of the sycamore family of trees which is found in southern Europe and middle Asia, the *Platanus orientalis,* or *Platanus palmata,* of the botanists, has been used topically as a medicament, the flowers for venomous bites, for hæmorrhage, and as a vulnerary, and the leaves and bark as a discutient. Whatever may be the value of the tree in medicine, it appears that it has certain noxious properties and harbors a parasitic acaride which sometimes attacks man. At least, Dr. Stéphen Artault (*Archives de parasitologie,* 1900, p. 115; *Gazette hebdomadaire de médecine et de chirurgie,* December 9th), writing of the *platane* of France, which we presume is the tree in question, states that it is the source of dust-like particles which are irritating to the nose, the eyes, and the bronchial tubes. It proceeds from the fruits and especially from the down on the lower surface of the

leaves. The tuft of the achænium, too, consists of long, stiff hairs, and they are charged with a sort of pulverulent resin and may be irritating, though certainly much less so than the hairs which cover the buds, the flowers, and the lower surface of the young leaves.

Besides its own irritating properties, the tree occasionally proves a pest by reason of its harboring a certain acaride, the *Tetranychus telarius,* which acts as a cutaneous irritant. Toward the close of winter it is easy to expose numerous nests of these insects by detaching the cortical scales of the trunk and branches of the tree. Their bite is not severe. It produces a little papule and gives rise to itching, which, however, lasts for only about fifteen minutes. Later in the season, when the buds have opened, the acarides migrate and may be found scattered over the lower surface of the leaves. Moreover, they leave the tree in spring and attack certain garden plants, on which they pass the entire summer. This occurs in the country; in Paris the parasites cannot exist elsewhere than on the tree, and they go into winter quarters earlier than their rural congeners. Their season of activity is much curtailed, lasting only three or four months, whereas the country *Tetranychus* flourishes for more than seven months. It is supposed to be in consequence of this fact that the Parisian insect is smaller than the country specimens, and its prolonged deprivation of food is thought to account for its attacking man more commonly at the close of winter than at other times.

THE *PHILADELPHIA MEDICAL JOURNAL.*

We learn that, except as to the original articles to be published in the January 5th number, Dr. George M. Gould's editorial responsibility has ceased. We learn also that there is some talk of establishing a new journal in Philadelphia, with Dr. Gould as its editor. He writes to us: "I am urged on all sides to start a new journal. Will do so if the profession wishes and will help." He asks to be addressed at No. 1631 Locust Street, Philadelphia.

AN UNCALLED-FOR ASPERSION.

We hear much of the bad taste of journalism on this side of the Atlantic, but we trust that it will be a long time before any American medical journal will emulate the course pursued by a leading English medical journal in its issue for December 1st. In commenting upon the letter of a correspondent who takes exception to the paper's statement that "there is no such thing as a qualified homœopathic medical man," it sustains its proposition by the argument that (in England) a physician who professes to be a homœopath, has his place upon the *Medical Register*, not by virtue of any homœopathic work, but in consequence of having gone through the regular course and obtained regular qualifications, the same as those held by all other practitioners. It then proceeds, in illustration of its meaning, to cite as analogous the case of a once famous politician, now dead, who, it says, "was a patriot according to his convictions, the idol of his followers, and the paramour of" a certain lady, also dead, we believe, whose name is mentioned. "But," continues this journal, "he was not the idol of his followers because he was the paramour of Mrs.——; and homœopaths are not on the *Medical Register* because of their therapeutic views."

Even had the case in point—a *cause célèbre* of some years ago—been the only available analogy to point the journal's moral and adorn its tale, its introduction would have been a cruel act; but, since countless others were available, it is uncalled-for defilement of the memory of the dead.

THE HIPPOCRATIC STIPULATION AGAINST "CUTTING FOR STONE."

As is well known, the Hippocratic oath contains among other things an undertaking not to "cut for stone." According to the *Indian Medical Record* for November 17th, Dr. Charpington, who has written a monograph upon the subject, thinks that Hippocrates referred to castration, and not to cutting for stone. The *Record* says: "Considering the licentiousness reigning at that time, and the fact that pæderasty was prevalent, slaves and others being castrated that they might grow up emasculated and therefore more feminine in actions and appearance, it is probable that castration was the operation interdicted by the oath."

The fact that this injunction is coupled with a pledge not to give an abortifacient to a woman, adds some color to this view.

THE CHICAGO PENNY LUNCH-ROOMS.

An excellent institution in the shape of a penny lunch-room has been established under the auspices of the St. Luke's Society, in Chicago. Every article on the bill of fare is priced at one cent. This bill includes coffee with sugar and milk, doughnuts, Wienerwurst, rolls, soup, mush and milk, etc. Three cents will suffice to secure a substantial breakfast, it is said, and five cents a day will certainly keep a man far removed from starvation. So successful from a financial point of view has the scheme proved, that it is contemplated to establish nineteen other such rooms in different parts of the city. Any man or woman, almost even any child, who is willing to work, can surely earn, even in the worst times, a nickel a day at "odd jobs," so that deaths from actual starvation should henceforth become impossible in Chicago. This scheme will, moreover, afford an excellent and practical method to charitably disposed persons of limited means, who, while compelled to refuse alms in indiscriminate charity, often find their hearts aching as

they read of deaths from starvation in the paper, and call to mind the poor unfortunate who "looked genuine" the other day when they were compelled to turn a deaf ear to his appeals. We would suggest to the society that checks or tickets should be purchasable, redeemable at any of the lunch-rooms, and the poorest could then carry "the price of a meal" in his pocket to give to any seemingly deserving one without fear of being seriously imposed upon, or of being taxed beyond his capacity. We wish every success to Chicago's enterprise, and should be glad to see its initiative followed here in New York.

A NASAL DISEASE OF DOUBTFUL NATURE.

AT a recent meeting of the Lyons Society of the Medical Sciences (*Gazette hebdomadaire de médecine et de chirurgie,* November 15th), Berchoud showed a man with a violet-colored tumefaction of the lower part of the nose of such uncertain nature that three different diagnoses were made, that of a neoplasm, that of rhinoscleroma, and that of syphilis. The man had given a history of having had syphilitic manifestations many years before, and his trouble had been mitigated by subcutaneous injections of mercury biniodide.

INVASION OF THE LABIUM MAJUS BY A FEMORAL HERNIA.

A VERY rare form of hernia is the femoral invading the territory of the inguinal. An example of it has lately been reported by Stieda (*Deutsche Zeitschrift für Chirurgie,* lvi; *Centralblatt für Chirurgie,* December 8th). The hernia was a femoral epiplocele, occurring in a woman fifty-four years old, which suddenly became enlarged and strangulated, and a portion of it was found to have been forced into the labium majus, apparently through a lacuna in the cribriform fascia.

THE ACTION OF SUNLIGHT ON THE TUBERCLE BACILLUS.

AT a recent meeting of the Paris Society of Biology (*Gazette hebdomadaire de médecine et de chirurgie,* November 1st) Jausset reported on a number of experiments on guinea-pigs. Sputa containing Koch's bacillus were exposed to direct sunlight and to diffused light, and then used in the experiments. In a considerable number of cases the sputa were found to have been completely sterilized, and the guinea-pigs inoculated with them were not injured; those that were infected survived for a long time and gained in weight, and the bacillus was found only at the site of the inoculation. It has not yet been ascertained how long an exposure to sunlight is required to render tuberculous sputa absolutely innocuous.

News Items.

Society Meetings for the Coming Week:

MONDAY, *January 7th:* New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, New York, Academy of Medicine; Utica, New York, Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association; Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; South Pittsburg, Pennsylvania, Medical Society; Chicago Medical Society.

TUESDAY, *January 8th:* New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private) (election); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, New York, Medical Association; Medical Societies of the Counties of Chenango (quarterly—Binghamton), Clinton (annual—Plattsburgh), Erie (annual—Buffalo), Genesee (semi-annual—Batavia); Greene (quarterly), Jefferson (annual—Watertown), Madison (semi-annual), Oneida (quarterly—Utica), Ontario (quarterly), Rensselaer (quarterly), Schenectady (annual—Schenectady), Schuyler (annual), Steuben (semi-annual), Tioga (annual—Owego), Wayne (semi-annual), and Yates (semi-annual), New York; Newark, New Jersey, Medical Association (private) (election); Trenton, New Jersey, Medical Association; Clinical Society of the Elizabeth, New Jersey, General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioner's Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, *January 9th:* New York Pathological Society (annual); New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress; Medical Societies of the Counties of Albany, Dutchess (annual—Poughkeepsie), and Seneca (semi-annual), New York; Tri-States Medical Association (Port Jervis), New York; Pittsfield, Massachusetts, Medical Association (private); Hampshire, Massachusetts, District Medical Society (quarterly—Northampton); Worcester, Massachusetts, District Medical Society (Worcester); Bennington, Vermont, and Hoosick, New York, Medical Society (annual—Arlington); Kansas City Missouri, Ophthalmological and Otological Society; Philadelphia County Medical Society.

THURSDAY, *January 10th:* Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society (annual and election); Medical Societies of the Counties of Cayuga and Fulton (annual—Johnstown), New York; South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

FRIDAY, *January 11th:* New York Academy of Medicine (Section in Neurology); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, New York.

SATURDAY, *January 12th:* Obstetrical Society of Boston (private); Worcester, Massachusetts, North District Medical Society.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine Hospital Service for the Seven Days ending December 27, 1900:

BAHRENBURG, L. P. H., Assistant Surgeon. Relieved from duty at the Immigration Depot, New York, and directed to proceed to Manila, Philippine Islands, and report to the chief quarantine officer for duty.

DECKER, C. E., Assistant Surgeon. Granted leave of absence for fourteen days on account of sickness.

DUFFY, FRANCIS, Acting Assistant Surgeon. Granted leave of absence for six days from December 29th.

LINLEY, W. J., Acting Assistant Surgeon. Granted leave of absence for thirty days.

MCINTOSH, W. P., Surgeon. To proceed to Columbus, Georgia, for special temporary duty.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera and plague, were reported to the surgeon-general during the week ending December 28, 1900:

Smallpox—United States.

Jacksonville, Florida	Dec. 22	1 case.	
Wichita, Kansas	Dec. 15-22	10 cases.	
Lexington, Kentucky	Dec. 22	1 case.	
Baltimore, Maryland	Dec. 22	1 case.	
Minneapolis, Minnesota	Dec. 15-22	12 cases.	
Winona, Minnesota	Dec. 15-22	120 cases.	
Manchester, New Hampshire	Dec. 15-22	14 cases.	
Jersey City, New Jersey	Dec. 16-23	7 cases.	
New York City, New York	Dec. 15-22	21 cases.	
Ashtabula, Ohio	Dec. 15-22	15 cases.	
Cleveland, Ohio	Dec. 15-22	25 cases.	
Portsmouth, Ohio	Dec. 22	1 case.	
Memphis, Tennessee	Dec. 22	1 case.	
Houston, Texas	Dec. 15-22	22 cases.	1 death.
Salt Lake City, Utah	Dec. 15-22	31 cases.	
Tacoma, Washington	Dec. 15	1 case.	
Milwaukee, Wisconsin	Dec. 22	1 case.	

Smallpox—Foreign.

Buenos Ayres, Argentina	Sept. 30	7 cases.	6 deaths.
Prague, Bohemia	Nov. 24-Dec. 1	43 cases.	
Pernambuco, Brazil	Oct. 1-15		26 deaths.
Rio de Janeiro, Brazil	Oct. 1-31		69 deaths.
Alexandria, Egypt	Nov. 27	3 cases.	1 death.
London, England	Dec. 1-8	1 case.	
Paris, France	Dec. 1-8		14 deaths.
Calcutta, India	Nov. 17		6 deaths.
Mexico, Mexico	Dec. 16	1 case.	2 deaths.
Progreso, Mexico	Dec. 9-15	3 cases.	
St. Petersburg, Russia	Nov. 24-Dec. 1	9 cases.	
Warsaw, Russia	Nov. 24-Dec. 1		36 deaths.
Glasgow, Scotland	Dec. 7-14	58 cases.	1 death.

Yellow Fever.

Rio de Janeiro, Brazil	Oct. 1-31	31 cases.	6 deaths.
Vera Cruz, Mexico	Dec. 14		2 deaths.

Cholera.

Bombay, India	Nov. 13-20		3 deaths.
Calcutta, India	Nov. 10-17		26 deaths.
Madras, India	Nov. 9-16		7 deaths.
Singapore, Straits Settlements	Nov. 10-13	5 cases.	5 deaths.

Plague.

Petropolis, Brazil	Dec. 10		1 death.
Rio de Janeiro, Brazil	Oct. 1-31	31 cases.	20 deaths.
Calcutta, India	Nov. 17		2 deaths.
Osaka, Japan	Nov. 2-27	8 cases.	8 deaths.
Tamatave, Madagascar	Nov. 11	1 case.	

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending December 29, 1900:

Diseases.	Week end'g Dec. 22		Week end'g Dec. 29	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	57	0	87	19
Scarlet fever	0	22	191	4
Cerebro-spinal meningitis	0	5	0	2
Measles	90	7	99	5
Diphtheria	171	48	271	33
Small-pox	21	0	11	2
Tuberculosis	168	142	199	156
Varicella	68	0	0	0
Laryngeal diphtheria (croup)	10	15	15	8

Small-pox.—The local small-pox scare in New York City has caused the number of vaccinations performed to break all previous records. Eight cases of small-pox have been discovered in Brooklyn, and from one to four new cases come to light daily in Manhattan Borough. One hundred and fifty physicians have been employed by the city board of health to vaccinate applicants free of charge, and it is estimated that over three thousand have already been vaccinated. The Board of Health of the State of New York has issued a special circular of warning. The reports of outbreaks of small-pox appear at different points all over the United States, including the following: Schenectady, N. Y.; Greenup, Ky.; Cecil, near Toledo, Ohio; Gates Mills, near Cleveland, Ohio, and at various points in Wisconsin, Missouri, Minnesota, Colorado, Michigan, and in Washington, D. C. One salutary effect produced by the outbreak is the vast increase that has taken place in the number of persons vaccinated.

To Succeed Dr. Hunter McGuire.—Dr. J. Allison Hodges, formerly of North Carolina, and for several years past Professor of Nervous Diseases in the University College of Medicine, Richmond, Va., has been elected to the presidency of the college, to succeed the late Dr. Hunter McGuire. Dr. Hodges has held successively the offices of corresponding secretary, proctor, and dean of the institution.

A Change of Editorship in the Northwestern Lancet.—Dr. Alexander J. Stone has retired from the editorship of the *Northwestern Lancet*, his successor being Dr. W. A. Jones.

Medical Society of City Hospital Alumni, St. Louis.—At the last regular meeting, on Thursday evening, the 3d inst., Dr. H. W. Soper reported cases of infectious disease of the kidney.

The New York Academy of Medicine.—At the last stated meeting, on Thursday, January 3d, the order for the evening was as follows: Address of the retiring president, by Dr. William H. Thomson; the Inaugural Address, by Dr. Robert F. Weir; Memorial Address on the Life of Dr. Lewis Albert Sayre, by Dr. Leroy M. Yale; presentation of a portrait of the late Dr. John Hoskins Griscom, original fellow and vice-president of the Academy in 1854; and the reading of the annual reports of officers and committees.

At the next meeting of the Section in Otology, on Wednesday evening, the 9th inst., Dr. J. A. Kenefick will read a paper entitled The Use of Electrolysis in the Destruction of Organized Stricture of the Eustachian Tube. Cases will be presented and specimens and new instruments will be exhibited.

At the next meeting of the Section in Pædiatrics, on Thursday evening, the 10th inst., a memorial address on the late Dr. J. Henry Fruitnight will be read, and Dr. H. Illoway will present a paper on Infantile Colic and Colic in Infants. Cases will be reported by Dr. Thomas S. Southworth and Dr. Vanderpoel Adriance.

Reopening of New Jersey Hospitals.—The General Hospital and Dispensary and the Blake Memorial Hospital for Women, both at Elizabeth, N. J., which had been closed in consequence of an outbreak of diphtheria, were reopened on December 15th.

Dr. Knapp's Gift to the New York Ophthalmic and Aural Institute.—This institution, which has been in existence since 1869, was on January 2d presented by Dr. Herman Knapp with the freehold of the buildings at present occupied by it, namely, Nos. 44 and 46 East Twelfth Street, on the south side of the street, a little over a hundred feet west of Broadway. The two buildings have been remodeled to serve the needs of the institution.

The Iowa Central State Medical Society held its seventh annual meeting in Marshalltown on December 11th. The following programme was announced: President's address, by Dr. W. E. Whitney, of Eldora; Appendicitis—Report of Cases, by Dr. F. S. Smith, of Nevada; Kidney and Gall Stones, by Dr. A. D. Bevan, Rush Medical College; Empyema, by Dr. M. U. Chesire, of Marshalltown; Sanitary Engineering in Small Cities (including a discussion of Sewage Disposal), by A. Marston, Assoc.

M. Am. Soc. C. E., professor of civil engineering Iowa State College of Agriculture and Mechanic Arts; Castration for Senile Hypertrophy of Prostate Gland, with Report of Case, by Dr. A. M. Sherman; voluntary papers and presentation of cases by Dr. N. E. Mighell, of Marshalltown, and others.

Fortieth Anniversary of the German Medical Society of New York.—The members of the German Medical Society of New York recently assembled in the Arion Club to celebrate its fortieth anniversary by a dinner. Dr. C. A. von Randohr, the toastmaster, delivered the opening address. Following him came a toast by Dr. H. Klotz, the retiring president, and Dr. George Jacobi, the new president, also spoke. Further speeches were made by Dr. F. Lange, Dr. A. Rose, and Dr. S. Breitenfeld.

Annual Meeting of the Rochester Academy of Medicine.—The first annual meeting of the Rochester Academy of Medicine was held recently. Officers for the ensuing year were elected as follows: President, Dr. William S. Ely; vice-presidents, Dr. Charles A. Dewey, Dr. John O. Roe, Dr. Simon L. Elmer and Dr. Richard M. Moore; secretary, Dr. Henry T. William; treasurer, Dr. Edward B. Angell; members of the council, Dr. Eugene H. Howard and Dr. Edward Mulligan; library committee, Dr. J. O. Roe, Dr. J. Livingston Roseboom and Dr. E. B. Angell.

Trustees of a Medical College Resign.—Dr. S. M. Monser, Dr. J. R. Laine, and Dr. Samuel Potter have resigned from the board of trustees of the College of Physicians and Surgeons at San Francisco, of which Dr. Winslow Anderson is president, on the ground that diplomas are too easily obtained. Several members of the faculty have also resigned, including Dr. E. E. Kelley, Professor of Anatomy.

New Officers of the Minnesota Valley Medical Association. —At the twentieth annual meeting of the Minnesota Valley Medical Association, held recently at Mankato, Minn., the following officers were elected: President, Dr. O. H. McMichael, of Vernon Center; first vice-president, Dr. W. S. Fullerton, of Minnesota Lake; second vice-president, Dr. G. W. McCarthy, of Madelia; third vice-president, Dr. J. W. Daniels, of St. Peter; treasurer, Dr. G. F. Merritt, of St. Peter; secretary, Dr. E. D. Steel, of Mankato.

The South Texas Medical Association held a meeting at Houston, Texas, recently and many important papers were read. A banquet was given after the meeting adjourned. The president of the association is Dr. J. H. Reuss, of Cuero; Dr. R. T. Morris, of Houston, is first vice-president; Dr. John T. Moore, of Galveston, second vice-president, and Dr. D. S. Wier, of Houston, secretary and treasurer.

The Bellevue Hospital Investigation.—Louis H. Hilliard, a patient in the insane pavilion at Bellevue Hospital, died recently under circumstances calling for an investigation. The coroner's jury which sat on the case found that he came to his death through violence, and three male nurses have been held under bonds to answer criminal charges in connection with his death. This institution being within the department of charities of the city of New York, the commissioner of charities, Mr. John W. Keller, has instituted an investigation into the alleged abuses in the treatment of the insane patients who pass through Bellevue; and this investigation is still in progress. As a result of the investigation ten undergraduate male nurses have been discharged, Dr. L. W. Schultze has been placed in charge of the pavilion, and several changes have been made in the rules governing the commitment of the insane. Under a former rule the examiners in lunacy were permitted to make a charge of $25 when the patient had means, but this has now been abolished. Many sensational stories of maltreatment of the insane in the hospital have come to the surface during the newspaper agitation, and considerable feeling has been developed by statements appearing in the daily papers as emanating from Commissioner Keller. In some of these statements the responsibility for the conditions existing at Bellevue Hospital has been placed by implication on the medical board of the institution, and some of the members of that board deny the imputation that they have been remiss in the discharge of their duties, and say that "practical politics" is to blame for a lack of proper organization and discipline in the institution. Other members of the board emphatically deny that party politics is a factor in the trouble, and warmly champion Commissioner Keller's administration. It is intimated that the State board of charities may institute an investigation of the hospital. The members of the medical board of Bellevue are: Consulting Physicians and Surgeons: Dr. F. Delafield, Dr. S. Smith, Dr. E. L. Keyes, Dr. Austin Flint, Dr. R. F. Weir, Dr. C. A. Leale, Dr. G. W. S. Gouley, Dr. L. A. Stimson, Dr. A. Jacobi.

Visiting Physicians and Surgeons: Dr. W. M. Polk, Dr. A. A. Smith, Dr. W. Gill Wylie, Dr. C. L. Dana, Dr. G. B. Fowler, Dr. H. P. Loomis, Dr. H. M. Diggs, Dr. W. B. James, Dr. A. Lambert, Dr. W. G. Thompson, Dr. A. Flint, Jr., Dr. F. W. Jackson, Dr. J. W. Brannan, Dr. Charles E. Nammack, Dr. Egbert Le Fevre, Dr. Charles Phelps, Dr. W. F. Fluhrer, Dr. J. D. Bryant, Dr. F. S. Dennis, Dr. S. Alexander, Dr. B. B. Gallaudet, Dr. George Woolsey, Dr. F. W. Gwyer, Dr. R. W. Taylor, Dr. Joseph D. Bissell, Dr. H. C. Coe, Dr. L. Bolton Bangs, Dr. B. Farquhar Curtis, Dr. George D. Stewart, Dr. Charles H. Chetwood, Dr. John B. Walker, Dr. George Lockwood. At a meeting of the medical board, held on January 2d, at which twenty-nine of the members were present, a letter from Commissioner Keller asking for information on certain points relating to the conduct of the medical officers in the hospital was discussed and an answer was drawn up. The reply informs the commissioner that a special committee of five has been appointed to take up the matter of the general conditions in the hospital and bring them to his notice officially, and then proceeds to answer Mr. Keller's questions. The letter says: "So far from the patients being injured by the bedside instruction of students in Bellevue Hospital, they are helped by it, and in the vast majority of cases the patients do not dislike or fear the interest that is shown in them, but rather the contrary. It is the experience of this institution and all others that medical instruction given in connection with the hospital promotes the best interests of the patients and of the hospital." * * * "The medical board has nothing to do with the fee system in the insane pavilion, the medical examiners being paid city officers, not under the control or direction of the medical board in any way, and their functions are not those of the treatment and care of the patients. The same regulations govern the house physician touching the alcoholic ward and pavilion for insane as govern the wards in the main hospital. It is considered proper and right for a nurse to administer hypodermic injections, but solely under the directions of the house or visiting

physician; it is a part of their training as nurses that they should be able to use a hypodermic syringe, but never except under medical directions."

The letter concludes:

"We have, in the foregoing, replied to the questions you have asked us. We are ready to supplement these answers in any way you wish, and to cooperate with you in perfecting the service in any way. The records of the hospital will show that no institution is doing more effective medical and surgical work in the cause of the sick poor than Bellevue Hospital, and the more completely this work is known, the more confident shall we be that the worth and merits of Bellevue Hospital will be recognized."

A letter from Dr. Austin Flint, the president of the board, was presented, the letter explaining the circumstances under which he received a fee from a patient in the insane pavilion at Bellevue. Dr. Flint's letter explained that he had already once examined the patient before his commitment to Bellevue in consequence of having made a public disturbance; that he visited him there, not in any official capacity, but at the request of his family, and to insure his prompt removal to a private asylum, which was effected, on the application of Dr. Flint and his associate to the court. Dr. Flint wrote that the courtesy of allowing members of the medical board to examine private patients in the hospital, so far as he was aware, had never been questioned, except in connection with this case. He appended to his letter a copy of a plan for the reorganization of the insane pavilion, which he drew up and submitted to the head of the department in January, 1898. This plan embraced a concentration of authority in the hands of responsible professional men. Two resident physicians were provided for the insane pavilion, who should already have served on and through the house staff of the hospital, and one of whom should always be on duty. Over them was to be a visiting physician in charge, who should be appointed by the Commissioner of Charities on the nomination of the medical board, and who should have power to suspend summarily, and subject to the approval of the board, any person employed in the pavilion, the suspension of a trained nurse to be reported at once to the institution with which the nurse was connected.

A letter from Dr. Allen Fitch in regard to his connection with the case in which a fee had been charged was received by Dr. Charles L. Dana, president of the board, in which he said that he, at Mrs. Newport's request, examined her husband. Then Dr. Flint prepared the necessary certificate for presentation to the court for Mr. Newport's removal to a private sanitarium, as Mrs. Newport desired. All the proceedings were hurried, at Mrs. Newport's urgent request. "I own no stock in any private asylum, and have never accepted a commission for sending cases to them," wrote Dr. Fitch. He had no knowledge that his name was to be used in Dr. Flint's bill.

Births, Marriages and Deaths.

Born.

Bell.—In Kansas City, Missouri, on Tuesday, December 18, 1900, to Dr. and Mrs. B. F. Bell, a son.

Married.

Bowers—Jennings.—In New York, on Wednesday, December 19, 1900, Dr. Harry W. Bowers, of Harrisonburg, Virginia, and Miss Ethyll Maude Jennings.

Cowan—Dade.—In Springfield, Missouri, on Tuesday, January 1, Dr. Robert M. Cowan, United States Volunteers, and Miss Agnes Dade.

Gardner—Christian.—In Savannah, Illinois, on Monday, December 10, 1900, Dr. S. Howell Gardner, of Sharpsburg, Maryland, and Miss Harriett Christian.

Knox—McCoy.—In Kansas City, on Tuesday, December 11, 1900, Dr. Andrew Christy Knox, of Jophine, Missouri, and Miss Mary E. McCoy.

Lyman—Long.—In St. Louis, on Thursday, December 13, 1900, Dr. Henry Lyman and Miss Sarah Long.

Mansfield—Morrissey.—In Rochester, on Thursday, December 20, 1900, Dr. James E. Mansfield, of Oswego, New York, and Miss May Morrissey.

Died.

Acree.—In Eddyville, Kentucky, on Sunday, December 23, 1900, Dr. C. E. Acree, aged fifty years.

Brown.—In New York, on Thursday, December 27, 1900, Dr. Ulysses Higgins Brown, of Syracuse, New York, in the fifty-first year of his age.

Brownlee.—In Kansas City, Missouri, on Wednesday, December 19, 1900, Dr. J. C. Brownlee.

Collins.—In Varina, Virginia, on Tuesday, December 25, 1900, Dr. W. Samuel Collins.

Dennison.—In Marion, Illinois, on Sunday, December 23, 1900, Dr. Edward L. Dennison, in the sixty-fifth year of his age.

Ferris.—In Mount Vernon, New York, on Wednesday, December 26, 1900, Dr. Isaac Ward Ferris, aged sixty years.

Giddings.—In Housatonic, Massachusetts, on Friday, December 28, 1900, Dr. Theodore Giddings, in the sixty-fourth years of his age.

Goodridge.—In Lakewood, New Jersey, on Thursday, December 27, 1900, Dr. John C. Goodridge, of New York.

Losee.—In Upper Red Hook, New York, on Saturday, December 22, 1900, Dr. John E. Losee, aged seventy-four years.

Marcy.—In New York, on Thursday, December 28, 1900, Dr. Erastus Edgerton Marcy.

Pith of Current Literature.

Medical Record, December 29, 1900.

Some Remarks on Medicine in 1800. By Dr. George K. Welch.—The beginning of the nineteenth century coincides quite closely with the emergence of the art of medicine from the domination of the so-called "systems." This release of the professional mind from the necessity of constructing or accepting an imaginary theory of medicine, joined to the discovery of means which rendered it no longer necessary to diagnosticate illness merely by the appearance of the patient and his statements, was a great incentive to the noting and recording of facts which served as a basis for further advance. The achromatic microscope, anæsthesia, and the cell theory toward the middle of the century, and later, antisepsis, powerfully aided this advance. An interesting account is given of the last illness of George Washington, quoted from

the *Medical Repository* for 1800. He died from laryngeal diphtheria. The treatment, it would seem, of an old man, sick with a disease very exhausting to vitality, and so severe that the illness lasted but twenty-four hours, consisted in the abstraction of between two and three quarts of blood; the administration of about twenty grains of calomel and six grains of tartar emetic, an injection, with external application of a blister. If we note the contrast between the fanciful and changeable theories of medicine in 1800, and the well-grounded and stable theories of to-day; the practically nonexistent physiology of 1800, and the physiology of to-day; the surgery of 1800, without anæsthesia or antisepsis, and the surgery of to-day; the therapeutics of 1800, including the domination of the lancet, prostrating emetics and cathartics, and the modern treatment; the guesswork diagnosis of 1800, and the scientific investigation of the functions of the body with instruments of precision, and of its organs by many well-adapted means to-day; the wild theories of ætiology prevalent in 1800, with the present steadily lengthening list of the diseases the exciting cause of which is certain—we shall be assured that medicine stands abreast of other arts and sciences in the century's advance.

A Case of Gonorrhœal Endocarditis with Congenital Malformation of Mitral Valves. By Dr. G. W. McCaskey.—There are several points of interest in this case. One of especial interest from a diagnostic viewpoint is the left-sided location of the greatest intensity of a basal murmur, proved by autopsy to have been the result of an aortic lesion. The general statement of the authorities with reference to this question ought to be qualified materially, as there are doubtless many cases in which this anomalous location of the greatest intensity of aortic murmur exists; and unless the exceptional cases are kept well in mind it may lead to errors in diagnosis.

The Operative Treatment of Varicose Veins of the Lower Extremities. By Dr. W. C. Borden.—The author, arguing from the pathological condition of a varicose vein, favors complete excision in all cases in which no contraindications are present; that, following this, multiple ligation, or excision combined with multiple ligation, is advocated; and, in cases in which these measures are contraindicated and the entire saphenous vein is dilated, trial of the high ligation of Remi and Trendelenburg. Also, arguing from the ætiology, pathology, and proneness of the varix to extend, the author advocates early operation. The tendency is too much toward palliation in this disease, especially in its early stages. Under palliative treatment, the disease too often extends until serious complications occur, or operations of magnitude are demanded. By removing the diseased vein when the diseased area is small and localized, the varix may be permanently cured. If more early operations were done, we should see fewer extreme cases in which the whole or a large part of the saphenous vein and its branches are involved.

Two Unusual Cases of Aphasia, with Special Reference to the So-called Naming Centre. By Dr. Græme M. Hammond.—From a consideration of the two cases presented, the author concludes that the presence of word blindness and word deafness, either alone or in combination, does not always imply that the lesion is to be found in the higher visual or higher auditory centres or in both, but that a lesion in any part of the speech area may so disorder the complex mechanism of the associated speech centres, that any or all forms of sensory aphasia may be induced. This view of the case receives further confirmation by the conditions which almost invariably accompany the so-called motor aphasia, agraphia, the impossibility of combining numbers, and the frequently coexisting amnesia.

The naming centre has yet to be found; at present it lies in the dreamland of theory only.

Boston Medical and Surgical Journal, December 27, 1900.

Operative Treatment of Goître. By Dr. J. Collins Warren.—The operative treatment of tumors of the thyreoid gland appears to be indicated in rapidly growing tumors in young persons in whom the medical treatment has been ineffective. The operation consists in the removal, by a U-shaped incision, of a limited portion of the gland, such as an isolated lobe or a more or less independently growing adenomatous mass of solid gland tissue, or in the enucleation of a cyst. All vessels should be tied with scrupulous care, silk being far better for this purpose than any of the forms of animal ligature. The dressing should be so applied and should consist of such materials as will give support without causing pressure. For this purpose the horse-collar dressing may be applied; rigidity being given to the collar by paper or pasteboard.

Many cases yield to medical treatment, and it is estimated by Kocher that ninety per cent. of the patients who come into the hospital at Berne are so improved by medical treatment that operation is not necessary. Since the thyreoid treatment of goître has been employed, the author has had comparatively few cases sent to him for operation, but he has seen quite a number of cases in which the treatment has produced no effect. He is not personally cognizant of a single case in which it has effected a permanent cure.

Statistics of Operative Treatment of Thyreoid Tumors. By Dr. Lincoln Davis.—In considering the mortality of the various operative measures, and the causes of death, the author quotes the statistics of Reverdin. In 3,408 operations of which he has details there were 118 deaths. In 1,276 enucleations there were only ten deaths. In 96 of the 118 fatal cases, the causes of death were known. Forty-five were of respiratory origin divided as follows: Pneumonia, bronchopneumonia and bronchitis, 32; asphyxia, 10; fatal lesions of recurrent laryngeal nerves, 3. Twelve cases were due to collapse and shock. There were nineteen of fatal hæmorrhage; none of these followed enucleation. Thirteen deaths were due to sepsis, three deaths to tetanus, one to myxœdema. All operations, in use at the present day, are liable to recurrence since total thyreoidectomy is proscribed. About twenty per cent. may be expected to have recurrences. In regard to section of the cervical sympathetic nerves for exophthalmic goître, the total number of cases treated by this method is fifty, with a cure in eleven; improvement in twenty-nine; no improvement in four; and death in six.

Neoplasms of the Thyreoid Gland. By Dr. Charles G. Cumston.—The author has had forty-two cases. With the exception of the malignant cases, the principal symptom complained of by the patients which required relief was dyspnœa, while hoarseness and dysphagia were less frequently prominent; palpitation of the heart was noted frequently. In many of these patients, a careful treatment with iodide compounds had been carried out before the operation, which had only produced a slight improvement in the condition, or none at all. In most cases the sternomastoid muscle was not divided. The author con-

siders the operation of total extirpation as, by far, the better operation in the large majority of cases of goître. Its great drawback, however, is the possibility of wounding the recurrent nerve. The author considers that the most dangerous place is on the posterior lateral aspect of the trachea, where the recurrent nerve passes before it enters the larynx; and Kocher advises the leaving of a bit of thyreoid tissue at this place in order to avoid the nerve at this point.

The Practical Use of Vital Statistics. By Frederick L. Hoffman, Esq.—In an exhaustive paper on this subject, the author well illustrates the value and utility of vital statistics. Unless we have more accurate information and a larger body of collected data as to the diseases of our working people, supported by accurate and extensive statistics as to deaths in different occupations and the ages at which the deaths occurred, the development of industrial medicine will not be possible. What is true of the necessity of such statistics for the purposes of industrial medicine is equally true of all other branches of medical inquiry into the longevity of our people as affected by other determining factors.

Two Cases of Perforating Duodenal Ulcer with Subphrenic Abscess. By Dr. J. C. Pegram.

Medical News, December 29, 1900.

The Nitrite Treatment in Syphilis. By Dr. William Browning.—The method employed by the author aims first to secure the temporary safety of the patient where there is immediate danger, and then more widely as a means to get better results from routine specifics. For this purpose, the hypodermic use is unsuited. Prolonged action without untoward effects is desired, and hence, the more volatile and fleeting preparations, like nitrite of amyle, are of limited value. Administration by the mouth answers best. From one to two grains of the sodium salt are usually sufficient for the earlier doses. In the early stages of progressive dementia and in the glycosuria of old syphilitics, this agent has repeatedly shown its value. In gumma of the brain or cord, nitrites help materially to get the desired rapid action of mercury and the iodides. Specific troubles outside the central nervous system, especially when accompanied by pain, may be thus favorably influenced.

The Failure of the Consensus Judgment with Reference to Tuberculosis. By Dr. Charles Denison.—Just now the prevailing opinion among medical men seems to be in favor of home management and the local hospital treatment of tuberculosis, and every consideration seems to hinge on infection as its cause. This general opinion the author opposes, and devotes an interesting article to demonstrating: (1) That there is a decided advantage in climatic change over the home or the local sanatorium treatment; and (2) that the germ origin of tuberculosis is not the sole cause of the disease, and so is not a sufficient foundation for either its educational or legislative control. He suggests that, as a means for giving incipient consumptives an outdoor life, a movable camp should be formed consisting of from fifty to one hundred invalids. Such a movable camp could be outfitted from one of the cities at the eastern base of the Rocky Mountains in Colorado, and, moving by easy stages, should reach some southern point, such as Tucson, Arizona, by the first of December. After a winter camp of three or four months, a return north could be undertaken by a new route, with the object of disbanding in Denver, or thereabouts, the following October or November. Properly carried out, the results would be better than could be produced by any other system or method of treatment at present known.

The Value of the Schumburg Method of Purification of Water for Military Purposes. By Dr. John H. Huddleston.—The experiments performed have given results quite in accord with those of Schumburg and Pfuhl. The failures have emphasized some of the limitations of the method without discrediting it, and, to one having in mind the typhoid bacillus as the one the destruction of which is particularly desirable, the results are most encouraging. The exact occasions on which this is desirable are numerous. The barracks and camps in infected localities, and vessels taking on water at suspected ports, are notable instances. It is an extremely practicable method. The solution must be kept in sealed vessels, and preferably in vessels that hold just the amount to be used for the special emergency.

A Theory of the Physiology of Spinal Anæsthesia. By Dr. H. H. Stoner.—"Why do the motor neurones escape the paralyzing effect of the solution?" The author believes that it is by no means a fact that these neurones are unaffected by the solution. The cytological structure of their cells certainly undergoes the same morbid change as does that of the sensory neurones, but, owing to the direction of the motor current and the relation of the end plates of the peripheral motor neurones to the muscle fibres, their capacity for transmitting motor stimuli to their destination in the muscle is not seriously handicapped.

As to the manner in which the poison gains access to the cell-bodies; the author's theory is that the axones, occupying the cavity into which the solution is thrown, absorb it and transfer it by way of their vascular supply back to the cell. The neurones most profoundly affected by the solution are those that go to make up the cauda equina. A portion of the nerve here lies exposed, as it were, and floats in the cerebrospinal fluid which is impregnated with the poison.

Philadelphia Medical Journal, December 22, 1900.

The Diagnosis of Calculus Disease of the Kidneys, Ureters, and Bladder by the Röntgen Method. By Dr. Charles Lester Leonard.—The mechanical accuracy of this method is very great. Errors may creep in through faulty technique or lack of skill in reading the negatives. Where, however, the negative secured fulfils the requisite conditions, the experienced eye can detect or exclude all calculi. In some cases it may be as yet impossible to secure negatives with such detail, as in the case of very corpulent or muscular subjects. The majority of failures and errors reported should, however, be attributed to lack of skill or a faulty technique on the part of the operator, and not to any inaccuracy in the method, or to the inability of the Röntgen rays to produce accurate negative or positive diagnosis.

Acute Infantile Endocarditis Following Vaccination; Recovery. By Dr. Warren Coleman.—The diagnosis was based on the following points: (1) the septic arm, which might serve as a focus of systemic infection; (2) the presence of a mitral murmur, the patient's heart being normal a few months previously; (3) the coincident appearance of patches of erythema nodosum on the arms and legs; (4) the septic appearance and septic symptoms—chills and sweating.

The Use and Abuse of Zoological Names by Physicians. By Ch. Wardell Stiles, Ph. D.—It is as incumbent upon physicians to follow zoological customs in deal-

ing with zoological subjects, as it is incumbent upon zoologists to govern themselves by the code of medical ethics in dealing with medical cases.

Primary Carcinoma of the Pancreas, with Reports of Four New Cases. By Dr. Frederick A. Baldwin.—Two of these cases are especially interesting. In them we can trace the development of the carcinoma from those areas of Langerhans, in which the epithelial cells are hypertrophic, through those stages in which the areas of Langerhans are hyperplastic, and others are adenomatous, to those which show cystadenocarcinoma.

Angina Ludovici. By Dr. G. G. Ross.—This disease is an infection of the thick layer of loose connective tissue which fills in the space between the symphysis of the jaw and the muscles of the floor of the mouth. The author presents two cases of this comparatively rare affection. The clinical manifestations and pathological appearances so nearly resemble erysipelas that in an active surgical hospital these cases should be isolated.

A Case of Deciduoma Malignum. By Dr. Joseph McFarland.

Composite Teratoma of the Ovary; Pathologic Report. By Dr. Edgar Allen Jones.—The most interesting feature of this case is the fact that the fœtus was so large, and, on casual observation, so well formed, that it could easily be mistaken for an ectopic gestation that had ruptured into the cavity of a preexisting ovarian cystoma.

Dermatomycosis Tonsurans. By Dr. W. B. Reid.—The manner of attack in this case, the tinea unguinum, is considered by all authorities to be the rarest form.

A New Photographometer. By Dr. John Milton Garrott.

December 29, 1900.

Rotary Lateral Curvature and Pott's Disease of the Spine; their Diagnosis and Treatment. By Dr. A. M. Phelps and Dr. D. W. Manton.—Rotary lateral curvature differs from tuberculosis of the spine. It is never produced by inflammation or disease of the spinal column. The authors believe that the ætiology of these curves occurring high in the dorsal or cervical region, is nearly always congenital or rhachitic. A rapidly growing child who sits in a faulty attitude, or stands in such a position as to constantly curve the spine, will often develop rotary lateral curvature. Curves that occur in the lumbar region are usually due to such a cause as this, or to a shortened limb or tilted pelvis. Paralysis of certain muscles may be also a factor, and there have been cases where the intercostal adhesions following the absorption of a pleuritic effusion, have been the cause of great deformity. The deformity in lateral curvature is produced by the absorption of the vertebræ from pressure.

Treatment must be based on rational principles. Lateral curvature should be treated with gymnastics and a support to relieve pressure; and Pott's disease, by fixation to give Nature a chance to repair. A spinal support must be *absolutely unyielding*, or it is entirely useless. When, in Pott's disease, a patient is suspended and a jacket properly adjusted, he is at once relieved from a condition of pain and suffering, and to such an extent that no amount of pressure upon the shoulders produces pain. In rotary lateral curvature of the spine, a plaster corset with lacing is made to fit this suspended and straightened position. For patients who can afford it, the aluminum corset is advised. It is light, durable, thin, comfortable, and can be worn during bathing.

Fracture of the Extremities. A Report of a Second Series of Five Hundred Consecutive Cases. Verified by Radiographs. By Dr. G. G. Ross, and M. I. Wilbert, Ph. G.—This statistical article, though of interest, does not readily admit of summarization. The authors have succeeded in demonstrating the great value of radiography in this connection. In the photographic plate, we have a means of showing all the details of a fracture, and when properly interpreted, we are in a position to say exactly the direction and extent of the lesion, and, in addition to this, we have a complete and correct record of the injury for future reference. By taking two pictures at right angles to each other, it is practically impossible for a fracture, even the slightest *infracture,* to escape us, taking for granted of course that our technique is not at fault. There seems to be little or no difference of opinion as to the scientific value of these rays as an aid to the surgeon; but, until it has been found feasible to properly standardize the making, and consequently the interpretation, of a radiograph, the medical profession should not urge or advise the admission of the x-ray picture as evidence *per se* in a court of law.

Ovarian Cysts in Colored Women, with Notes on the Relative Frequency of Fibromas in both Races. By Dr. Daniel H. Williams.—The author combats the opinion that prevailed until a very recent period, that colored women did not develop cystic tumors of the ovaries, and, in regard to the frequency of fibromas, asserts that, in this respect at least, the colored woman is like her white sister.

On the Use of Formalin in the Dissecting-room. By William Keiller, F. R. C. S. Ed.—The use of formalin has solved, to the author's satisfaction, the problem of keeping the human body for dissection, and, he asserts, that bodies thus prepared keep perfectly on the tables in all weather, at all temperatures, and for indefinite periods, while they are free from odor, and pleasant to handle.

Some Anomalous Cases of Typhoid Fever. By Dr. Augustus A. Eshner.—One of these cases, the author believes to have been typhoid fever without intestinal lesions. No autopsy was made—the diagnosis being based upon the presence of the Gruber-Widal reaction and the total absence of intestinal symptoms.

An Unusual Case of Achylia Gastrica. By Dr. Frank H. Murdock.—In this case the author is assured by chemical investigation that achylia existed for ten months, and morally certain that there was no gastric juice in the patient's stomach for three years; and he believes that its unexpected return was responsible for the sudden attack of nausea and vertigo experienced by the patient. Achylia gastrica is common enough, but it is quite unusual for the gastric secretions to be restored after having been absent for so long a time.

New Slide Lifter and Holder. By Dr. A. H. Stewart.

Amputation of both Feet, the Left Hand and the Right Hand. Saving the Little Finger and Part of the Thumb. By Dr. J. S. Wight.

A Suitable Dress for Defence against Infectious Disease.—When the rank and file of the profession begin to dress properly for attending patients suffering with infectious diseases, they will do so no less for the protection of their business interest than for the sake of personal and public safety. The practice will be certain to receive the stamp of popular approval, and that speedily. The costume proposed by the author consists of a suit of white pajamas, a baker's hat, a pair of tennis shoes, and four rubber bands for the sleeves and trousers.

Journal of the American Medical Association, December 22, 1900.

Treatment of Injuries to the Ureters. By Dr. Byron B. Davis.—When division of the ureters occurs, the following would seem to be the rational mode of choosing the method of repair: (1) when it is possible to perform uretero-ureteral anastomosis, this is the preferable procedure; end-to-end anastomosis being simpler and better; (2) when the distal portion is too short for uretero-ureteral anastomosis, implantation into the bladder should be performed; (3) when there is too much loss of substance to permit uretero-ureteral anastomosis, and the proximal end cannot be brought down to the bladder, even with the assistance of a diverticulum of the bladder, as devised by Van Hook, the least objectionable procedure is probably implantation into the colon.

Epispadic Exstrophy of the Bladder Complete. By Dr. Ap Morgan Vance.—The case presented by the author is an excellent one, and the results of treatment demonstrate the value of autoplastic work in this connection. In this work, much patience is required both on the part of the patient and on the part of the surgeon, and many difficulties are to be overcome, principal among which are the septic surroundings, the difficulty of drawing away the urine, and the constant lack of rest of the parts due to the tendency to erections. Notwithstanding all the difficulties, the benefits justify one in the efforts at autoplastic work. Maydl's operation, in the light of future experience, may prove better, but the author believes that, in the hands of the rank and file of surgeons, it is a very grave procedure, to say nothing of the possible future complications that may arise in the way of disease of the kidneys, due to septic invasion from below.

Hæmorrhagic Infection in an Infant Due to the Typhoid Bacillus. By Dr. George Blumer.—It would seem likely that this case was one of congenital typhoid fever in which the bacilli had remained latent in the fœtal tissues for a period of four and a half months. The septicæmic character of the disease is characteristic of this class of cases, and the hæmorrhagic tendency is seen at times, both in children and in adults. Among the congenital cases; in P. Ernst's there was a hæmorrhagic eruption during life; and in Janiszewski's case, there were hæmorrhages in the kidneys and in the connective tissue in the neighborhood of the œsophagus. In Dürk's case there were hæmorrages beneath the capsule of the liver. In discussing the hæmorrhagic form in adults, A. G. Nichols thinks it due to secondary infection with pus cocci. Finally, it is interesting to note that, in this case, the histological appearances almost exactly correspond to those recently described by Mallory, though much slighter in degree than those seen in adults.

Morphological Variation in the Pathogenic Bacteria, with Two Pronounced Examples. By Dr. O. P. Ohlmacher.—A member of the colon-bacillus group, recently obtained from the gall-bladder, bile-ducts, and viscera, in a case of gangrenous cholecystitis and cholangeitis, furnishes the more striking of the two examples that the author brings forth for consideration. The polymorphism of this organism, though evident in the pure cultures obtained from the kidney, spleen, and heart's blood, was particularly striking in the original smears and sections from the gall-bladder and bile-ducts, and in the first generation of cultures from these sources. All gradations from minute coccoid or diplococcoid to long, coarse filamentous forms, were observed in the smears and sections from the biliary apparatus. The coccus, diplococcus, and the short streptococcus-like individuals corresponded precisely to those recently described by Adami, Abbott, and Nicholson, being often so small as to tax the amplification of the one-twelfth inch objective.

Local Use of Guaiacol in the Treatment of Frequent Painful Urination. By Dr. Jesse Hawes.—Guaiacol in a fluid condition should not be permitted to cover the mucous membrane; barely enough to make a surface application is all that is desirable. Thus applied it is an anæsthetic and mild stimulant. It gives rise to much less pain than the usual local applications. No strangury results, as is usually the case when silver nitrate is used. The patient will often retain the urine for hours after the application. Its use is often followed by a lessening of the perineal and suprapubic discomfort after a few hours, and, in the author's experience, a few applications, from five to ten days apart, have been more satisfactory to patient and physician than any remedy previously used. The author states that twenty per cent. of his patients have been cured, while in seventy per cent. marked improvement has followed the use of guaiacol.

Lancet, December 22, 1900.

Pulmonary Tuberculosis in Early Childhood, with Special Reference to its Prevention and to its Diagnosis from other Wasting Diseases. By A. Latham, M. B.—Predisposition—the hereditary and acquired character of the soil—is a most important factor in the ætiology of pulmonary tuberculosis in childhood. Infection takes place either by an infected air supply or by an infected milk supply. The author's observations of the postmortem lesions in some 3,000 cases, lead him to coincide with the view held by most authorities: *i. e.*, that an infected air supply is much the more common cause, but not the sole one. The bronchial glands may become tuberculous from an infected milk supply; the bacilli pass from the intestinal mucous membrane, by way of the lymphatics, to the bronchial glands. From these glands the process spreads to the lung tissue (1) by direct continuity; (2) by means of the lymphatics but against the supposed lymphatic stream; (3) by ulcerating into a blood-vessel and in this way disseminating the bacilli all over the body; and (4) by ulcerating into a bronchus. The right set of glands is more commonly affected than the left.

The varieties of pulmonary tuberculosis in young children up to the fourth year may be classified as follows: 1. Tuberculosis of the bronchial glands. 2. Miliary tuberculosis of the lungs, dependent upon (*a*) a rapid primary infection without any discoverable old focus; (*b*) the rupture of a tuberculous bronchial gland into a blood-vessel with rapid dissemination throughout both lungs, more especially of the lower lobes; and (*c*) pulmonary infection secondary to other and older lesions, such as tuberculous disease of the testis, bone, etc. 3. Tuberculous bronchopneumonia, dependent upon (*a*) the tubercle bacilli obtaining a hold upon a simple bronchopneumonia; and (*b*) direct spreading by the lymphatics of the bronchi. This may go on to confluent bronchopneumonia, cheesy consolidation, or, rarely, to a fibroid condition of the lung. 4. Pulmonary tuberculosis approaching the adult type. Uncomplicated tuberculosis of the bronchial glands gives rise to no distinctive symptoms; there may be signs of a mediastinal tumor, more marked on the right side of the chest. There may be compression of a bronchus, with feeble or absent breathing. There are other pressure-symptoms, varying according to the seat of pressure. Miliary tuberculosis of the lungs seldom occurs in young children except in

cases of general tuberculosis. The general symptoms always precede the localizing ones; often the latter are entirely absent. Progressive wasting with slight fever should always arouse suspicion.

Tuberculous bronchopneumonia may be acute or chronic, but it is rarely arrested, and reaches a fatal termination in from one to six months' time. Its diagnosis is always difficult. A copious crop of downy hair is frequently found on the backs of children who become tuberculous. After the age of six years the type of pulmonary tuberculosis conforms more and more to that seen in adult life. But there is not the same tendency to begin at the apex or to the formation of fibrotic tissue. Extensive excavation is less common, as are hæmoptysis and laryngeal complications.

The prognosis is most grave in miliary tuberculosis of the lungs, due to blood infection; brightest in cases where the tubercle bacilli become engrafted upon a simple bronchopneumonia, following measles or pertussis.

The first step in treatment is to secure against further possibility of infection, either through the air or the food supply. Attention to detail is most important: Fresh air and plenty of sunlight; good, digestible food; precautions against exposure and fatigue. With regard to climate, the chief necessities are an equable temperature and a dry soil. Of drugs, the most beneficial is cod-liver oil, which is really a food; but too much should not be given. Preparations of creosote are often of real benefit. In advanced cases our efforts must be directed towards euthanasia.

On some Disappointments of Surgery. By D'Arcy Power, F. R. C. S.—The author's article concerns itself with the minor unsatisfactory results of operations—the surgical disappointments, which are due to two main causes—either the surgeon promises too much, or his fear of doing harm prevents his doing enough. A frequent disappointment following circumcision is that the cut surface of the prepuce adheres to the glans; this may be avoided by frequent retraction, or by passing the glans through a slit in the gauze dressing. In harelip operations, there is often faulty apposition of the two red edges of the lip; to avoid this, the first suture should be passed at that point. The recurrence of adenoids is a fertile source of disappointment to parents. The operation may be perfectly successful, but the predisposition remains. So that too much should not be promised as a result of removal. The greatest disappointments occur in connection with abdominal operations, especially in those carried out upon the kidney. The formation of a fistula, where it occurs immediately after an operation, can hardly be called a disappointment; but they often occur at a period remote from the operation, when the wound has healed soundly. The trouble is usually with the ligatures used. Disastrous disappointments are often met with in operations for internal strangulation of the bowel, hernia and intussusception. Operations upon the vermiform appendix afford so many surgical disappointments that it is never wise to promise too much beforehand. Mental disturbances often follow operations, and the author cites several instances. Injuries to bones are followed by the most disastrous, as well as the best-known surgical disappointments: Colles's or Pott's fracture, non-union, the formation of a conical stump—in all these, the results may be annoying and disastrous to a surgeon's reputation. Injuries of nerves and dislocations are perennial sources of disappointment.

Observations on Compressed Air Illness. By Dr. F. R. Wainwright.—The author is medical officer to the Baker Street and Waterloo Railway Tunnel Works, and his observations on the subject of illness induced by exposure to compressed air, are embodied in this article.

An astonishing rise of temperature was noted on "locking-in"; the mercury would rise from 60° F. to 115° F. During "locking-out" he has seen it fall from 90° F. to 45° F. But he does not consider that these changes in temperature play the smallest part in the ætiology of the condition. The pressure in the tunnel varied from twenty-three to thirty-five pounds per square inch, over and above the normal fifteen pounds per square inch of atmospheric pressure. During a period of five months, forty-seven cases of illness due to compressed air, were observed. The pathological effects of compressed air are manifested at two distinct times and are due to entirely different conditions: 1. Those appearing when going into or when actually in the pressure. These are purely mechanical, and consist of pains in the ears, frontal, and maxillary sinuses. The earache is most common, and may be slight or agonizing; rupture of the tympanum may even occur. The injury is never permanent. 2. Those symptoms which are only manifested after leaving the pressure. The most common symptom is pain in the joints, especially the knee- and elbow-joints. These pains usually appear within two hours after leaving the pressure. Epigastric pain and vomiting may also occur. Headache and giddiness are also observed, with visual disturbances. Paralysis occurred in only one case. None of the cases were fatal. The most important points in the diagnosis are the time and manner of the onset. The following theories as to the causation of the disease have been advanced: (1) the exhaustion theory, based on the hypothesis that an increased metabolism follows a stay in compressed air, owing to the greater amount of oxygen present; (2) direct poisoning by carbonic-acid gas; (3) congestion of the brain, spinal cord, and other organs; (4) anæmia of the cord; and (5) supersaturation of the blood with gases, which are later set free on leaving the pressure and enter the surrounding tissues, causing the various symptoms of the disease. The author reviews these various theories, and states his adherence to the last, that of supersaturation of the blood. He believes that it furnishes an adequate explanation of the joint pains, of the paralyses and other manifestations. In the great majority of cases, only one treatment is necessary, and that is recompression, with a subsequent slow decompression, the pressure being reduced not faster than at the rate of one pound every three minutes. For this purpose he uses a medical air lock, the pressure in which can be exactly regulated. In some cases, however, the pains recur, and morphine must be used for their relief.

Interesting Surgical Cases. By Dr. E. P. Thurstan—The author reports the following twenty-four cases 1. Left ovarian cyst; ovariotomy; recovery. 2. Carcinoma of the liver; exploration; death. 3. Extra-uterine fœtation; laparotomy; death. 4. Perinephritic abscess abdominal section; unsatisfactory result. 5. Extra-uterine fœtation on the left side; laparotomy; recovery. 6 Extra-uterine fœtation on the left side; ano-laparotomy death following premature coitus. 7. Hydatids of the brain; trephining; death. 8. Double pyosalpinx; abdominal section; recovery. 9. Tuberculous kidney; removal of left kidney; death. 10. Hydatids of the abdomen; abdominal section; recovery. 11. Uterine fibroids; double oöphorectomy; recovery. 12. Appendicitis; abdominal section; recovery. 13. Strangulation b Meckel's diverticulum: abdominal section; recovery. 14 Ovarian cyst; ovariotomy; death. 15. Stone in the kidney; nephrotomy of the right side; recovery. 16. Hys

tero-epilepsy; double oöphorectomy; recovery with great mental improvement. 17. Large uterine fibroid; double oöphorectomy; recovery. 18. Advanced cancer of the cervix uteri; removal impossible; blood supply tied off; patient still living after twelve months. 19. Cystic ovary; left oöphorectomy; recovery. 20. Internal strangulation in the ileocæcal fossa; laparotomy; recovery. 21. Adhesions subsequent to former ovariotomy; laparotomy and separation of the adhesions; recovery. 22. Traumatic ovaritis on the left side; oöphorectomy; recovery. 23. Hydatid of the liver; abdominal section; recovery. 24. Traumatic varicose aneurysm of the thigh; ligature of the vein and artery; recovery.

British Medical Journal, December 22, 1900.

Syphilitic Diseases of the Tongue. By C. Heath, F. R. C. S.—Primary syphilitic disease of the tongue is a very rare thing. The author has never seen a case. It is not indurated, but there is marked enlargement of the glands beneath the jaw. The commonest secondary syphilitic affections of the tongue are the mucous tubercles and the subsequent fissures. Another frequent symptom is the development of inflammation, superficial in character and followed by shedding of the epithelium. A certain amount of cicatricial tissue results, causing smoothness of the surface of the tongue, recognized as the characteristic "bald patch." Or the inflammation may go on to ulceration, followed in turn by chronic thickening.

The treatment for all of these secondary conditions is the administration of mercury; the iodides are useless. The author uses a mercurial mouth-wash, beginning with a strength of 1 to 2,000 of the bichloride, and gradually increasing it. Mercury must also be given internally; the author prefers inunctions, given at night. Salivation must be carefully avoided; to this end the use of an alum mouth-wash is recommended. There are cases of syphilitic tongue on the borderland between the secondary and tertiary stages, instances of late ulceration. For gumma of the tongue, full doses of potassium iodide are to be given together with a mercurial mouth-wash. Leukoplakia may occur entirely apart from syphilis, the common cause being tobacco. But syphilis aggravates the condition. Local irritation must always be present to produce leukoplakia. A warty condition of the back of the tongue is one of the evidences of syphilis, but it must not be confused with the slight hypertrophy often seen on healthy tongues.

Abstract of a Clinical Lecture on Recurrent Appendicitis. By F. A. Southam, M. B.—This article is based upon a series of fifty cases operated upon by the author. In almost every case the appendix was thickened and occluded at some point in its lumen. On the distal side of the obstruction, the tube was frequently found to be dilated. In fifteen cases suppuration had occurred in the neighborhood of the appendix; in twelve cases a localized abscess was present. In most of the cases where an abscess had formed, the attacks had been frequent. In three instances where the suppuration was diffuse, the attacks had been so numerous that the patients had lost count of them. The formation of pus was usually associated with perforation of the appendix. In one case the abscess presented on the anterior wall of the rectum. Fæcal concretions were found in seven cases, being within the appendix in five instances. In only one instance was a foreign body (a pin) found. Adhesions were present in a majority of the cases. A complication occasionally met with was intestinal obstruction from inclusion of the bowel in a mass of old adhesions. In forty cases the patients had suffered from three or more attacks; in five cases there had been only one distinct attack. The length of time during which the patients had suffered varied from several months to six years. Of the fifty patients, thirty-five were in men and fifteen in women. More than one half the cases, twenty-nine, were met with in persons between twenty and thirty years old.

Quantitative Colour Tests. By Dr. K. Grossmann.—The author calls attention to the shortcomings of the method of testing the colour sense by means of Holmgren's wools. One very serious objection is the occurrence of a central colour scotoma. Where the light is distinct, the image falls on the scotoma and is not properly recognized. In order to properly test the colour sense, the test object must be (*a*) variable in colour; (*b*) variable in size; and (*c*) variable in intensity. To fulfil these requirements, the author has devised a lantern, revolving in front of which are two metal discs, perforated near their edges with circular apertures filled with glasses of various colours. There is an iris diaphragm by means of which the size of the lighted area may be varied. The intensity of the light is graduated by means of gray glass slips of varying opacity. No questions are asked, the patient simply matching colours. The apparatus admits of the adoption of a standard for the quantitative measurement of colour perception. With the average normal central colour vision (C. V.) reduced to one half for red and green, rejection of the examinee is advisable; reduced to one fourth, it is an absolute necessity.

Remarks on Chronic Enlargement of the Pancreas in Association with or Producing Attacks Simulating Biliary Colic. By G. Barling, M. B.—The object of this communication is to present four cases of enlargement of the pancreas, accidentally found while operating on the gall-bladder or ducts. Two of these cases showed distinct errors in diagnosis, for gall stones were not found, although it was believed that they were responsible for the symptoms. The common features in the cases were enlargement of the head of the pancreas with attacks of colic, and more or less complete blocking of the common bile duct. The pancreatic enlargement was probably inflammatory in nature. Blocking of the common bile duct by inflammatory mischief spreading from the duodenum is a well-recognized cause of jaundice. The four patients are regarded as having suffered from chronic pancreatitis, which in two of them led to an ill-founded diagnosis of gall stones. In the other two, gall stones coexisted, and possibly by inflicting damage on the common duct in their passage, directly induced the pancreatic inflammation.

A Case of Congenital Hypertrophy with Stenosis of the Pylorus. By Dr. H. D. Rolleston and Dr. R. Crofton-Atkins.—The authors report a case of the above-mentioned affection occurring in a full-term male infant, weighing eight pounds and three quarters. The first symptoms—vomiting and convulsions—arose when the child was two weeks old. Temporary relief followed careful dieting, but the vomiting and diarrhœa reappeared a week later, and the child died at the age of seven weeks and five days. Three days before death, dilatation of the stomach was made out, but at no time could any tumor in the region of the pylorus be felt. At the autopsy there was found great hypertrophy, with almost complete occlusion of the lumen of the pylorus.

The authors carefully review the literature on the subject. There are two theories as to its causation: (*a*)

congenital redundancy of pyloric tissue; and (*b*) congenital gastric spasm. Obstinate vomiting with constipation may suggest the disease, but a diagnosis cannot be made in the absence of a tumor. The prognosis is extremely grave, but recovery is reported as having taken place in six cases. Rectal feeding may lead to temporary improvement, but in the severe cases nothing short of surgical intervention will be of any avail. In the milder cases, nasal feeding is of value; it obviates the peristalsis induced by deglutition and minimizes the spasmodic stenosis of the hypertrophied pylorus.

Further Observations on Epidemic Arsenical Peripheral Neuritis. By Dr. E. S. Reynolds.—The author's observations are based upon cases seen in the Manchester epidemic of arsenical peripheral neuritis due to contaminated beer. He reports a few symptoms not previously noted. The pigmentation does not occur in fair-complexioned patients, or only to a slight degree. The rash is at first erythematous, especially on the hands, face, neck, and upper part of the chest. It becomes gradually darker, then passes into marked pigmentation, which finally desquamates in small branny scales. Herpes is only moderately common. Neuralgia has been observed in a few cases. Poststernal and epigastric pain has been noted in a few cases, together with breathlessness and weakness on exertion, these symptoms being similar to those seen in beri beri. The interesting question as to how much of the total of its symptoms can be ascribed to arsenic, and how much to alcohol, can hardly be answered at present. The present epidemic can be traced back for over twelve months.

The Strength of the Hypertrophied Bladder. By Dr. D. W. Samways.—When the bladder hypertrophies, its whole wall is strengthened. The interfascicular spaces, by becoming sacculated, are put into what is economically and mechanically the most ideal condition for supporting pressure. When large sacculi develop or spontaneous rupture occurs, the causes are probably additional pathological complications rather than errors in mechanical principles during hypertrophy.

Intraperitoneal Rupture of the Bladder; Operation Four Days after Injury; Recovery. By W. P. Blumer, F. R. C. S.—the author reports the case of a man, aged thirty-five years, who suddenly became giddy on the street and fell, striking his abdomen. All attempts at micturition were fruitless, and four days later he walked two miles to the infirmary. The abdomen was greatly distended, and absolutely dull over both flanks. On passing a soft catheter, 196 ounces of bloody urine were removed. Laparotomy was performed, and a vertical tear on the posterior wall of the bladder was found. The abdominal cavity contained considerable urine. The rent was closed with continuous sutures, the abdomen closed (a drainage tube being left in) and the patient made a gradual recovery. The interesting points are: (1) the length of time between the injury and the operation; (2) the large amount of fluid in the abdomen, causing comparatively little trouble; (3) that four days after the injury the patient walked over two miles; and (4) the absence of symptoms of peritonitis.

Notes on a Case of Profuse Hydroperitonæum Complicating Uterine Fibroids.—The author reports a case of hydroperitonæum in a woman suffering from uterine fibroids, following an accident in which she was knocked down by a cart and severely bruised. The following points are of interest: (1) the ovaries and tubes were healthy; (2) the tumors removed were simple fibromyomata; (3) up to the date of the accident no free fluid had been discovered in the abdomen; (4) emaciation was first noticed, and free fluid in the abdomen first detected, about six weeks after the accident; (5) so far as could be ascertained, the patient was free from thoracic or abdominal disease; (6) though aspiration was performed five times in six weeks, yet there was no reaccumulation of fluid after the supravaginal hysterectomy, and the patient remains in perfect health.

The hydroperitonæum was directly caused by the injury to the peritonæum covering the fibroids.

Otomycosis in the Tropics. By Dr. H. C. Highet.—Otomycosis is very common in Singapore and Bangkok. All the cases seen were in adult Europeans; children are said to be exempt from the disease. There may be simply blocking of the external auditory meatus, or there may be considerable pain and discharge. Where acute diffuse inflammation supervenes, the pain is intense. The meatus is filled with a soft, wool-like substance, varying in color from pale yellow to pale green, according to the particular type of fungus present. In chronic cases, sodden impacted masses will be found in the meatus. The prognosis is good, as the disease is readily curable. As much of the fungus as possible should be removed with a probe and cotton; the canals should then be syringed with a warm 1 to 5,000 bichloride solution. They are then to be wiped and dried with cotton wool and finally sponged out with a 1 to 1,000 solution of bichloride in absolute alcohol. This causes considerable pain for a moment, but it soon passes off. After the fungus has ceased to grow, a powder of boric acid, bismuth salicylate, and oxide of zinc, should be insufflated.

Some Points in the Treatment of Spinal Abscesses. By A. H. Tubby, F. R. C. S.—1. Do not wait to open a spinal abscess until the skin is reddened and involved. 2. So far as possible open the abscess at certain "seats of election," the places of evacuation to be decided by the direction taken by the abscess and by the surgeon. 3. Whenever evacuation is decided upon, let it be done, so far as possible, away from the groin, and in such a position that more than one opening can be made into the abscess cavity. 4. Carefully cleanse the cavity and rub the interior thoroughly with iodoform or menthol solution. 5. Avoid drains of all kinds. 6. Be careful to carry out perfect aseptic measures from first to last.

A Case of Restoration of the Lower Lip after almost Complete Excision for Epithelioma. By Dr. R. Kennedy.—The author reports a case where restoration of the lower lip was effected by means of Trendelenburg's operation. Sixteen months later, no retraction of the lip from scar formation had taken place, and the patient was able to use the lip perfectly.

Two Cases of Blindness Due to Sphenoidal and Ethmoidal Sinus Disease, both Cases Terminating Fatally Necropsy. By Dr. G. V. Miller.

Complete Prolapse of the Rectum Successfully Treated by Intra-abdominal Fixation. By T. S. Kirk, M. B.—The author reports a case of this affection in a male child aged twelve months, where the prolapse of the rectum refused to yield to the ordinary modes of treatment. The abdomen was opened in the left iliac fossa, the iliac fascia was exposed and the bowel was stitched with a fine continuous silk suture to the exposed area. The child made a rapid recovery, and the rectal prolapse has not recurred. The only objection to this apparently ideal operation is the risk of a subsequent ventral hernia, and this can be minimized to a great extent by splitting the muscles and aponeuroses so far as possible and not cutting them.

Presse médicale, December 5, 1900.

Affections of the Vascular Apparatus.—M. Hutinel writes an historical review of the views held on the diseases of the heart and its valves and of the blood-vessels during the present century. (*To be continued.*)

Berliner klinische Wochenschrift, December 3, 1900.

Diabetes Mellitus.—An historical review by Professor von Noorden.

Chronic Diffuse Œdema of the Skin with Involvement of the Larynx.—Dr. W. Lublinski reports such a case in which no nephritis existed, neither was there a myxœdema, nor could the diagnosis of diffuse scleroderma be made as the skin was pale and not bluish-red. The patient improved under treatment by thyreoid extract, but was not completely cured.

Results of Thyreoid Therapy in Sporadic Cretinism.—Dr. H. Neumann says the most striking result is the diminution of the myxœdematous symptoms, especially in the loss of weight due to the lessening of the amount of unhealthy tissues. The increase in stature was next noted, the growth being mainly osseous, the teeth sharing in this development. The cerebral symptoms also improved markedly. The treatment must be begun as soon as possible after the initial period of the disease, in order to gain the best results.

Treatment of Fractures of the Jaw.—Professor Warnekros writes of the prosthetic apparatus to be used in these cases and urges a more general recognition on the part of the profession of the methods now available, especially the guttapercha plate for use within the mouth.

Treatment of Nervous Diseases at Home.—Dr. R. Gnauck speaks of the difficulties and the best methods of overcoming them.

Deutsche Medizinal-Zeitung, December 10, 1900.

Diplococcus Influenza.—Dr. Schtschegolew describes a number of cases which ran the clinical course of influenza and seemed to be contagious, in which he succeeded in isolating a diplococcus that had some biological distinction from the ordinary diplococcus found in pneumonia. The same organism was detected in cases of acute conjunctivitis. One of the patients developed pneumonia and died of it. The author thinks the morphological differences may be attributed to the changes which take place when the diplococcus of Fränkel and Weichselbaum is transplanted to agar.

December 13, 1900.

Light Therapy and Electric Light Baths.—Dr. Max Heim says that the influence of electric light upon the activity of the cells and increased metabolism is absolutely proved. Chlorosis and anæmia, rheumatic affections, gout, obesity, neuralgias, colds, multiple sclerosis, tertiary syphilis, arthritis deformans and neurasthenia have all been favorably influenced, partly through beneficial blood changes and in part by heightened metabolism. Psoriasis and allied skin diseases have likewise benefited under the light treatment. He says the treatment should, however, not be used alone, but in combination with general therapy.

Centralblatt für Chirurgie, December 8, 1900.

Use of the Bur for the Division of Flat Bones.—Dr. Paul Meisel describes in detail his invention of a bur which is of especial use in the division of flat bones, such as the skull. In the Freiburg clinic it has been used for osteoplastic trephining of the skull with eminent success.

Wiener medizinische Blätter, December 13, 1900.

On Chronic Myocarditis.—Dr. J. Wahringer divides the ætiological factors of chronic myocarditis into two stages, the presclerotic and the cardio-arterial. The latter is characterized by increased blood pressure, peripheral endarteritis and, later, by involvement of the internal organs and the vessels of the heart. (*To be continued.*)

Münchener medicinische Wochenschrift, December 11, 1900.

Traumatic Movable Kidney.—Dr. Erwin Paye has seen cases in which severe massage of the lumbar and abdominal muscles, undertaken for other diseases, has evoked a movable kidney. This may arise further from a severe fall upon the feet or the buttocks, or from constant irritation of the kidney with a tendency to downward displacement while the trunk is immovable, as in horseback riding. It may arise from severe lumbar injury, great compression of the thorax, or severe muscular exertion. There is always probably a disposition for the kidney to be easily moved on a change in the abdominal balance of pressure. (*To be continued.*)

Action of Various Poisons upon Distoma Hepaticum. By Professor von Tappeiner.

Iodine Poisoning from Potassium Iodide.—Dr. O. Muck reports two cases in which an iodine acne, nausea and other symptoms appeared in varying intensity.

Immobile Butyric-acid Bacilli and their Relation to Anthrax Affections. By Dr. A. Schattenfroh and Dr. R. Grassberger.

Small-pox Epidemic of the Summer of 1900.—Dr. Martin Kauffmann reviews the features of the small-pox epidemic in Frankfort last summer. The epidemic lasted three months and not one case developed among the *personnel* of the hospital, all having been vaccinated as soon as the outbreak occurred. There were in all twenty-seven cases. Patients who had been vaccinated under twenty years were all lightly affected; but those whose vaccinations had been undertaken fifty years or more ran severe courses. Between these periods, the cases were moderately severe. Four patients were successfully vaccinated while they were suffering from variola, one of them dying of the disease. Only one patient was received who had been vaccinated under six years before the epidemic.

Case of Lichen Obtusus. By Dr. G. Hügel.

Chloral and Hæmorrhage.—Dr. E. Model says that owing to arterio-sclerotic conditions he took chloral or bromides for some time and invariably suffered from hæmorrhages from the stomach, lungs or nose whenever he made great physical exertion, such as long walks or mountain climbing. Immediately upon stopping the drug, the hæmorrhages ceased. The author says, therefore, that drugs which lower the blood pressure are better not taken when arterio-sclerosis exists.

Vaccinations in Bavaria in 1899. By Dr. L. Stumpf.—A statistical review.

Medicinische Woche, December 10, 1900.

Retrospect of the Artificial Foods.—Dr. Vollmann thinks that, although tropon and plasmon are nutritive to a high degree in cases of malnutrition and convalescence from wasting diseases, they are still too dear to be of universal use. He looks for some combination, possibly

of casein and meat albumin, which, with the same nutritive power, will be within the reach of all.

Riforma medica, November 27, 1900.

Werlhof's Disease: Treatment with Endovenous Injections of Bichloride of Mercury. By Dr. Arnaldo Lusignoli.—The author reports three cases in which intravenous injections of mercuric bichloride were given in order to introduce into the system an antiseptic that would counteract the infectious agent of the disease, whatever this agent may be, in a manner analogous to that already used in malarial infection with injections of quinine. In addition to the three cases whose histories are given, the author mentions two other instances of Werlhof's disease which yielded to injections of bichloride, and a sixth case in which the patient was moribund when admitted to the hospital and died in a short time in spite of the injections. The author's conclusions are as follows: (1) The hæmorrhagic diseases, scurvy, purpura, peliosis, are due to the presence of a micro-organism whose products circulate in the blood of the patient. (2) These diseases can be distinguished from one another only by their intensity. (3) These diseases can be successfully treated with intravenous injections of bichloride of mercury.

November 28 and 29, 1900.

The Treatment of Purulent Cystitis with Irrigations of Sulphocarbolate of Zinc. By Dr. A. Scarcella, and Dr. E. Sapuppo.—The authors' experience with this mode of treatment enables them to state that irrigations of the bladder with two-per-cent. solutions of sulphocarbolate of zinc constitute a very efficient therapeutic measure in purulent cystitis, because this salt is an energetic antiseptic, and yet is well tolerated by the system. These irrigations were sufficient, without any other treatment, to combat the most obstinate cases of cystitis. The authors give the histories of nine cases and mention twelve other cases of purulent cystitis in which a complete cure was accomplished in a comparatively short time by means of injections of sulphocarbolate of zinc. They used a double-current catheter with continuous flow or an irrigator of Cantani's pattern, and employed a litre or more of the solution at each irrigation. They recommend that the urethra be flushed out with the sulphocarbolate solution before the sterilized catheter is introduced, in order to remove the pus that may have adhered to the urethral wall. On the second or third day, the local symptoms usually disappeared, and the introduction of the catheter was no longer painful. The urine of the patients was examined daily in order to observe the manner in which the inflammatory process receded. At first, the globules of pus disappeared from the urine; then followed the crystals of triple phosphate; the epithelial cells, however, persisted until after the patient had been discharged cured. In some cases the crystals of triple phosphate disappeared before the pus globules.

Gazzetta degli ospedali e delle cliniche, November 18, 1900.

Concerning Intestinal Obstruction Due to the Diverticulum of Meckel. By Dr. R. Caminiti.—Cases of this kind are comparatively rare, and Provera collected only thirty-eight cases of intestinal obstruction due to this cause in which operations were performed. [Bérard and Delore (De l'occlusion intestinale par le diverticule de Meckel, *Revue de chirurgie,* Paris, 1899, Nos. 5 and 6) state that the diverticulum of Meckel persists in one person out of fifty-five.] The author reports the history of a case of obstruction due to Meckel's diverticulum which he operated on in 1897.

The patient was a man aged thirty-six years who had been suffering from digestive disturbances for a considerable length of time. In May, 1897, he was seized with an abdominal pain after an imprudence in diet. The pain grew steadily worse, and on the second day there was complete absence of defæcation in spite of all possible remedies. Tympanites, borborygmi and increased peristaltic movements were observed, and it was noticed that the pain seemed to radiate from the right iliac fossa through the rest of the abdomen. In this region there was also felt a resistant mass of the size of a fœtal head, but without distinct outlines. Vomiting of food began on the fourth day and became speedily fæcal in character. Then operation was decided upon. When the abdomen had been opened, it was found that a band as thick as an ordinary quill extended from a loop of small intestine, beginning at the side farthest away from the mesenteric attachment and extending to the umbilicus. This band was provided with a mesentery near its attachment to the small intestine. The portion of intestines to the right of the band was free, but a loop, shaped like a horseshoe, was found adherent to the abdominal parietes. This loop was from twelve to thirteen centimetres in length, and was adherent for a distance of from five to six centimetres in front and behind by means of old and firm adhesions. Under this loop, which was thus held down by adhesions and by the band above described, a larger loop of small intestine had "insinuated itself" and had become strangulated. The band was cut at the umbilicus and at the intestinal attachment, and as it was found to be a pervious diverticulum, the gap in the intestine was sutured by Lembert sutures. The adhesions were next separated, and the large loop of intestines was freed. It was found to be about forty centimetres in length, congested, and dark red in color. The intestines were replaced and the incision united by three rows of sutures. The patient died on the fourth day after the operation, probably from an intestinal toxæmia. The author cites several similar cases in which death occurred apparently from toxæmia after the operation (Pearce Gould and others in the London Clinical Society, December, 1897). On histologic examination it was found that the band was Meckel's diverticulum and was pervious for about one half its length. Its mucosa contained numerous follicles of Lieberkühn. A statistical review of forty-six cases of this kind is also given. Of these cases, thirty-six proved fatal after operation. Only three occurred in women, and all the rest were in men under fifty-one years of age, except one, who was sixty-two years of age.

Concerning a Case of Quincke's Disease. By Dr. B. Zamboni.—The author reports a case of angeioneurotic œdema, which he observed in his clinic in January, 1897. The patient was a man aged thirty years, who presented the typical symptoms of what Senator called hydrops articulorum intermittens, but, in addition, there was œdema of the face, the scrotum, the buttocks, and of the glottis, giving rise to the phenomena of suffocation. The same condition was found in the patient's father and brother.

December 2, 1900.

Skin-grafting with Pieces of Skin Obtained from Hens. By Dr. Emilio Bianchi and Dr. P. L. Fiorani.—The authors report a satisfactory result obtained by skin-grafting with hen's skin according to the method sug-

gested by DeFrancesco. In this case the defect in the skin was very large, and, although a part of the ulcer was covered with skin-grafts from a child, it was impossible to obtain sufficient skin to cover the remainder. A young hen was obtained and a portion of skin was thoroughly cleaned, deprived of feathers, and disinfected. Fourteen strips of epidermis and derma, about one square centimetre each, were removed from the lateral portion of the chest of this hen, and were put in position on the wounded surface so soon as they were cut off, one by one. These strips were disposed in three parallel lines on the defective surface; the lateral lines were one centimetre distant from the respective margins, and the middle line was two centimetres distant from the lateral lines on either side. The wound was dressed with sterilized gauze and with sterile cotton. The surface was washed with sterile water on the seventeenth day, when the grafts were all found adherent and in good condition. On the nineteenth day, the grafts were observed to increase in size, and in a short time the surface was completely covered. The author adds that the new skin does not "show any signs that would excite the fear of a growth of feathers," and presents a smooth, normally colored surface resembling in all respects human skin.

Concerning a very Rare Case of Complete Occlusion of the Œsophagus. By Dr. A. File-Bonazzola.—The patient was three years old, and, when first seen by the author, he had been unable to swallow any food or liquid for ten days previously. He was given a cup of water to drink, and drank it with avidity, but after a few swallows, rejected the water, mixed with mucus. The mother stated that these attacks had been recurring at intervals for two years. During these attacks the child could not swallow any food and retain it for any length of time. On examination it was found that there was a complete stenosis of the œsophagus, so that the smallest sound could not enter. The child was too exhausted when brought to the hospital to permit of surgical interference, and died during the first night after admission. On autopsy, a scar was found on the posterior portion of the tongue and the œsophagus was greatly dilated at its upper end. A fibrous ring was found in the œsophageal wall at the lower pole of the fusiform dilatation, and about five centimetres and one half from the upper end of the gullet. In this ring a mass of bread crumbs was found tightly wedged. On the removal of the crumbs, a No. 12 sound passed through the ring. On incising the fibrous ring, the author found an ulcer of the œsophageal wall about one centimetre in diameter, and round in shape, with hard, prominent margins. It is probable that the whole trouble arose from the swallowing of some caustic substance. In all probability this substance was lye, for such cases are not uncommon in Rome. Œsophagotomy performed in time would have probably saved the child.

A Case of Otitis Media Purulenta with Mastoiditis and Symptoms of Diffuse Meningitis. By Dr. Salvatore Satullo.

Scottish Medical and Surgical Journal, December, 1900.

The Invention and Evolution of the Midwifery Forceps. By Dr. A. R. Simpson.—An inaugural address.

Organotherapeutics, Especially in Relation to Mental Diseases. By Dr. C. C. Easterbrook.—General conclusions. Brown-Séquard's generalization, that "all glands and all tissues have an internal secretion, all injected subcutaneously have a tonic effect," undoubtedly requires modification. The animal extracts, consisting mainly of simple proteids (albumin and globulin) and albuminoids, merely have a dietetic value; but those which are rich in nucleins and nucleoproteids produce, when given by the stomach and in sufficiently large doses, a temporary stimulation of cell-catabolism with a subsequent anabolic reaction, this being evidenced by the common increase of the water, total solids, urea and phosphoric acid of the urine, by the general tendency to a subfebrile pyrexia, and, perhaps, most important of all, by the initial loss in weight followed by a gain. These substances may thus be termed "metabolic tonics." Apart from the general tonic effect upon cell metabolism, it is extremely doubtful whether each organ possesses a specific internal secretion. Some organs do, as witness the thyreoid and suprarenal glands. Thyreoid extract stands far above all the others in the stimulation of catabolism or tissue oxidation, and, when it is administered in large doses, the anabolic reaction never sets in until after the cessation of the use of the drug. Whereas, in the case of all the other "metabolic" extracts, an anabolic rebound generally sets in during the continuance of the administration of the drug.

Four Cases with Affections of Multiple Abdominal Organs. By Dr. R. C. Buist.—The cases here reported were as follows:

1. Medullary cancer of both ovaries; pelvic cyst. The operation itself was successful, but the growth soon recurred and death took place in a few weeks.

2. Left ovarian cyst; right hydrosalpinx; encysted appendix vermiformis. Operation followed by recovery.

3. Gall-stones; cystic left ovary; retroflexion of uterus; right femoral hernia. Operation followed by recovery.

4. Malignant deciduoma of uterus and right ovary.

Angina Ludovici; a Favorable Case. By J. T. Fox, M. R. C. S.—The author reports a case of the above-mentioned affection occurring in a boy aged fifteen years, following exposure. Onset sudden. The whole submaxillary region seemed involved in a tender, elastic, resistant swelling, almost symmetrical, similar to that of mumps, but the parotids were not affected. On the third day, the floor of the mouth was coated with a thick, white, false membrane. The swelling of the neck localized itself on the left side, and on the seventh day suppuration took place. The pus escaped by an incision on the floor of the mouth near the canine tooth. Examination of the pus showed many micro-organisms, principally staphylococci and streptococci. Convalescence was established in a fortnight.

Difficulties in Labor Due to Shoulders. By Dr. R. G. M'Kerron.—The author reports two cases of difficult labor due solely to the size of the child's shoulders. In one case, the child was still-born: in the other it became necessary to eviscerate the infant. In one case, pregnancy had been unduly prolonged. He reviews shortly the conditions in which the shoulders may be arrested and the various methods of overcoming the difficulty, and closes by agreeing with Hirst, who recommends it as a good rule of practice to allow no woman to exceed the normal duration of pregnancy by more than two weeks.

American Journal of the Medical Sciences, December, 1900.

A Case of Malaria Presenting the Symptoms of Disseminated Sclerosis, with Necropsy. By Dr. William G. Spiller.—The case reported was one with the symptom—complex of disseminated sclerosis—largely unilateral. A

few cases of disseminated sclerosis attributed to malaria are reported, but none with necropsy. This report is of great interest. Unfortunately, a brief quotation or abstract cannot do it justice, and the perusal of the original is commended.

The Cortical Localization of Sight and Hearing. Report of a Case of Blindness (Slight Light-perception Remaining) and Deafness Due to Cerebral Lesions. By Dr. Clarence A. Good.—The author points out the several steps of progress we have already taken in the direction of cortical localization, and the works of Ferrier, Schäfer, Von Monakow, Henschen, and others, are referred to. His own observation follows in minute detail. His general conclusion is that destruction of the cortical visual areas will lead to a degeneration of the cells in the geniculate ganglia, and the corpora quadrigemina, and to a degeneration of the nerve fibres of the optic tracts and nerves. The macula lutea of one eye is in connection with the opposite angular gyrus.

The Leucocyte Count in Serous Pleurisy. By Dr. John Lovett Morse.—Serous pleurisy is only exceptionally accompanied by an increase in the number of white corpuscles, and then only intermittently so. The white count is of value in two ways in the diagnosis of serous pleurisy: If the physical signs are doubtful and there is no leucocytosis, the condition is almost certainly not pneumonia or empyema, but serous pleurisy. If there is a serous pleurisy and a continuous leucocytosis, some complication is present. The white count in serous pleurisy affords no information as to the duration of the process, the amount of the fluid, and its increase or diminution. The number of white cells is not influenced by the presence of blood or microscopical pus in the fluid or by the degree of fever.

The Operative Treatment of Cirrhosis of the Liver. Report of a Successful Case. By Dr. Charles H. Frazier.—Though the operation for the relief of ascites due to cirrhosis of the liver was suggested some years ago, it is only recently that it seems to have attracted the attention it deserves. Suffice it to say that the author's case was typical. As to the operation, it was commenced under local anæsthesia, but after opening the peritoneal cavity, the manipulation elicited so much pain that it was necessary to finish the operation under ether narcosis. The parietal peritonæum of the abdominal wall on either side of the incision was rubbed quite vigorously with a gauze pad, and the very much thickened and contracted omentum was sutured to the parietal peritonæum and to the margins of the wound. The fluid contents of the abdominal cavity were evacuated and the incision closed without drainage. Convalescence was uninterrupted; the patient suffered no ill effects from the operation; the wound healed throughout by first intention. Three months have elapsed since the operation. On the thirteenth day, 328 fluid ounces were withdrawn; on the thirty-sixth day only 96 ounces were withdrawn. There has been no further accumulation of fluid; the patient is no longer bedridden, but goes out daily, and receives no medication other than enough citrate of magnesium to insure a daily evacuation of the bowel. A table of all the previous operations is given.

These cases are so hopeless, the technique so simple, the dangers so trivial and the outlook so promising, that the prospects of this mode of treatment becoming an established one seem bright.

Report of a Case of Extensive Dissecting Aneurysm of the Aorta. By Dr. Herbert Swift Carter.—The special points of interest in the author's case are: (1) The generally dilated condition of the arteries throughout the body. (2) The presence of an accompanying sacculated aneurysm. (3) The fusiform dilatation of the dissecting aneurysm above the origin of the cœliac axis, partially filled with laminated clot. (4) The dissection taking place anteriorly. (5) The complete transplantation of two branches of the aorta. (6) The original opening of the inferior mesenteric artery shown closed by a fibrous nodule.

On the So-called "Irritable Bladder" in the Female. By Dr. Frederic Bierhoff.—The term "vesical hyperæsthesia," or "irritable bladder," is in almost every case in the female erroneously applied. As a true *neurosis*, vesical hyperæsthesia rarely occurs. Where vesical hyperæsthesia exists, it does so only as a symptom. The diagnosis of the causative factor must rest upon a thorough examination, not only of the bladder, but also of the urethra, genital and pelvic organs as well. The treatment must be directed against the local changes and the causative factors.

Brooklyn Medical Journal, December, 1900.

Artificial Illumination. By Dr. L. A. W. Alleman.—A very interesting and readable article on the various methods of lighting both streets and houses. The author speaks highly of the incandescent gas burner. Of acetylene the author says that it "is a light source with which we are destined to become more familiar should it ever be allowed a fair competition on its merits. It should be one of the least expensive of all light producers. It can be made perfectly safe, despite the outcry against its danger, and is a light of superior quality. It is said to give the nearest approach of any artificial illuminant to true sunlight color values, which would highly recommend it in industrial plants and shops where the colors are important. It is a highly concentrated light, and should, on this account, never be used save with proper diffusion."

Vacuum tube lighting is discussed as "one of the startling promises which Tesla has given to the world," though the author is reserved as regards its becoming a "commercial possibility." The author considers that "the whole problem is one of approximating daylight conditions, and to this end there are two essentials: The concealing of the light source, and the diffusion obtained by making the walls, ceilings and furnishings all act as light distributors." "When a reading or a working light is desired in any part of the room an individual light may be added for this purpose." The author's main thesis is that the lights should be covered by reflectors which protect the eye from the light source and direct the light against the wall and ceiling, to effect which purpose a special shade is described. The following remarks upon a reading light are worthy of reproduction and commendation:

"When a room is sufficiently lighted by the indirect method, reading is possible in all parts of the room, but where this ideal condition is not obtainable the best arrangement for reading is an overhead light, preferably screened by a reflector underneath, and a desk or table light with an opaque shade which will protect the eyes and throw the light down upon the book.

"It is a common error to read by a single light which is thrown upon the book while the room is in nearly total darkness. The brilliancy of the page is supposed to be all that is necessary. A momentary consideration of a well-known fact of retinal physiology will show the reason for the discomfort thus occasioned.

"Retinal sensibility increases rapidly in the dark; on entering a comparatively dark room nothing is seen, but in a moment objects begin to be visible. The sensibility increases most rapidly at the moment of entering the dark room, and proceeds more and more slowly until the limit of sensibility is reached.

"When reading by a single light the room presents practically the dark-room condition; all the retina which does not receive the image of the paper is attuned to darkness. When we look up for a moment, the eye instantly makes the adjustment to the room lighting, and when the brilliant page is again looked at it is almost as dazzling as the sun, the contrast is so striking. No one would think of reading in the direct glare of sunlight. We all appreciate that diffused daylight is far preferable; yet from the frequency with which I find this condition reproduced by a reading light, the fallacy must be widely held, and I would lay especial stress upon this point. An insufficient reading light is less harmful than the extreme contrast of a too bright light in a dark room. If only one light can be had, it is better to use a translucent shade and let the light shine in the eyes; it will do less harm than the green reflector delusion.

"With a proper quantity and location of light for reading, the quality of the light must be determined by individual necessities. In practice, I advise those with sensitive eyes to procure a skeleton shade, and cover it experimentally with a succession of tissue papers in delicate tints, till the one is found which proves most acceptable, which is usually a yellow-green."

Historical and Critical Observations upon the Surgery of the Liver and Biliary Passages. By Dr. George Ryerson Fowler.—An interesting historical article, but unsuited for abstract.

Abscess of the Liver. By Dr. Walter C. Wood.—The avenues of infection are: (1) Traumatism; (2) parasites; (3) direct continuation from adjacent suppurative processes; (4) pyæmia. The portal vein constitutes a septic channel from ulcerations of, and operations on, the rectum; dysenteric ulcers of the colon; appendiceal abscesses; typhoid patches; gastro-intestinal catarrh; septic inflammations of the umbilicus; ulcerations of the stomach and duodenum, etc. The hepatic artery is a channel for septic incursion from distant points, as head injuries, osteomyelitis, gangrene of the lung, purulent bronchitis, septic endocarditis, etc. The inferior vena cava is also a possible channel. Such abscesses are usually multiple, but the tropical single, or so-called "idiopathic" abscess is considered probably pyæmic due to some intestinal lesion, and has been preceded, according to local observers, in from seventy-five to eighty-five per cent. of cases, by dysentery. A parallel is to be found in "facial erysipelas, formerly considered to be idiopathic, but now known to arise from a minute abrasion about the nose or ear." Prompt drainage is the only rational plan of treatment. "Waiting for adhesions to form or for pus to approach the surface of the liver or abdominal wall is more dangerous than early operation. Delay is dangerous in three ways, from septic absorption, from the increase in the extent of liver tissue involved and the number of abscesses, and from rupture." The accepted operation to-day is drainage at one sitting; the best results are reported by those who incise the liver with the cautery. "The usual *abdominal operation* is as follows: A vertical incision four inches in length, commencing at the border of the rib, is made over the most prominent part of the swelling. The peritonæum is incised through the entire length of the incision. The general cavity is then packed off with gauze. An aspirator is used to locate the abscess and draw off as much of the fluid as possible. The needle must be large, as the pus is usually thick. An incision, one or two inches long, is now made through the liver tissue into the abscess, with the cautery knife, and the cavity sponged out. Its interior is then explored to locate any abscess admitting of drainage through the first one. It is well to curette a chronic abscess, but probably not an acute one. The use of tincture of iodine to swab out the cavity aids the disinfection. The margins of the liver tissue are then united to the skin with half a dozen sutures, using a round needle; a short drainage-tube and moderately firm packing are then inserted."

The Intra-thoracic Operation.—An incision is made parallel to one of the lower ribs adjacent to the abscess. It is wise to excise at least four inches of the rib so as to permit the introduction of the hand. The costal pleura is then opened for the full length. The pleura covering the diaphragm is next incised for two inches and with the diaphragm is stitched to the costal pleura, thus shutting off the pleural cavity. Waring and other authorities advise this precaution. In the only case of this kind that the author has done, he avoided an empyema and obtained a successful result by packing off the pleura as one usually does the abdominal cavity. An aspirator was then inserted into the abscess and the procedure from this point was the same as in the abdominal operation.

Tumors of the Liver. By Dr. Russell S. Fowler.—A useful article of a text-book character.

Letters to the Editor.

CLAY-EATING.

WINSTON, N. C., *December 15, 1900.*

To the Editor of the New York Medical Journal:

SIR: Allow me to ask for information on a subject of which I have seen very little mention in medical literature, viz., clay-eating. This is a practice quite common among adults in certain districts in the South, and not infrequently we are consulted by parents about children who "eat dirt."

Now, is this a habit pure and simple, is it a gratification of a morbid appetite, or is it Nature's demand for some inorganic material not supplied in the individual's dietary? If the latter, what is this material?

Light on the subject of ætiology and treatment is what I would ask of you directly, and of others, through the columns of the *New York Medical Journal.*

THOMAS W. DAVIS, M. D.

***A perverted or depraved appetite is not uncommon among the insane, and is evidenced especially by anæmic or chlorotic girls, women in the early months of pregnancy, and children. According to the *Reference Handbook of the Medical Sciences,* Vol. i, p. 296, under Appetite, the subjects may be divided into those who eat substances unused as food but containing nutritive principles, and those eating objects not assimilable. The first condition is termed malacia; the second, pica. Geophagia, clay-eating, or dirt-eating, is said to be common among certain races of native Africans, and instances occasionally occur among civilized peoples. Geophagy is supposed by some to be possibly hereditary. A neurosis of digestion, bad and insufficient food, chloro-anæmia, in-

flammation of the mesentery and ankylostoma duodenale are also given as causes. The principal therapeutic indication is to seek out and remove the cause. For more detailed information our correspondent is referred to the before-mentioned article.

Book Notices.

Life and Letters of Thomas Henry Huxley. By his Son, LEONARD HUXLEY. In Two Volumes. With Portraits and Illustrations. New York: D. Appleton and Company. [Price, $5.00.]

HUXLEY was intended for a medical career, and it has been a subject of speculation with many as to the possible influence he might have exerted on medical science had he pursued the study to the end. According to the custom in vogue at the time he began his studies, he was apprenticed to a medical man, a practical preliminary to walking the hospitals and obtaining a medical degree in London. While preparing for the matriculation examination of the University of London, he attended lectures at the Sydenham College, and it was here he won his first prize—the silver medal of the Pharmaceutical Society of Great Britain, awarded in open competition for proficiency in botany. His first scientific paper, published in the *Medical Gazette* in 1845, when he was nineteen years old, announced his first anatomical discovery, that of the existence of a membrane in the root of the human hair, which still bears the name of Huxley's layer. As a student he was successful in all branches of study, winning honors in chemistry, anatomy, and physiology. In 1845 he passed the first M. B. examination at London University and carried off the gold medal for anatomy and physiology.

Huxley, however, cared little for purely medical studies; his great desire was to be a mechanical engineer. The only part of his professional course which really and deeply interested him was physiology, and that because he regarded it as "the mechanical engineering of living machines." Paradoxical as it may seem, his divorce from medicine as the art of healing dates almost from the moment he received his M. B. degree; for soon after graduating, on the recommendation of Sir Joseph Fayrer (the present eminent physician), he applied for and received a commission in the medical service of the navy. After a sojourn of several months at Haslar Hospital, he was appointed assistant surgeon to the *Rattlesnake,* a twenty-eight-gun frigate, which was fitted out for a surveying expedition to New Guinea. His almost complete alienation from purely medical studies after his appointment to the *Rattlesnake* is shown in the fact that the cruise resulted in no contribution to medical science, and we search in vain through the letters for any allusions to his medical work on board ship. Zoology claimed him thereafter, and one of his earliest pieces of research work in biological science was an account of *Physalia,* or the Portuguese man-of-war, as it is called, which was noticed in the *Proceedings of the Linnæan Society.* The cruise of the *Rattlesnake* lasted four years, and, as Professor Virchow has said, made of Huxley a perfect zoologist and a keen-sighted ethnologist:

"How this was possible any one will readily understand who knows from his own experience how great the value of personal observation is for the development of independent and unprejudiced thought. For a young man who, besides collecting a rich treasure of positive knowledge, has practical dissection and the exercise of a critical judgment, a long sea voyage and a peaceful sojourn among entirely new surroundings afford an invaluable opportunity for original work and deep reflection. Freed from the formalism of the schools, thrown upon the use of his own intellect, compelled to test each single object as regards properties and history, he soon forgets the dogmas of the prevailing system and becomes first a skeptic and then an investigator. This change, which did not fail to affect Huxley, is no unknown occurrence to one who is acquainted with the history, not only of knowledge, but also of scholars."

His work on the *Rattlesnake* received almost immediate recognition. On his return to England, his leadership in science was readily acknowledged, and he was honored in various ways. He was elected a fellow of the Royal Society, being at the time the youngest fellow on record, and membership in learned societies and election to positions of responsibility in scientific bodies, besides appointment to various important government commissions, came in quick succession. The turning point in his career was reached in 1854, when he obtained a permanent lectureship in London. In the same year he was appointed naturalist of the Geological Survey, and closely following this he was offered a lectureship on comparative anatomy at St. Thomas's Hospital, and in September he was asked to lecture for the science and art department at Marlborough House. Up to 1854 Huxley's work had been almost entirely morphological, dealing with the invertebrates. Palæontology and administrative work then began to claim more of his attention, and his essay on Palæontology, published in 1856, was the first of a long series of papers dealing with fossils, the description of which fell to him as naturalist to the Geological Survey.

By his services in expounding the principles of evolution promulgated by Darwin in his *Origin of Species,* he earned for himself the title of the "Great Apostle of Evolution," and his widest renown was probably derived from the matchless skill in controversy which he exhibited in making the discoveries of Darwin clear to the comprehension of the public and giving them the sanction of exact demonstration. Popularly and with many persons of real culture and education, too, Darwin's explanation of the cause of evolution was regarded as a "capricious and antitheological assertion that men are descended from monkeys." At the Oxford meeting of the British Association in 1860, Huxley made a notable effort to extort a fair hearing for Darwin's ideas. Darwin's theory of evolution was discussed by Bishop Wilberforce in what was considered an unfair and unbecoming way. Bishop Wilberforce attempted to cast ridicule upon both Darwin and Huxley, rallying the latter on his descent from a monkey. "In a light, scoffing tone, florid and fluent," according to an auditor who lately recorded his impressions of the speech in *Macmillan's Magazine,* "he assured us that there was nothing in the idea of evolution; rock-pigeons were what rock-pigeons had always been. Then, turning to his antagonist with a smiling insolence, he begged to know was it through his grandfather or his grandmother that he claimed his descent from a monkey?" This descent to personalities gave Huxley a tactical advantage which he immediately seized upon. Turning to his neighbor, he exclaimed: "The Lord hath delivered him into mine hands." Perhaps the most accurate account of Mr. Huxley's reply (the exact words have been variously reported) is that of Mr. J. R. Green, as follows:

"I asserted—and I repeat—that a man has no reason to be ashamed of having an ape for his grandfather. If there were an ancestor whom I should feel shame in recalling, it would rather be a man—a man of restless and versatile intellect—who, not content with an equivocal success in his own sphere of activity, plunges into scientific questions with which he has no real acquaintance, only to obscure them by a nameless rhetoric, and distract the attention of his hearers from the real point at issue by eloquent digressions and skilled appeals to religious prejudice."

Huxley was a lover of truth and sincerity, and his letters to colleagues in science reveal this salient feature of his mental character. The story of his life is fully narrated in the letters and his conversation, and the biography is thus to a great extent autobiographical. The author lets his father speak for himself, only supplying so much biographical matter as is needed to make a connected narrative and likely to lead to our better understanding of the man.

Almost every subject of human interest claimed the attention of Thomas Henry Huxley; and it would require the most profound expert analysis to give a fitting exposition of his researches into Nature and philosophy. His published works include twelve volumes of collected essays, six text-books still in constant use, and about 150 articles contributed to scientific periodicals, besides many reviews. All who are interested in the history of scientific inquiry in the nineteenth century will be amply repaid by a perusal of these letters and reminiscences compiled by the son of the gifted scientist.

Studies of American Fungi. Mushrooms, Edible, Poisonous, etc. By George Francis Atkinson, Professor of Botany in Cornell University and Botanist of the Cornell University Agricultural Experiment Station; Author of *Studies and Illustrations of Mushrooms, Biology of Ferns, Elementary Botany, Lessons in Botany.* With a Chapter on Recipes for Cooking Mushrooms, by Mrs. Sarah Tyson Rorer; on the Chemistry and Toxicology of Mushrooms, by J. F. Clark; and on the Structural Characters of Mushrooms, by H. Hasselbring. With Two Hundred Photographs by the Author, and Colored Plates by F. R. Rathbun. Ithica, N. Y.: Andrus and Church, 1900. [Price, $3.00.]

While the number of people in the United States who are interested in the collection of mushrooms is small as compared with the number of Europeans who have some knowledge of the subject, there has been a remarkable increase of interest in the study of the edible fungi throughout the Eastern United States during the past few years. One of the best indications of the growing interest in mycology is furnished by the appearance of several works on the subject by American authors within a comparatively short space of time, including Gibson's, Taylor's, Peck's, and McIlvaine's, all of which have been published within the past five years. The latest addition to this list is the work of Professor Atkinson, which is devoted especially to the study of the various genera of agarics found in the United States. The most striking feature of the work is the wealth of original illustrations, made in excellent half-tones from photographs, showing numerous typical specimens of each of the varieties described. There are, in all, some 222 figures in the volume, a large majority of which consist of unusually fine photographic plates. There are also some five excellent colored plates in which the natural colors are reproduced with a very satisfactory degree of accuracy. The descriptions are accurate and are sufficiently broad to embrace the various slight modifications which the type sometimes undergoes, which modifications have been ignored by some popular writers on the subject, to the great confusion of the self-taught student.

As the book is intended for popular purposes, the author has very wisely included a chapter giving recipes for cooking mushrooms, by Mrs. Sarah Tyson Rorer, and also a brief summary of the chemistry and toxicology of mushrooms from the pen of Professor J. F. Clark. This latter chapter will be found of particular interest by physicians who may be called upon to treat suspected cases of mushroom poisoning.

The book will undoubtedly prove of great value to those who are interested in the study of mushrooms from the practical point of view, and to even the trained scientific observer the excellent photographs will be of great interest.

BOOKS, ETC., RECEIVED.

Diseases of the Nervous System. A Text-book for Students and Practitioners of Medicine. By H. Oppenheim, M. D., Professor at the University of Berlin. Authorized Translation by Edward E. Mayer, A. M., M. D., of Pittsburg. First American from the Second Revised and Enlarged German Edition. With Two Hundred and Ninty-three Illustrations. Pp. 5 to 899. Philadelphia and London: J. B. Lippincott Company, 1900.

Medical Electricity. A Practical Handbook for Students and Practitioners. By H. Lewis Jones, M. A., M. D., Medical Officer in Charge of the Electrical Department in St. Bartholomew's Hospital, etc. Third Edition. With Illustrations. Pp. xv-532. London: H. K. Lewis. Philadelphia: P. Blakiston's Son & Company, 1900. [Price, $3.00.]

The Treatment of Fractures. By W. L. Estes, A. M., M. D., Physician and Surgeon-in-Chief of St. Luke's Hospital, South Bethlehem, Pa. Pp. 216. New York: International Journal of Surgery Company, 1900.

Disinfection and Disinfectants. A Treatise upon the Best-known Disinfectants, their Use in the Destruction of Disease Germs, with Special Instruction for their Application in the Commonly Recognized Infectious and Contagious Diseases. By H. M. Bracken, M. D., Professor of Materia Medica and Therapeutics, University of Minnesota, etc. Pp. 85. Chicago: The Trade Periodical Company, 1900.

A Compend of Diseases of the Skin. By Jay F. Schamberg, A. B., M. D., Professor of Diseases of the Skin, Philadelphia Polyclinic and College for Graduates in Medicine, etc. Second Edition, Revised and Enlarged. With 105 Illustrations. Pp. xv-9 to 291. Philadelphia: P. Blakiston's Son & Company, 1900. [Price, 80 cents.]

Food and the Principles of Dietetics. By Robert Hutchison, M. D. Edin., M. R. C. P., Assistant Physician to the London Hospital, etc. With Plates and Diagrams. Pp. xviii-548. New York: William Wood & Company, 1900.

Proceedings of the Eighth Annual Meeting of the Association of Military Surgeons of the United States, Held in Kansas City, Missouri, September 27, 28, and 29, 1899. Volume VIII.

Abstract of Report on the Origin and Spread of Typhoid Fever in United States Military Camps During the Spanish War of 1898. By Walter Reed, Major and

Surgeon, U. S. Army; Victor C. Vaughan, Major and Division Surgeon, U. S. Volunteers, and Edward O. Shakespeare, Major and Brigade Surgeon, U. S. Volunteers.

Transactions of the Obstetrical Society of London. Volume XLII. Parts I, II, and III.

The Good Nurse. By James H. McBride, M. D., of Los Angeles, California. (Reprinted from the *Chicago Medical Recorder.*)

Some Observations in Dietetics. By Martin H. Thelberg, M. D. (Reprinted from the *Western Medical Review.*)

Röntgen Rays in the Treatment of Skin Diseases and for the Removal of Hair. By William A. Pusey, M. D., of Chicago. (Reprinted from the *Chicago Medical Recorder.*)

Orthopædic Surgery. A Handbook. By Charles Bell Keetley, F. R. C. S., Surgeon to the West London Hospital, etc. Pp. xvii-539. London: Smith, Elder & Company, 1900. [Price, $5.50.]

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc. Assisted by H. R. M. Landis, M. D., Assistant Physician to the Out-patient Medical Department of the Jefferson Medical College Hospital. Volume IV, December, 1900. Pp. vi-18 to 428. Philadelphia and New York: Lea Brothers & Company, 1900.

Thomas Sydenham. By Joseph Frank Payne, M. D. Oxon., Fellow and Harveian Librarian of the Royal College of Physicians, etc. Pp. xvi-1 to 264. New York: Longmans, Green & Company, 1900.

The Medical Examination for Life Insurance and its Associated Clinical Methods, with Chapters on the Insurance of Substandard Lives and Accident Insurance. By Charles Lyman Greene, M. D., Clinical Professor of Medicine and Physical Diagnosis in the University of Minnesota. With Ninety-nine Illustrations. Pp. xiv-9 to 426. Philadelphia: P. Blakiston's Son & Company, 1900. [Price, $4.00.]

Comparative Physiology of the Brain and Comparative Psychology. By Jaques Loeb, M. D., Professor of Physiology in the University of Chicago. Illustrated. Pp. x-309. New York: G. P. Putnam's Sons, 1900.

A Practical Treatise on Materia Medica and Therapeutics, with Especial Reference to the Clinical Application of Drugs. By John V. Shoemaker, M. D., LL. D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine in the Medico-Chirurgical College of Philadelphia, etc. Fifth Edition, thoroughly Revised. Pp. vii-766. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1900. [Price, $4.00.]

Sanity of Mind. A Study of its Conditions, and of the Means to its Development and Preservation. By David F. Lincoln, M. D. Pp. vi-177. New York and London: G. P. Putnam's Sons, 1900.

Prehistoric Implements. A Reference Book. A Description of the Ornaments, Utensils, and Implements of Pre-Columbian Man in America. By Warren K. Moorehead. Six Hundred and Twenty-one Figures, showing Three Thousand Specimens. Pp. xv-17 to 431. Cincinnati: The Robert Clarke Company, 1900.

A Manual of Surgical Treatment. By W. Watson Cheyne, M. B., F. R. C. S., F. R. S., Professor of Surgery in King's College, London, etc., and F. F. Burghard, M. D., and M. S. (Lond.), F. R. C. S., Surgeon to King's College Hospital, etc. In Seven Volumes. Volume V. The Treatment of the Surgical Affections of the Joints (Including Excisions) and the Spine. Pp. xx-370. Philadelphia and New York: Lea Brothers & Company, 1900.

The American Girl of To-day. By George J. Engelmann, M. D., of Boston. (Reprinted from the *Transactions of the American Gynæcological Society.*)

Miscellany.

An Analysis of the Symptoms Observed in Cases of Tuberculous Meningitis at the Babies' Hospital.—At a meeting of the New York Neurological Society, held on December 4th, Dr. C. A. Herter read a paper with this title. There had been twenty-four cases of tuberculous meningitis, and in fifteen of them there had been autopsies. In these fifteen cases, six patients were of the age of eight months; seven were a year old or under. In the nine cases without autopsy, six patients were five months old. These figures showed that tuberculous meningitis was not so rare in the first year of life as had been supposed by some writers. Nineteen of the cases had run their course in less than a month. The fontanelle had been decidedly distended in seven of the twenty-four cases, and in three there had been a marked excess of fluid found at the autopsy. In one case the fontanelle had been depressed—the child had been sick for four or five months. In six cases there had been a delay in the closure of the fontanelle. Vomiting had been noted in nineteen of the twenty-four cases, and had been the first symptom in fourteen. In five of the cases where there had been vomiting, the autopsy showed nothing different from the findings in cases that had presented no vomiting. In eleven cases there had been marked constipation. In cases coming to autopsy there had also been tuberculous lesions in the intestine. In several of the cases there were tuberculous ulcers of the colon, and yet constipation instead of diarrhœa had been present. The pupils were unequal in twelve of the twenty-four cases and dilated in the others. The pupils were contracted in only two cases. Nystagmus was observed in four cases, and strabismus in ten cases. In the cases showing strabismus there were marked lesions at the base and in the interpeduncular space. There were general convulsions in fifty per cent. There was no case which did not present either rigidity or convulsions. In cases without meningitis, but with tubercles in the brain, convulsions were not so common. Paralysis was noted in ten of the twenty-four cases, and was monoplegic in a number. The variability of these palsies was a rather notable feature. In the cases without meningitis, but with tubercles in the brain, no paralyses were noted. The *tache cérébrale* was noted in seven cases and flushing of the face in ten. All the cases of tuberculous meningitis with autopsy had presented stupor, or coma, or more or less irregularity of respiration, while these had not been observed in any of the cases with tubercles, but without meningitis. Hyperæsthesia had been noted in only one case, and in only one had there been a well-developed cephalic cry. Retraction of the abdomen had been noted to a greater or less degree in fifteen of the cases of tuberculous meningitis, but not at all in the other cases. The fever had not been high in the uncomplicated cases, and the pulse had shown nothing distinctive. In the cases without meningitis

marked opisthotonos and convulsions had been the rule, and early vomiting had been much less frequent than where meningitis was present. Only two or three of the cases had presented solitary tubercles. In all the autopsy cases the cerebral tuberculosis had been clearly secondary. The intestine was the seat of tuberculous lesions in eleven of the thirteen cases in which the intestine was examined. The knee-jerk was increased in a large proportion of cases, and absent in only two. An interesting feature was that at times the knee-jerk would be alternately exaggerated and absent.

The Indian and Colonial Addendum to the New British Pharmacopœia.—According to the *Lancet* for December 15th, the following is the list of substances and preparations contained in the *Addendum:*

Acaciæ cortex
Acalypha
Acetum mylabridis
Acetum urgineæ
Adhatoda
Agropyrum
Alstonia
Andrographis
Aristolochia
Arnicæ flores
Aurantii cortex indicus
Azadirachta indica
Belæ fructus
Berberis
Betel
Buteæ gummi
Buteæ semina
Calotropis
Cambogia indica
Catechu nigrum
Cissampelos
Coscinium
Cucurbitæ semina præparata
Daturæ folia
Daturæ semina
Decoctum acaciæ corticis
Decoctum agropyri
Decoctum cissampeli
Decoctum gossypii radicis corticis
Decoctum hygrophilæ
Decoctum isphagulæ
Decoctum sappan
Embelia
Emplastrum calefaciens mylabridis
Emplastrum mylabridis
Extractum acalyphæ liquidum
Extractum adhatodæ liquidum
Extractum agropyri liquidum
Extractum belæ liquidum
Extractum cissampeli liquidum
Extractum glycyrrhizæ spirituosum
Extractum gossypii radicis corticis liquidum
Extractum grindeliæ liquidum
Extractum kavæ liquidum
Extractum picrorrhizæ liquidum
Extractum viburni prunifolii liquidum
Gossypii radicis cortex
Grindelia
Gummi indicum
Hirudo australis
Hygrophila
Infusum alstoniæ
Infusum andrographidis
Infusum azadirachtæ indicæ
Infusum coscinii
Infusum tinosporæ
Infusum toddaliæ
Isphagula
Kaladana
Kaladanæ resina
Kavæ rhizoma
Kino eucalypti
Liquor andrographidis concentratus
Liquor aristolochiæ concentratus
Liquor berberidis concentratus
Liquor coscinii concentratus
Liquor epispasticus mylabridis
Liquor tinosporæ concentratus
Liquor toddaliæ concentratus
Mucilago gummi indici
Mylabris
Myrobalanum
Oleum ajowan
Oleum arachis
Oleum gaultheriæ
Oleum graminis citrati
Oleum gynocardiæ
Oleum sesami
Oliveri cortex
Oxymel urgineæ
Picrorrhiza
Pilula ipecacuanhæ cum urginea
Pilula urgineæ composita
Podophylli indici resina
Podophylli indici rhizoma
Pulvis buteæ seminum
Pulvis kaladanæ compositus
Sappan
Succus acalyphæ
Succus adhatodæ
Syrupus urgineæ
Tinctura adhatodæ
Tinctura alstoniæ
Tinctura andrographidis
Tinctura aristolochiæ
Tinctura arnicæ florum
Tinctura azadirachtæ indicæ
Tinctura berberidis
Tinctura calotropis
Tinctura coscinii
Tinctura daturæ seminum
Tinctura jalapæ composita
Tinctura kaladanæ
Tinctura oliveri corticis
Tinctura picrorrhizæ
Tinctura podophylli indici
Tinctura tinosporæ
Tinctura urgineæ
Tinctura valerianæ indicæ ammoniata
Tinospora
Toddalia
Turpethum
Tylophoræ folia
Unguentum gynocardiæ
Unguentum mylabridis
Unguentum myrobalani
Unguentum myrobalani cum opio
Urginea
Valerianæ indicæ rhizoma
Viburnum.

The Rule of the Road.—The following editorial remarks from the *Lancet* for December 1st will apply with equally trenchant force to other cities besides London and other countries besides England:

"Weak, nervous, and elderly people are often made very uncomfortable by the overcrowding of the London pavements in the more frequented parts, while busy men are driven to despair by the obstacles to direct walking. Of late the inconvenience experienced has been increased by the fact that the people of London are, on the whole, less orderly and well-mannered than those of a previous generation. The deterioration of public manners of the men, and especially of the boys, in the street is a subject of constant remark among those whose memory carries them back only ten or fifteen years. Formerly the observant Londoner on visiting a country town was often struck by the fact that in the provinces the people, as a rule, walked about without any regard to rule, and he noticed that, although the pavements or 'sidewalks,' to use a convenient Americanism, were less crowded there was much more trouble in avoiding collisions with foot passengers than was the case at that time in any part of London. We regret to say that London is now as bad as, or worse than, any country town. The unwritten rule of the pavement—that a pedestrian should walk on the right side—is a most valuable one, and has not only convenience, but some prestige of antiquity, to support it. It does not, however, date back beyond the last century, and it is not, so far as we know, possible to determine the origin of the rule. It probably came slowly into general use in London. Dr. Johnson, while at breakfast in the Highlands one morning, told Boswell that when his mother lived in London there were two sets of people, 'those who gave the wall and those who took it,' and that when he returned from London to Lichfield his mother had asked him to which set he belonged. 'Now it is fixed that every man keeps to the right,' said Dr. Johnson, 'or if one is taking the wall another yields it and it is never a dispute.' This, according to Dr. Johnson, was the state of things in 1772. All well-behaved and peaceable people took the right side, but the rule was not absolutely established at that date, for some few people still 'took the wall.' Why it was a sign of pride and of a quarrelsome disposition to 'take the wall' when to 'go to the wall' was synonymous with misfortune is a question for philologists; we are concerned only to insist that in the present crowded state of the streets of London order and method should be duly observed by pedestrians."

We would suggest, among other New Year's resolutions, one to "keep to the right" in walking along our crowded thoroughfares.

The Effect of City Life upon the Eyesight.—The *Lancet* for November 17th, commenting on the Boer eyesight, says:

"There will be nothing strange or new to ophthalmologists in General Sir Redvers Buller's remarks regarding the eyesight of the Boers. He says:

" 'Many of our men are city born, and England is not a very large country. We went out to a region where the principal number of our enemies were born in a very open country, a very large country, and it is not untrue to say that practically the vision, the ordinary sight, of our enemy was two miles at least further than the average sight of the English who were fighting against them. That is a matter of actual fact. An ordinary Dutchman or African can see a man coming toward him two miles before the man approaching can detect him.'

"If we recollect aright," continues the *Lancet,* "Lord Wolseley has also stated that when he was in South Africa he was impressed with the same fact, and we have heard it remarked that the Boers are not so much better shots as better judges of distance than our own soldiers.

It is well known, and it can be easily accounted for, that savage or less civilized races living in the open air do not suffer from the imperfect vision resulting from defective accommodation of the eye which often obtains among more highly civilized and educated races whose vision has been accustomed and adapted to more and more limited ranges."

The Proposed Change in the Government of Bellevue Hospital.—The following statement regarding the proposed change in the method of managing Bellevue Hospital, which we print by request, is not a complete "brief" of the case, but represents the point of view taken by physicians who have been for many years connected with this hospital:

"The objects which we desire to obtain by a transfer of Bellevue to the care of a governing board are in general these:

"1. The removal of this institution (which is by far the most important one of its kind in the city) from political control.

"2. The establishment of a stable and permanent method of management, by which its interests can be looked after in connection with more carefully studied and systematic policy.

"First. As regards the desirability of the first point, it does not seem that much argument is needed. It happens sometimes that that hospital falls under the control, as it is at present, of an efficient and intelligent commissioner; but there is no assurance that such wise control will be continued for more than one term of office; and, even if any equally efficient man succeeds him, he must again learn the duties of the place, and his interests and activities may develop another kind of policy. Besides, it seems impossible, however efficient the commissioner, that under our political system he can do all that is necessary to secure a well-disciplined and thoroughly organized service. An inspection of the hospital and a comparison of it with other hospitals managed by responsible boards of governors, not subject to outside influences, will show how wide the differences are between the two methods.

"It may be claimed that the plan proposed will not have the effect desired. To this it can only be said that it has been most carefully studied out with the help of the best advice and largest experience obtainable, and it is confidently believed that it will be effective and practicable.

"Second. As to the question of the advisability of having a permanent board of managing officers, it seems also that no argument is needed to maintain the general proposition. It is in this way that all large non-municipal hospitals are managed throughout this country and in England, and they are usually managed well. On the other hand, the city hospitals of our large cities have the same defects, due to politics and changing policies. That the board hospitals are well run, and the city hospitals badly run, is a perfectly well established fact for America. Furthermore, in Boston and Cincinnati, where the method we propose has been tried for many years, it has worked successfully, so that this is not a purely experimental scheme.

"The history of the growth of Bellevue is the damning evidence of the evils of the present policy of its government. Successive administrations have added, changed, rebuilt, and patched up Bellevue until it is now a congeries of buildings, badly and often extravagantly built, unsuitable for effective work, unharmonious and repulsive architecturally. It might be a wise and economical policy to tear everything down and start afresh on a carefully drawn plan. The buildings consist now of

"1. The Original Hospital.
"2. Sturgis Pavilion.
"3. Marquand Pavilion.
"4. Alcohol Cells.
"5. Insane Pavilion.
"6. Emergency Hospital.
"7. Tuberculosis Hospital.
"8. Infectious Diseases Pavilion.
"9. Morgue Building.
"10. Special Gynæcological Ward.
"11. Special Gynæcological Cottage.
"12. Erysipelas Pavilion.
"13. Drug House.
"14. Protestant Chapel.
"15. Catholic Chapel.
"16. Boiler Building.
"17. Dispensary Building.
"18. Porter's Lodge.

"There are, thus, seventeen different buildings, put up at different periods during the last twenty years and arranged without any consistent purpose or in accordance with any wise foresight. Each administration has apparently aimed to do something to distinguish its policy.

"Objections of various kinds can and have been made: 1. That a non-political board cannot be obtained. 2. That the institution can be better run under one head. 3. That it will split up the work of municipal charity and that friction will occur between the board hospital and the other hospitals under the care of the commissioner.

"These objections are matters of opinion and cannot be argued to advantage here. The question must be decided by the judgment of the commission, enlightened by the experience of the present method and of that of other methods. This at least can be said: That, if the great central hospital like Bellevue is organized and run upon the highest possible scale of efficiency, it will surely have a good effect upon the rest of the city hospitals, just as the streets of Brooklyn grew better after New York's were improved."

Discovery of a Statue of Æsculapius in the Roman Forum.—The Roman correspondent of the *Lancet* for December 15th states that among the recent interesting finds in the Roman Forum is a statue of Æsculapius. It was lying face downward under the central niche of the large arched space surrounding the Well of Juturna, which has lately been excavated under the direction of Professor Boni. The head of the figure and the middle of the right arm are wanting, but the other parts are well preserved. It represents the god with a *volumen* (or roll of paper or parchment on a stick) in the left hand, leaning on his staff, round which is coiled the serpent, the symbol of prudence and renovation. Close to the staff is a child, supposed to be Camillus or Telesphorus, the genius of recovery, in the act of bringing the offering of a cock in his left hand and holding in his right hand a small knife with a pointed blade. The well enjoyed a reputation for the salubrity of its water, and this fact explains, no doubt, the presence in its precincts of the statue of the god of medicine, under whose special protection such wells were placed. The worship of Æsculapius is said to have been introduced into Rome from Epidaurus about 293 B. C., but this statue, which is of indifferent workmanship, belongs to a much later period, probably the first or second century of the Christian Era.

Original Communications.

PREVENTION AND MANAGEMENT OF INFECTION OF THE BREAST DURING LACTATION.*

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IT is almost unnecessary to refer to the importance of this subject. The facts that the majority of nursing women have wounds of the nipple of greater or less extent, that these wounds result in much suffering, that they frequently become infected, that the infection often extends to the breast and causes abscesses, and, not infrequently, long-continued suppuration, show that the management of the breast is one of the most important obstetrical questions. Moreover, the fact that the disturbance of the breast is the cause of much sickness and mortality among infants, makes this an important subject of pædiatrics.

At the beginning, I wish to call your attention to the distinction between infection of the breast and simple hyperæmia or congestion of the breast. This distinction is necessary, for it is important that the difference between the two conditions should be kept in mind. The establishment of the milk secretion is always attended with more or less painful congestion of the breast, and, later, the breasts are liable to become painfully distended whenever the interval between nursings is unusually prolonged. Infection of the breast, on the other hand, is generally attended with fever, and while it is often confounded with simple congestion, it is entirely a distinct process.

Formerly we heard much of the so-called "milk fever" that comes on during the first week of child-bed, about the time of the swelling of the breasts, and was attributed to the establishment of the milk secretion. It is now well proved that this fever is due to genital wound infection. While the secretion of milk, like the secretion of other glands, is attended with a very slight local rise in temperature, this increase in heat amounts only to a few hundredths of a degree, can be measured only by a delicate thermometer, and cannot properly be called fever. Hence the term "milk fever" should entirely be abandoned. If there is no infection, there is no fever. We have, therefore, to consider only the nature, cause, and the diagnosis of infection of the breast, as a basis for the study of its prophylaxis and treatment.

It has been found that the *Staphyloccoccus pyogenes aureus,* the *Staphylococcus pyogenes albus,* and in some cases the *Streptococcus pyogenes,* are the infecting germs. It is well known that the staphylococci always, and the streptococci frequently, are found on the skin and in the ducts of the cutaneous glands. They are found, not only around the nipple, but also in the milk channels, and in the milk drawn from sterilized nipples. While it is doubtful if the *Streptococcus albus* found in the milk is the cause of infection, even if there is an abrasion of the lining membrane of the milk ducts, there can be no doubt that the bacteria found in great numbers on uncleaned nipples are a source of danger. Various sources of contamination are the clothing, the fingers of the mother and nurse, and the face and hands of the child. The mother's nightgown, the child's dress and bib, often soiled with overflow milk, are frequently contaminating agents. The fingers of the mother or nurse, perhaps soiled by coming in contact with lochial or fæcal discharges, when used to draw out the nipple, or cause its erection for a better application of the child, are a common source of infection. Perhaps one of the most dangerous infecting agents is the head or hand of the child. For several years I have noticed that severe infection generally occurs in patients whose babies have boils or pustules on the body, or sore eyes. The pustules open spontaneously, and the pus, smeared over the face of the baby, is rubbed into the nipple when the child is put to breast.

There is some dispute between those who hold that germs enter the breast only through the nipple by way of the lymphatics and those who believe that the milk passages are also routes for infection. The general presence of an abrasion in the epithelial layer of the nipple in cases of infection, and the direct route from the erosion to the depth of the breast furnished by the lymphatic channels, which are favorable routes of most pathogenic bacteria, favor the now generally accepted conclusion that the latter is the route of breast infection.

The diagnosis between infection of the breast and simple congestion, on one hand, and genital wound infection on the other hand, is very important. Simple congestion of the breast is generally important, as a disturbing factor, only during the first days of lactation. While it is often attended with the tenderness which is characteristic of an infection, other symptoms, namely, chills, fever, etc., are absent. As soon as these symptoms develop, all doubt concerning the diagnosis between congestion and infection of the breast must cease.

The diagnosis between genital wound infection and breast infection must be made by a study of the predominant local symptoms. The greatest difficulty is experienced when symptoms of infection coincide with pelvic tenderness, distention of the breast, and soreness of the nipples. In such a case the determination may require some delay.

An important point in diagnosis is the determination of the question whether the infectious process has resulted in the formation of an abscess or not. The centre of the infection and abscess formation is often quite deep, and the determination of fluctuation is difficult. The use of diagnostic aspiration with the large hypodermic needle is in such cases the proper procedure. If fever or local pains continue for more than two or three days in spite of proper treatment, the diagnostic puncture should be made.

*Paper prepared for the meeting of the Mississippi Valley Medical Association, at Asheville, N. C., October 9-11, 1900.

Coming now to the subject of the paper, the prevention and treatment of breast infection, we first have to ask, What, if anything, can be done to prevent infection before lactation begins? The laity, as well as the profession, quite universally believe in various local applications, sometimes astringents and sometimes ointments to the nipple. To develop a retracted nipple, some kind of a suction apparatus is frequently used. The latter I believe to be of very doubtful value, and not to be commended. Fatty substances on the nipple serve as bacteria catchers and so are of questionable propriety. The tanning of the skin of the nipple by astringents will not last long after nursing begins. I believe all that need be done is to give attention to cleanliness during pregnancy, and especially careful washing of the nipple with soap and water. In this way the skin of the nipple is made healthy and resistant, and there will be no accumulation of bacteria when the child is first put to breast.

In this connection it is important to remember that a person in good health resists infection better than one with poor digestion, poor circulation, and poor excretion. Every one has observed how differently infection develops in different patients, and we may conclude that these differences are due to variations in the resisting powers of the patients. If two women have similar wounds, contaminated with bacteria from the same source, one will become infected, and the other remain unharmed, because the tissues of one immediately resist the invasion of the germs, and the tissues of the other do not. It is also a common clinical observation that in one patient an infection may begin in the breast, and in a few hours may disappear completely, while in another patient an infection of the same kind may persist, apparently disappear for a few days, reappear, and eventually terminate in an abscess. Such differences in the progress of breast infections, like similar differences in infection of other parts of the body, must be explained by differences in the resistance of different individuals.

It therefore follows that all measures tending to the improvement of the general health, both before and after confinement, are most important in the prevention of breast, as well as all other, infections.

In child-bed or after nursing begins the two principles of prophylaxis are to avoid contamination with bacteria, and to avoid or heal as quickly as possible the nipple wounds. To meet the first indication, it is necessary to remember the most important sources of infection. The common practice of nurses and patients of taking hold of the nipple with the fingers to draw it out for the child to grasp, is quite unnecessary and should be forbidden. When the nipple is not erected spontaneously, a little pressure on the breast outside of the areola is generally sufficient. If it should seem necessary to take hold of a retracted or flat nipple, the finger should be protected by sterilized gauze.

The danger from the child is from pus escaping from boils, pustules, or sore eyes. The pustular eruption on the neck and face of the child resulting from the easy inoculation of its tender skin with pus germs, is a source of great danger; for the unobserved rupture of a single pustule, and the scattering of its bacteria, is the most common source of infection of the nipple. The management consists in the careful opening of each pustule when it is ripe, the surrounding skin having been thoroughly washed with alcohol, and the evacuation of the matter, leaving the open pustule for some time covered with cotton saturated in alcohol. If the open pustule is on the face, it may be closed with a small drop of collodium. When the face has been contaminated with matter from sore eyes it should be carefully washed before nursing. If one is uncertain how well the washing is done, it is safer to use a nipple shield until the danger is past.

Suppuration in the glands of Montgomery, while not very common, is, while it exists, an important source of danger. Some mechanical injury produced by the nursing child, or by a badly fitting nipple shield, may set up an infectious process. The proximity of the nipple makes such a suppurating gland dangerous. It should be opened like the pustule on a child, and should then be sealed with collodium during nursing.

The general precautions consist in washing the nipples with clean water before nursing, and washing them after nursing with 75 per cent. alcohol, to protect the nipple abrasions from accidental infections from the mouth or skin of the child, and in covering the nipple always with sterilized gauze laid over the breast or attached to the shirt, to prevent contamination with soiled garments or bedclothes. As a disinfectant, alcohol is chosen because it is harmless to the child, and at the same time fairly efficient. Other disinfectants, like carbolic acid or sublimate, cannot be used on account of the danger of poisoning the child. The popular boric acid is of very little disinfectant value, and is practically worth no more than water.

The liability of the nipple to abrasions and wounds depends considerably upon its shape, size, and formation. The most serious wounds, like the deep transverse and perpendicular fissures, are due to malformation of the nipple.

When a nipple is small and not easily grasped, or when, because of the small size of the openings of the ducts, the milk flows slowly, the child must pull very hard on the nipple, and the chances for the production of abrasions are increased.

The length of time that the child is at breast is also important. If the child is nursed for half an hour, or one hour, or lies at the breast practically all night long, the nipple is, of course, macerated, and wounds are easily made and infected.

For the prevention of wounds of the nipple, as well as for their cure, the nipple shield is of very great importance. Properly made and used, it not only saves the mother from much suffering, but also protects her from the dangers of infection. Many of the shields on

the market are improperly made. Frequently they are too short, and the nipple cavity ends in a small opening, into which the nipple is drawn and pinched. Frequently the shields are too small and the nipple is painfully constricted at the base. The flange is often too narrow and improperly formed. The rubber shield does not afford sufficient protection. The flange should be smooth, flat, and nearly at right angles to the bowl, and large enough to cover the areola. The bowl or nipple cavity should be so large that the nipple is not constricted, cylindrical in shape, and deep enough so that the nipple is not pulled too firmly against the end. It may open into a small bulb which serves as a milk reservoir. Such a shield may be used temporarily or intermittently as the case may require, during the first four weeks of lactation. Attention should be given to its care, that it may not become a source of danger. The nipple should be removed and thoroughly washed after each nursing. After washing its outside, it should be turned wrong side out, and the inside thoroughly washed. Then it should be dried with clean gauze and placed, together with the shield, which has also been thoroughly washed with running water or boiled, in a piece of clean gauze. The common practice of putting the shield unwashed into a cup of boric-acid solution and letting it stand for hours is an abomination that should not be tolerated.

When nipple wounds become infected, but before there are any symptoms of general infection or involvement of the deeper breast, the local wounds may be treated like similar wounds in other parts of the body. The application of cotton saturated with alcohol is generally efficient. Nursing through a shield may be allowed.

The appearance of the symptoms of chills and fever generally indicates a deep infection of the breast. When this appears, nursing from the affected breast should be entirely stopped, and the breast should be supported and put at rest by a proper bandage. Treated in this way, from eighty to ninety per cent. of all breast infections will terminate without abscesses. The nipples will heal, and the infective process will be localized and controlled by Nature's inflammatory reaction. Should an abscess form under this plan of treatment, which will happen very rarely, it will be small and confined to one lobe, or part of a lobe.

For supporting the breast and putting it at rest, the simplest form of bandage will often suffice. This is a plain piece of muslin six or seven inches wide, encircling the chest. Its mode of application is very simple, but important. The nurse should distinctly understand that the breast is to be raised and supported, not compressed; with the patient lying on her back, the bandage under her, the nurse takes hold of one end of the bandage with one hand, and of the corresponding breast with the other, and draws the breast up to the middle of the chest, holding it there with the bandage; the patient is then directed to hold the breast in this position with the hand of the same side, the fingers being extended. Then the other breast is raised and held in the same way, after which the bandage is fastened by several safety pins, the lower border being drawn more tightly than the upper. If the bandage tends to slip down because the patient moves around more or less, strips of bandage over the shoulders may be used to hold it in place.

The double Y bandage holds the breast better than the circular bandage just described. It is made of strong cotton cloth, and consists of a back piece four or five inches wide, and fourteen to twenty inches long. To each end of it are strongly sewed two diverging strips, each from four to five inches wide, and about thirteen inches long. The lower limbs of the Y's which go under the breast are fastened together in front with safety pins, then the upper limbs in the same manner. The upper and lower limbs of the Y's in front may be fastened together with safety pins, to support better the inside of the breasts. With this bandage the nipple of the sound side may be left free, so that the nursing of the child will not necessitate the unfastening of the bandage. If the circular bandage is used, it must be unfastened every time the child is nursed from the healthy side, or an opening must be made over the nipple. In case such an opening is made to allow the child to be nursed, it will be necessary to protect the nipple and areola by a pad of gauze inserted under the bandage.

Another form of bandage that may be used with very good results, especially in cases of infection of both breasts where nursing must be entirely stopped, is that recommended by the late Dr. P. A. Harris. It is a roller bandage, and its mode of application is somewhat difficult to describe, although quite easily understood when one sees it applied. This bandage might also be used to enclose only one breast. I will first describe its mode of application when only one breast is affected, and when the sound one is left exposed for the nursing of the child. A roller three inches wide, and from ten to twelve yards long, is required. Both breasts are covered with absorbent cotton, and a small pad of cotton to protect the shoulder is in readiness. Beginning outside of, and below the affected breast, the bandage is carried twice around the chest, passing first across the front, then it is carried under the affected breast, over the opposite shoulder, and again around the chest, once more under the affected breast, and the second time over the shoulder. Then it passes again under the breast, the lower half of which is now nearly covered, and around the chest above the sound breast. The next turn comes directly over the nipple of the inflamed breast, and above the sound breast. Two or three more turns, then cover the remainder of the affected breast. If any bandage remains, a firmer support to the breast will be given by making a turn again under the breast and over the shoulder, and still another under the affected breast, and above the healthy one, finishing with an extra turn over both breasts. The bandage must then be well fastened with from twelve to twenty safety pins placed in front, at back, and at the sides. The cotton over

the sound breast may be removed or an opening made to nurse the child.

When both breasts are to be enclosed, five or six yards more of bandage will be required. Begin with two turns around the body, and one turn under the first breast, and over the opposite shoulder as before. The bandage is then carried under the second breast, and over the back, across the shoulder opposite the second breast, down in front and under the breast again. Then it goes around the body, under the first breast, across the front part of the chest over the shoulder, under both breasts again and across the back, then over the shoulder opposite the second breast, and again under the second breast. This turn may be repeated the third time if necessary. Then the bandage is brought under the first breast, now nearly half covered, above the second breast, across the back, above the first breast and under the second breast, thus forming a figure of eight around the breasts. This may be repeated if necessary, and then the bandage is fastened with two turns of bandage around the chest over both breasts. This breast bandage must also be fastened with numerous pins. It is convenient to make the first turn with the patient on her back, and have her to sit while applying the rest. Much care should be taken in applying the bandage to make it just tight enough, and, on this account, the patient should be asked frequently if it is comfortable. If the bandage is too tight it may draw heavily upon the shoulders and become unbearable.

A very valuable adjuvant to the treatment of breast infection is the application of cold by means of the ice-bag. This not only has great influence in relieving the pain, but also modifies favorably the infective process. It can be applied satisfactorily only when the patient remains in bed. It is indeed desirable that the patient should always keep in bed for at least two or three days. The ice-bag is used in connection with the Y or circular bandage. The thick layer of cotton which is employed in connection with the roller bandage interferes with the action of the ice. The large-sized round bag is best. The ice should be broken quite fine, and the bag made to conform to the contour of the breast. If the infected lobe is on the outside, the bag is placed against the affected spot and supported by pillows or blankets. When the infected region is in the upper or inner side of the breast, the bag may be laid upon the chest.

Under this plan of treatment we shall find, in almost every case, that the pain has largely disappeared in twenty-four hours, and at the end of from forty-eight to seventy-two hours that the local tenderness has disappeared, and the nipple is healed. The ice may now be removed and nursing resumed, the child being allowed to stay at the breast not more than four or five minutes. If nursing increases the pain it must of course be stopped for one or two days more.

If, in spite of this treatment, some tenderness continues or reappears after a few days, and if suspicion of fluctuation exists, with perhaps a slight increase in temperature, we must suspect the presence of pus. As was previously stated, this question can be easily and safely determined by the use of a proper hypodermic needle. If an abscess is present, however small, it should be opened at once. If we are in doubt as to the presence of an abscess, a continuance of the bandage support and the ice-bag can do no harm, and this is the best possible method of limiting the abscess formation and controlling the symptoms of pain and tenderness, until the diagnosis, and the need of an operation, can be definitely established.

Under the treatment of poultices, which was formerly so prevalent, it was frequently advised to allow the abscess to develop until a considerable portion of the breast was broken down before opening it. This unsurgical procedure resulted from the unfortunate experience that so many had had with the continued development of abscesses in the lobes surrounding those first attacked. The obstetrician could not assure his patient that one operation would be sufficient unless he waited until a very large abscess cavity was formed. The operation of opening an inflamed breast was very much dreaded; without an anæsthetic, it was very painful, and if an anæsthetic was used, a big operation requiring assistance was necessary. The method of infiltration anæsthesia has been of very great value to patients having abscesses of the breast, for by its use an abscess may be opened without pain, and so may be opened early. If a second or third abscess develops, it may likewise be attended to with little trouble and expense. The manner of using the infiltration anæsthesia is very simple. After a careful disinfection of the skin a few drops of Schleich's solution No. 2, applied with any ordinary hypodermic syringe that has been rendered aseptic, makes the short line of incision anæsthetic. After the incision, the pus is washed out with sterilized water, and a few sterile or iodoform threads are introduced for drainage. A strict antiseptic dressing is applied, and the breast bandaged very firmly. In twenty-four hours the drainage is removed. The wound is kept open by irrigation for a day or two longer, when it will generally close of itself.

By this management we shall not see the extensive destruction of the breast, the long-continued suppuration, the fistulæ, eczematous skin, worn-out mother, and puny child. If we come across these neglected cases we must, of course, treat them according to the rules of surgical procedure which apply to such cases. These rules are too well known to require any further description.

Imperial Medical Military Academy, St. Petersburg.—Professor B. M. Bechtereff has been elected president of the Society for Experimental Psychology. Dr. E. I. Kotlar, privat-docent, editor of the *Ejenedielnik Practitcheskoi Meditsiny* (*Weekly Record of Practical Medicine*), and one of the most active of Russian pharmacologists, died on September 24, 1900. Dr. A. A. Losinsky, a collaborator of the famous Russian journal *Vratch*, has been appointed editor of the *Ejenedielnik*.

THE QUESTION OF OPERATION IN APPENDICITIS.*

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If we consider the question of operative intervention in appendicitis, we find that the opinions on the subject, both of the general practitioner and of the surgeon, have undergone many changes in the last few years, the over-radical surgeon and the over-cautious medical practitioner coming closer together in this time. Even at the present day, however, widely divergent views are held on this matter, so that the physician is very apt to call in consultation in his cases of appendicitis that surgeon whose opinions on the subject are entirely or nearly in accord with his own.

What cases of appendicitis demand operation? At what time of the disease shall we operate?

The opinions held on this subject may be briefly classified as follows:

I. Operate immediately; as soon, in fact, as the diagnosis is made, in each and every case of appendicitis.

II. Operate in all cases, except in those mild cases in which the patients are very distinctly recovering when first seen by the practitioner, and have no bad symptoms whatever at that time—and operate in these later, in the interval.

III. Let these mild cases wait for a second attack (which may never come).

IV. Wait for several attacks (three or more) before operating.

V. Do not operate at all unless alarming symptoms develop during an attack.

VI. Use medical treatment alone for all cases.

This last opinion is mentioned because every now and then reports are published of a certain number of cases treated in that way (by symptomatic treatment) with recovery, associated sometimes with perforation into the bowel, bladder, etc.

My own views are not the radical ones expressed in the first division, that is, to operate in each and every case of appendicitis on sight, but rather those expressed in the second, namely, that we should operate in all cases of acute appendicitis (and, roughly, within twelve hours; sometimes, of course, sooner), except in those cases of a mild type which exhibit no "bad signs or symptoms" whatever when first seen, and the patients are evidently recovering from their attack—and that we should operate in these cases later, in the interval.

To have this opinion well defined, it is necessary to indicate exactly what is meant by the expression "bad signs or symptoms." Briefly, these may be stated as follows:

A rectal temperature of over 102° F. A pulse of over 100 (if the patient is not distinctly neurotic or hysterical), or a *poor pulse* of any frequency whatever—and especially a pulse in which there is any *tension*. A thoracic respiration of over 34 (if the patient is not distinctly neurotic or hysterical). A sick appearance of the patient at any time. Continued vomiting at any time. More than moderate abdominal pain. More than slight rigidity. Any distention whatever. Marked sweating. A chill. The slightest dilated condition, not previously present, of the superficial abdominal veins on the right side of the umbilicus, or the slightest pitting of the skin in this region on pressure. Marked increase in frequency of micturition (indicating usually a long appendix reaching into the bladder region. Such an appendix will almost always be found markedly inflamed). The slightest jaundice. Constipation not relievable by enemata. Hiccough. A sudden drop of temperature or of pulse rate in a patient who has been sick for twenty-four hours or more (this usually means perforation with beginning general septic peritonitis). An increasing leucocytosis.

Any one of these signs or symptoms I consider "bad," and we should not wait till we get two or more of them, but the presence of any one of these should point the way. We may have a serious condition in or around the appendix revealed to us by only one of these signs or symptoms at first and for some time after, several being added later on in quick succession when the case is perhaps beyond our control. Many cases of general septic peritonitis have developed, as we all know, from the appendix as a starting point without an elevation of pulse rate or of temperature beyond the limits mentioned, and without other bad symptoms than a sick appearance of the patient. Many cases apparently mild will have a rapid pulse as the only indication of a severe grade of inflammation in a small area of the appendix, which may progress later to a perforation at that spot.

I hold firmly to the opinion, however, that in every acute case, except of the mild catarrhal type, we shall have at least one bad sign or symptom to put us on our guard if we examine the patient carefully. We may remove or advise removal, every now and then, of an appendix which we believe might possibly never have given trouble, or which might have been the seat of several attacks before a dangerous condition developed in it, but we should all feel, I am sure, that it is better that a few appendices of this kind should be removed while in this state than that a single gangrenous one should be taken out a little too late from a patient whose temperature was perhaps never above 102° F., whose pulse, of fair quality, was not over 90 at any time, and whose only bad symptom may have been marked rigidity on the right side until the symptoms of general septic peritonitis developed suddenly in their entirety. Numbers of such cases have been reported.

I have said that I advise operation in all acute cases except those mild ones that are first seen at a time when

*A paper read before the Lenox Medical and Surgical Society November 14, 1900.

the patients are very evidently recovering and there are no bad signs or symptoms whatever at that time. We are all aware that many mild cases, especially in the first attack, show during the first twelve hours symptoms out of all proportion to the lesion existing. Is there any way of ascertaining in each instance of this kind whether such a case will subside in twelve hours or so, or will go on to a critical condition in from twenty-four to thirty-six hours? I wish there were, for these are just the cases that one sees in private practice. The surgeon is called in early, nowadays, often within a few hours of the onset of the pain, and a "complex" of symptoms exists; advice is eagerly sought and much may depend upon it.

Suppose the advice is given to wait in such a case, in which the diagnosis of appendicitis is pretty sure. An ice-bag is applied to the right side, an enema given, and possibly a hypodermic injection of morphine. Five or six hours later, distinct improvement may be found, which progresses until complete recovery is reached. You congratulate yourself and your patient and think perhaps that after all it is just as well to have waited; recovery has followed this attack; there may never be another, and if the patient desires the appendix to be taken out, it can be done in the interval.

Suppose, however, that notwithstanding this distinct improvement, which starts in a few hours after you have seen your patient, you are called up in the early morning hours to find that the vomiting has started up again, the pain has distinctly increased, and your patient looks distinctly more sick than when first seen. You are again worried and seek a consultation; several hours are spent before you can get the surgeon you want, another hour or so is taken up in the preparation for the operation, and, when the peritonæum is opened, you may find a beginning general septic peritonitis, pus perhaps free around the appendix, the coils of intestine beginning to be injected and some lymph scattered over them, and your patient may either die or make a slow convalescence with an open wound for necessary drainage. Such cases occur every now and then, and, if we except the mild forms of catarrhal appendicitis, we can never be sure that any patient may not suddenly have these symptoms and run this course.

Will you satisfy yourself by saying that it was impossible to tell how things were going at the start? I hardly think so. Your patient's family certainly will not in these days of popular knowledge on the subject, and you are lucky if you escape their censure for not advising an immediate operation in the case, when you were first called. My own practice, therefore, in these cases, when I see them for the first time in the first few hours while the acute symptoms are present, is always to advise operation immediately and to have the patient or the family accept the responsibility of nonintervention themselves, if that is their decision, after explaining matters to them.

If I see a similar case, however, for the first time after every one of these so-called "bad symptoms" has entirely subsided (usually from twelve to twenty-four hours after onset in a case that is going to do well), I am then willing to let such a patient go on to recovery without operation, having a leucocyte count made at intervals, and watching the condition very closely with a careful nurse who will report any change in any of the symptoms or signs immediately, so that the appendix may be got at within a few hours of the possible onset of any bad symptom. I have personally never lost a case by doing this, where every one of these bad symptoms had entirely subsided, nor have I seen such a case, after the entire subsidence of every bad symptom, go wrong and require immediate operation. I affirm that in every case where a dangerous condition exists there will be some one bad sign or symptom at least to guide us; there may be but one, but this one should be enough.

Should every patient with appendicitis that has recovered from a first attack be operated on before a possible second, or should we advise waiting for this second attack before operating?

My own opinion used to be that, if the patient stayed within easy access of a good surgeon, it was allowable to wait for a second attack that might never come. This precluded, however, any travelling, except along the beaten paths and the larger cities. Travelling in Europe was interdicted on account of the views held in the past by many there on this subject. My experience with several such cases in the last few years has led me to change my views, and I now advise all patients who have had a distinct attack of appendicitis to have the organ removed before a possible or probable second attack. I have seen perforation occur within twenty-four hours of the onset of a patient's second attack, and I prefer that the responsibility of carrying around a once inflamed appendix with its possibilities should be shouldered by the patient if he prefers to wait; I always state that it is impossible to know the exact condition in which the inflammation has left the appendix, and that, while a certain number (twenty-three per cent.) of patients never have any trouble or any second attack afterward, others, and the majority (seventy-seven per cent.), do have recurrences, and that any one of these recurrences may be distinctly dangerous, possibly fatal, even with quick operation.

Should the patient be the subject of distinct cardiac, renal, pulmonary, or tuberculous disease, or be handicapped by the presence of much fatty deposit about the abdomen, the dangers of a general anæsthetic should be considered and advice given accordingly.

We were formerly justified, in some cases, in allowing a second attack to manifest itself before operation, for the danger of another possible or probable attack could very properly be balanced in the surgeon's or practitioner's mind against a not unheard-of postoperative sepsis or a possible hernia or both. But now that we do practically all our abdominal work either with sterile rubber gloves or with hands as aseptic as the human skin can be made, and have at our disposal the more than excellent

intermuscular method of Dr. McBurney, we are getting far different results, and are justified, in my opinion, in shaping our practice according to the opinions laid down in this paper. It comes down to this: Does a patient run a greater risk of a possible postoperative sepsis* or of a probable second attack with possible early pus formation, or gangrene with perforation and general septic peritonitis?

The old idea about there being a time in the course of an appendicitis attack when operative procedures were in themselves more dangerous, and more likely to spread the infection than to curtail it, has been thoroughly proved to be an erroneous one in every way. It was not the time in the course of the attack that made the difference, but the operator's methods in these cases. These have been perfected, and the danger recognized to be where it really is, due allowance being made for the various grades of infection as seen by the cultures obtained from many cases. There is no time in an appendicitis attack when operation is contraindicated *per se.* When we are brought face to face with alarming symptoms of appendicitis in a patient suffering from marked cardiac, pulmonary, renal, tuberculous, or other disease, and are loath to use a general anæsthetic, we have at our disposal our sterilizable β eucaine solutions. Under them the discomfort is comparatively slight in my experience.

I am not referring, of course, in what I have said to those not infrequent cases where the diagnosis is in doubt. These naturally stand apart, the diagnosis being at times impossible early in the trouble; this may happen on account of the location of the pain, which may be felt in another part of the abdomen at first, before it has localized itself to the right iliac fossa. In others, it is hard to distinguish between appendicitis, some forms of cholecystitis, and biliary calculi associated possibly with a movable right kidney; in still others, the distinction between an inflammatory condition in a dependent appendix and that in the right ovary and tube, and occasionally in the bladder, may be hard to make until we have watched the case for a while. These conditions are apparently fraught with less danger at the start; on this account we should keep the possibility of the more dangerous condition before us continually, until we feel confident that we have ruled out the appendix in any doubtful case. Clinically, the association of appendicitis with one or more of these previously mentioned lesions is very frequent.

A mass in the right iliac fossa, following or developing during an attack of appendicitis, should always be opened as soon as possible. While such a mass is usually found to be an abscess, it may prove to be made up in part or entirely of rolled-up and adherent omentum, the appendix being at or near the centre. If so, the contained appendix has in every case that I have seen been markedly diseased and fit for removal.

*Personally I have not lost an interval case or obtained wound infection in any of these cases beyond a drop or two of pus around a skin suture (and this latter was before the rubber glove period).

While many a pyosalpinx may be found sterile by the cultures, an appendix abscess is practically never so (that is, I have not seen a report of such a case), and while the rupture of such an appendix abscess into one of the hollow viscera, intestine or bladder, has been followed in some cases, it is stated, by permanent recovery, all agree that it is unwise to have a patient run the risks attendant upon a recovery by this route.

As to the length of time that it is safe to wait after an attack has subsided, before operating in the interval, my own preference is for not more than ten days after the pulse and temperature have apparently reached normal. It is rare to have another attack within two weeks after the complete subsidence of all symptoms. They will, however, recur occasionally in two or three weeks.

Another reason for not waiting much longer is that it is possible for an attack to subside entirely, so far as symptoms are concerned, leaving a small localized pus collection in or adjacent to the appendix; a distinct danger which cannot be foretold. That the patient should be made to assume the responsibility of a nonintervention, after a calm and impartial *exposé* on the part of his physician of the dangers which may attend the carrying around of a once inflamed appendix, I consider perfectly proper and wise, and while I never persistently urge patients who have had only one mild attack of catarrhal appendicitis to have the organ removed, I do distinctly advise them to do so unless there are offsetting contraindications in the way of renal, cardiac, pulmonary, tuberculous, or other disease.

We all know that hospital patients, that is, the usual run of ward patients, have to be dealt with somewhat differently from one's private patients. It is certainly a good plan to operate on all such cases of appendicitis (unless some of the previously mentioned contraindications are present), soon after admission, at any rate. The mild cases rarely enter the hospital wards, and even in these the degree of intelligence exhibited by the patients usually precludes their proper understanding of the conditions liable to arise, if they are allowed to take their once inflamed appendices home with them in their abdomen.

As to the non-surgical treatment of those mild cases of catarrhal appendicitis which are first seen when they are very evidently recovering without any bad symptoms whatever, I would say that my own practice has simply been: Ice bag to the right iliac region, enemata for the bowels, fluid diet without milk, total abstinence from opium in any form, and the use of the rectal tube for gas formation.

Personally, I prefer not to give any calomel (except in the general septic peritonitis cases, after operation) for fear of over-action. That enemata are sufficient to clear out the large intestine, has been proved to my satisfaction, for I have never been able in such cases, after opening the peritonæum, to feel any fæcal matter whatever, in either the caput coli or the large intestine. And

in the other cases that are about to be operated on, the therapeutic measures employed while waiting for the operation have been: Washing out the stomach for persistent vomiting; morphine hypodermatically for the pain; rhythmical tongue traction (Laborde's method) for hiccough; cold coil over the abdomen and rectal tube for gas distention; strychnine hypodermatically, with or without atropine, and hot-water colon irrigation, as heart stimulants; copious rectal enemata for the constipation.

The more cases of appendicitis one sees, the more conservative one becomes, but I am here using the word conservative in its proper sense, as opposed to that turn of mind which allows patients to drift along in a channel where soundings are impossible, and where at any time, suddenly and with little or no warning, the rocks may be struck and a total wreck result; for I maintain that, by following out the rules herein mentioned, the careful and painstaking surgeon will without question "conserve," that is, "save" more of his appendicitis patients than by any other method with which I am acquainted.

That, in the course of years, a few appendices will have been removed that might never have given further trouble is quite true, but it is even more true that a certain number of patients will be saved from abdominal suppuration or from perforation with a rapidly developing general septic peritonitis.

42 EAST TWENTY-SIXTH STREET.

THE GENERAL PRINCIPLES OF INFANT FEEDING, WITH A SIMPLE METHOD OF HOME MODIFICATION OF COW'S MILK.*

BY L. EMMETT HOLT, M. D.,

NEW YORK.

THE nutrition of infants is easy only on paper. At the bedside or in the nursery, even when conditions are simplest, nutrition is successfully carried on only by care and constant watchfulness. At times it becomes one of the most difficult problems in medicine. All methods of feeding have their successes and all have their failures. What we want to know is the best method of feeding most infants.

Maternal nursing, as now carried on, has as large a proportion of failures chargeable to its account as any method with which I am familiar. The proportion of successes among women of the better class in New York is, in my experience, hardly twenty per cent. Wet-nursing also, as it is, can hardly be considered to boast of much better results. It is usually my fortune to have three or four, and sometimes ten or twelve, failures with different women before a suitable one is found. Let us bear these facts in mind when we think of the difficulties and failures with artificial or substitute feeding.

When properly begun and intelligently continued, artificial feeding with the average child I believe to be more successful than the two other methods mentioned, as they are usually carried on. When improperly begun and ignorantly carried on, it is the cause of more deaths than all the contagious diseases combined. Not that I would discourage maternal nursing; by all means should every effort in that direction be seconded by the physician; but at the same time we must insist that all such cases be watched with the closest attention, in order to determine at the earliest possible moment whether such nursing is advantageous, and, if not, to discontinue and begin with something better before the digestive organs have been seriously upset or so much weight has been lost that grave malnutrition exists.

We may assume without discussion the truth of certain propositions:

1. That good breast milk not only is the best food, it is the ideal food; all substitutes must resemble it in furnishing certain proportions of fat, sugar, proteids, and salts which Nature has ordained to be the requirements in the young infant for normal development.

2. That the nearest approach to these elements is found in fresh cow's milk.

3. That, although containing all the elements needed, they are not in cow's milk furnished in their proper proportions; furthermore, that the elements themselves are not identical in their composition with those of breast milk; and therefore that cow's milk cannot be fed to most infants without some modification.

Fresh cow's milk, properly modified, nearly the whole scientific world to-day agrees to be our best substitute for the breast. The main question for discussion, then, is, What constitutes proper modification, and how can it be most easily accomplished? We sometimes speak of modified milk as if it were a new thing, but the late product is only the evolution of a very old idea. The earliest milk modification was simply dilution with water and the addition of cane sugar to make it taste like breast milk. Later, when the composition of breast milk came to be better understood, it was thought that all that was necessary in a modified milk was to secure the same proportions of fat, sugar, and proteids as existed in breast milk, and we should then have the best possible substitute, a food suited to the great majority of healthy infants. Out of this idea grew the various mixtures of milk, cream, sugar, etc., which aimed to reproduce, according to the views of different writers, the most exact breast-milk proportions. This represented a great advance, in that some proper relation between the different food constituents was maintained; and, while such formulas succeeded admirably with many infants, they failed with many more. Although the food was the same, the child was not always the same. Again, the difference in the digestibility of some of the elements, especially the proteids, was not sufficiently taken into account. Experience has shown that no single formula can be made to do general duty. Careful students of the problem have

*Read before the New York Academy of Medicine, October 18, 1900.

stopped trying to discover *a food*, and gradually there has been evolved in the place of it *a method of feeding* known in this country as the percentage method. The central thought of this is to consider the different elements of the milk separately, and to adapt their proportions in the food to the digestion of the child. In other words, it aims to discover the proper proportions of fat, sugar, and proteids and the best method of gradational increase for healthy infants with normal digestion; and for those with abnormal or feeble digestion, the combinations best suited to the individual conditions. Where difficulty is found in the digestion of cow's milk, instead of discarding it and turning to proprietary substitutes of the manufacturer, the aim is to try to discover with which of the elements of cow's milk the difficulty lies, and to modify our proportions accordingly until those best suited to the existing condition are secured. Milk indigestion is not one thing; sometimes it is fat indigestion, in other cases proteid indigestion, and in still others sugar indigestion. By the modern method of feeding, an attempt is made to separate these conditions, and, instead of treating them all in the same way, by simply diluting the food and thus reducing the proportions of all of the elements, the aim is to reduce only the one that is causing the trouble.

Such is the theory upon which the modern modification of milk is based; somewhat more complex possibly than the method it has superseded, but not nearly so much so as might at first appear. In practical results, however, it is a very great step in advance, in the opinion of nearly every one who has taken the trouble to master the method. The percentages are simply a method of statement of what we do. At first it may be somewhat difficult to think in percentages, but with a little study this is easily mastered, and it is the only scientific and accurate way yet proposed of recording our observations for the guidance of others and for a comparison of results with them.

To the milk laboratories the medical profession owes the development of this principle of feeding. They have taught us to approach the problem from what, to my mind, is the only scientific standpoint, working not for the discovery of the food, but for the elaboration of a correct principle of feeding, based upon accuracy and definiteness, without which all is chaos, confusion, and haphazard experimentation. By this I do not wish to imply that we have solved this difficult and perplexing problem. What I do mean to say is that we have made a beginning, and if this problem is ever entirely solved I believe it will be by working along the lines upon which we have now begun.

I shall not now consider the milk laboratories in their relation to the modern method of feeding, but will say only this regarding them, that I believe in the milk laboratories, and that during the past few years I have fed 215 infants, including two of my own, on modified milk prepared by them. My results have steadily improved as with increased experience I have learned better and better how to prescribe milk. The purpose of the present paper, however, is to consider how the main advantages of the laboratory method may be secured when milk is prepared by the mother or nurse. There are four essentials to success in infant feeding with milk modified at home:

1. The best raw materials, the cleanest and freshest milk and from healthy cows.

2. Intelligent and careful cooperation on the part of the mother or nurse.

3. Definite and minute directions, generally in writing, of exactly how the food is to be prepared, the quantity for each feeding, the hours of feeding, etc.

4. The physician must see that what he orders is carried out. In order to do this, occasional visits must be made to the child and every detail of nursery routine carefully scrutinized. Regular reports should be rendered, at least once a week, of the child's progress as to weight, condition of its appetite, stools, digestion, etc.

I believe that it is the physician's prerogative to direct in the matter of feeding. Too long has this responsibility been assumed by ignorant nurses and inexperienced mothers, whose only guide in many cases has been the advice of friends or the circulars of the proprietary food manufacturers, with what disastrous results to life and health is well known. If the physician assumes to direct, he must himself give more time and attention, even in minute details, to the subject than he has hitherto done. The continued complaint of patients is the attitude of indifference of most physicians to these details of infant feeding; but there is no success to be had without them. One can never prescribe a food and turn the case loose; but week by week the progress must be watched and such changes made as are demanded by the conditions which arise.

In practice we must separate normal cases, or those of healthy infants with average digestion, from the abnormal cases or those in which there is feeble digestion or more or less of indigestion. From the failure to make this distinction much confusion on the subject has arisen and many errors have crept into the subject of infant feeding. The digestion of all healthy infants is very much alike, and they may be fed in pretty much the same way; but the indigestions of unhealthy infants are endless in their variations and each one must be considered by itself. If it is only healthy infants that can be fed by rule, it is also true that, if fed from the start according to proper rules, most infants will remain healthy. It is not difficult to start right, and not very difficult with a little intelligent care to keep right, but it is exceedingly difficult when things have been going wrong to get right. In a nutshell, directions as to the right method of beginning are very simple: viz., to start with such low proportions of fat and proteids, particularly the latter, that the child's digestion is not upset; and, as soon as it has become somewhat accustomed to the food, to gradually increase the proportions of these elements. This is necessary for

the reason that the stomach of the infant was not intended to digest cow's milk, but breast milk; yet, if rightly managed, the organs of the average infant can in the great majority of cases be trained to digest a properly prepared cow's milk perfectly well.

In the home modification of milk there are two distinct problems: 1. To get the required proportions. 2. To use them after we have them. The latter is by far the more difficult. No plan of home modification yet proposed secures more than approximate accuracy in the percentages of fat, sugar, proteids, etc. Yet, if directions are carefully carried out, a degree of accuracy which is sufficient for all practical purposes can be secured. The thing desired is a method simple enough to be readily grasped by the average mother or nurse who is to carry out the physician's directions. The method here given is one which in principle I have followed for many years, and I have found no difficulty in making nurses understand how to use it.

While it is not ordinarily possible to know the exact composition, it is essential that the physician should know the approximate composition of the milk, cream, etc., ordinarily used in the home; and also that he should know how to obtain most easily the elements from which the various milk modifications are derived.

The composition of herd-milk, or the mixed milk of a number of cows, is practically constant except in the proportion of fat, this varying from 3.50 to 5.50 per cent.; in the ordinary samples used, 4 per cent. may perhaps be taken as the average, except in milk from Jersey cows. As regards the proteids, it seems certain from recent analyses that to assume 4 per cent. as the average is a mistake, and that 3.50 per cent. is much nearer the truth. Some of the foreign authorities place it as low as 3.40 per cent.; others at 3.60 or 3.70 per cent. The sugar is not far from 4.30 to 4.50 per cent. We shall therefore assume in our discussion the composition of average herd-milk to be: Fat 4, sugar 4.50, proteids 3.50 per cent.

It is necessary to know also the percentages of sugar and proteids which are present in cream containing different amounts of fat. The following table, taken from the analyses made by Adriance and others, may, I think, be assumed to represent pretty nearly the composition of creams of different density:

	I.	II.	III.	IV.	V.
Fat.	4.00	8.00	12.00	16.00	20.00
Sugar.	4.50	4.35	4.20	4.05	3.90
Proteids. . .	3.50	3.40	3.30	3.20	3.05
Salts.	.75	.70	.65	.60	.55

In most of the modifications of milk for young infants, it is required that the fat be considerably higher than the proteids. A simple plan would seem to be, first, to raise the percentage of fat to such a point that, when the milk is diluted to bring the proteids down to the required figure, the fat shall also be reduced to the percentage which we wish to use. Really, the important part of the modification consists in finding the best way of introducing the extra fat desired. It may be done by the addition of cream or by using the *upper milk* after it has been standing for a given length of time.

If cow's milk from a mixed herd is put into bottles soon after it is drawn and rapidly cooled, it will be found that after four hours the upper fourth will contain nearly all the fat that will rise as cream, and that the upper layers will have nearly the same percentage of fat whether the milk has stood for four hours, for eight hours, or over night. This has been demonstrated in a series of experiments made for me by Messrs. Upton & Jeffers, at the Walker-Gordon Farm at Plainsboro. After it had been standing under the conditions mentioned, fat-tests were made with the Babcock apparatus of the different four-ounce layers of bottled milk, which were carefully removed with a siphon, with the following results:

	After 4 Hours, Per cent. of fat.	*After 8 Hours, Per cent. of fat.*	*Over Night, Per cent. of fat.*
Upper 4 oz. . . .	20.50	21.25	22.00
Second 4 oz. . .	6.00	6.50	6.50
Third 4 oz.	1.50	1.40	1.00
Fourth 4 oz. . .	1.20	1.00	.30
Fifth 4 oz.	1.00	1.00	.05

Each of these percentages represents the averages, each test having been repeated many times, 110 different tests having in all been made. It will be seen from this that after four hours the composition of the separate layers does not change very much with the period of standing. With this knowledge of the amount of fat in the different layers of milk, it becomes a comparatively simple matter to secure almost any desired percentage of fat by simply varying the number of ounces removed from the upper part of the quart. Thus, with the milk in question it will be seen that by removing

16 oz.,	or upper	1-2,	we secure	approximately	7	per cent.	of	fat.
11 oz.,	" "	1-3,	" "	"	10	" "	"	"
8 oz.,	" "	1-4,	" "	"	13	" "	"	"
6 oz.,	" "	1-5,	" "	"	16	" "	"	"

The formula in each case with this milk runs slightly above the percentages given; but, as the particular milk with which the tests were made averages about 4.25 per cent. of fat, it may be assumed that these figures represent very nearly what is obtained when the 4.00-per-cent. milk is used, this being what the average physician is likely to have at hand.

Instead of this milk, if Jersey milk (5.00 to 5.50 per cent. of fat) is used, from two to three ounces more may be removed of each formula. If a poor quality of milk (3.00 to 3.50 per cent. of fat), about two ounces less than the amount specified should be taken to secure the correct percentages of fat.

For all who use milk fresh from the cow, the simplest plan is, therefore, to put that which is needed for the baby into a glass quart jar or quart milk-bottle, placing the jar, covered, in ice water and letting it stand for at least four hours, after which the upper portion may be removed. The same plan can be followed and essentially the same result will be obtained when the milk has stood for eight hours, or with the usual bottled milk sold in cities and delivered on the following morning, always

provided the bottling has been done at the dairy before the cream has been allowed to rise. This upper milk should be removed with a siphon, spoon, or cream-dipper, but should not be poured off.

We have now obtained five different grades of milk having different fat percentages in which the fat is respectively five, four, three times, and twice the proteids, and in which the two are about equal. The composition of these milks in fat, proteids, and sugar is as follows:

			Per cent.							*Per cent.*
Fat to proteids	5 : 1 =	16	milk	=	fat	16.	sugar	4.05	proteids	3.20
" " "	4 : 1 =	13	"	=	"	13.	"	4.15	"	3.25
" " "	3 : 1 =	10	"	=	"	10.	"	4.30	"	3.30
" " "	2 : 1 =	7	"	=	"	7.	"	4.40	"	3.40
" " "	8 : 7 =	4	"	=	"	4.	"	4.50	"	3.50

Instead of using the upper layers of bottled milk after standing, these formulas may be obtained by mixing milk and cream as follows:

The 16-per-cent. milk is the ordinary gravity cream.
The 13-per-cent. milk is obtained by mixing 1 part of milk with 3 parts of (16 per cent.) cream.
The 10-per-cent. milk is obtained by mixing 1 part of milk with 1 part of (16 per cent.) cream.
The 7-per-cent. milk is obtained by mixing 3 parts of milk with 1 part of (16 per cent.) cream.
The 4-per-cent. milk is ordinary plain milk.

These calculations have been given somewhat in detail to show how from the materials which are generally available in the home, milk fresh from the cow, bottled milk, or milk and cream, we may easily obtain milks containing a definite percentage of fat, *i. e.*, 4, 7, 10, 13, and 16 per cent., which we wish to use in our modification. These milks have been called by different names, such as "definite-percentage milk," "top milk," "superfatted milk," etc. I shall hereafter refer to them as *primary formulas* of the different series. Once the primary formula is obtained, the subsequent modifications become a comparatively simple matter.

Modification of the Fat and Proteids.—Given the primary formula in which the ratio between the fat and proteids desired is known, we may, by a process of simple dilution, derive as many secondary formulas as we wish, the ratio between the fat and proteids being of course unchanged. We may make the constant difference between the formulas as large or as small as we desire. For convenience in calculation it is easy to make this constant difference $\frac{1}{20}$ of the original formula.

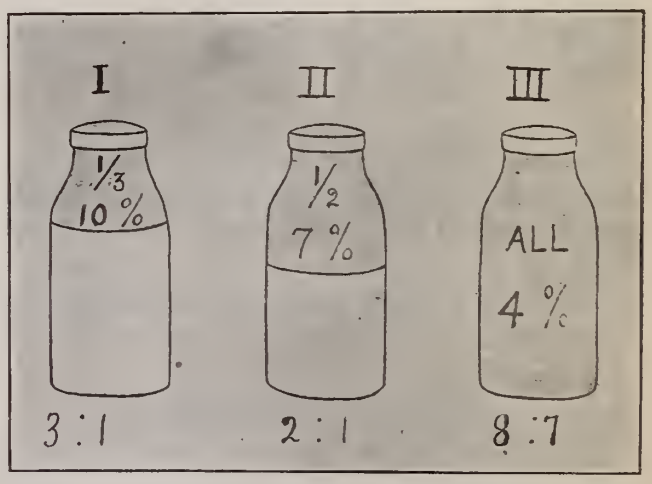
Modification of the Sugar.—The range required in the modification of the milk sugar is ordinarily between 5 and 7 per cent. In estimating the quantity to be added to bring up the proportion to this amount, account must of course be taken of the sugar already present in the milk. I have found that, except for mixtures which have proteids above 2 per cent., *i. e.*, those which are more than half milk, one ounce of sugar to twenty ounces of the mixture will give very nearly the percentage required, viz., about 5 per cent. for the lower mixtures and 6.5 or 7 per cent. for the higher ones. This embraces nearly all the formulas required for the first ten months; after this the close percentages are not so important. The amount of sugar in the primary formulas varies between 4.05 and 4.50 per cent. A mixture, for example, which contains $\frac{4}{20}$ of any primary formula will have, before any sugar has been added, .80 or .90 per cent. of sugar. If one ounce of sugar is now added to each twenty ounces of the mixture, it will now be raised to 5.8 or 5.9 per cent., according to which primary formula we use. In practice this may be considered as a 6-per-cent. sugar.

In measuring the milk sugar it is to be remembered that one ounce by volume is very nearly one ounce by weight. If the measuring is done with the tablespoon, one even tablespoonful may be calculated as three drachms, or two and a half even tablespoonfuls as one ounce. If cane sugar is used, the proportion should be about one half that which has been mentioned, *i. e.*, half an ounce to each twenty-ounce mixture, as there are few infants who will bear cane sugar in the proportion of 5 to 7 per cent. in their food.

Lime Water.—It is generally agreed that 5 per cent. of lime water produces the average alkalinity required. This is easily secured by adding one ounce of lime water to each twenty-ounce mixture. It can readily be increased when desired.

Diluent.—For my own part, I prefer boiled water as a diluent for the first months of life. But the method of modification is not affected if anything else is used. One may, if he prefers, use one half or one quarter barley water, or the dilution may be entirely with this. The sugar is, of course, to be dissolved in the diluent, whatever it may be. In all the formulas given, the water or other diluent is to be added in a sufficient quantity to make up twenty ounces, this unit being the most convenient one for calculation.

The foregoing detailed description of the different



steps of the modification may seem rather complex. However, the practical application of the results is very simple.

The three series of formulas which are most used are: 1. Those in which the fat is three times the proteids. 2. Those in which the fat is twice the proteids. 3. Those in which they are about equal. With these three the

great majority of healthy infants can be fed during the entire first year. The primary formulas from which the three series are severally derived are graphically shown in the accompanying illustration.

I have written out below a number of formulas derived from these primary ones, showing how easy it is to pass from a weaker to a stronger formula. Those given are the combinations which I have found more generally useful in my own practice. Many others may, of course, be derived in each group, but the proportion of fat to proteids will always remain the same as in the primary formula:

SERIES A.—Ratio of fat to proteids, 3 : 1.

Primary Formula.—10 per cent. milk; fat 10, sugar 4.30, proteids 3.30 per cent. Obtained (1) as upper one third of bottled milk, or (2) equal parts of milk (4 per cent.) and cream (16 per cent.).

Derived Formulas Giving Quantities for Twenty-ounce Mixtures.

Milk sugar..... 1 oz.
Lime water..... 1 oz.
Water, q. s. to.....20 oz.

I.

I.	With	1 oz.	of	10%	milk	= fat .50	sugar	5.20	proteids	.17%
II.	"	2 oz.	"	10%	"	= " 1.00	"	5.40	"	.33%
III.	"	3 oz.	"	10%	"	= " 1.50	"	5.60	"	.50%
IV.	"	4 oz.	"	10%	"	= " 2.00	"	5.85	"	.66%
V.	"	5 oz.	"	10%	"	= " 2.50	"	6.05	"	.83%
VI.	"	6 oz.	"	10%	"	= " 3.00	"	6.25	"	1.00%
VII.	"	7 oz.	"	10%	"	= " 3.50	"	6.50	"	1.20%

If more than twenty ounces is needed, it is convenient to calculate the quantity as 25, 30, 35, 40 ounces, etc.; thus, using No. IV, we would have:

10-per-cent. milk..... 4 oz.
Milk sugar..... 1 oz.
Lime water..... 1 oz.
Water, q. s. to.....20 oz.

II.

To make 25 oz. add ¼ more.		*To make 30 oz. add ½ more.*	
10-per-cent. milk.....	5 oz.	10-per-cent. milk.....	6 oz.
Milk sugar.....	1¼ oz.	Milk sugar.....	1½ oz.
Lime water.....	1¼ oz.	Lime water.....	1½ oz.
Water, q. s. to.....	25 oz.	Water, q. s. to.....	30 oz.

SERIES B.—Ratio of fat to proteids, 2 : 1.

Primary Formula.—7 per cent. milk; fat 7, sugar 4.40, proteids 3.40 per cent. Obtained (1) by using the upper one half of bottled milk, or (2) by using three parts milk (4 per cent.) and one part cream (16 per cent.).

Derived Formulas Giving Quantities for Twenty-ounce Mixtures.

Milk sugar..... 1 oz.
Lime water..... 1 oz.
Water, q. s. to.....20 oz.

III.

I.	With	1 oz.	of	7%	milk	= fat .35	sugar	5.20	proteids	.17%
II.	"	2 oz.	"	7%	"	= " .70	"	5.40	"	.35%
III.	"	3 oz.	"	7%	"	= " 1.05	"	5.60	"	.52%
IV.	"	4 oz.	"	7%	"	= " 1.40	"	5.80	"	.70%
V.	"	5 oz.	"	7%	"	= " 1.75	"	6.00	"	.87%
VI.	"	6 oz.	"	7%	"	= " 2.10	"	6.20	"	1.05%
VII.	"	7 oz.	"	7%	"	= " 2.45	"	6.45	"	1.22%
VIII.	"	8 oz.	"	7%	"	= " 2.80	"	6.70	"	1.40%
IX.	"	9 oz.	"	7%	"	= " 3.15	"	6.90	"	1.55%
X.	"	10 oz.	"	7%	"	= " 3.50	"	7.10	"	1.75%
XI.	"	11 oz.	"	7%	"	= " 3.85	"	*7.30	"	1.92%
XII.	"	12 oz.	"	7%	"	= " 4.15	"	*7.50	"	2.07%

SERIES C.—Ratio of fat to proteids, 8 : 7.

Primary Formula.—Plain milk; fat 4.00, sugar 4.50, proteids 3.50 per cent.

Derived Formulas Giving Quantities for Twenty-ounce Mixtures.

Milk sugar..... 1 oz.
Lime water..... 1 oz.
Water, q. s. to.....20 oz.

I.	With	2 oz.	of	4%	milk	= fat .40	sugar	5.40	proteids	.35%
II.	"	4 oz.	"	4%	"	= " .80	"	5.80	"	.70%
III.	"	6 oz.	"	4%	"	= " 1.20	"	6.20	"	1.05%
IV.	"	8 oz.	"	4%	"	= " 1.60	"	6.70	"	1.40%
V.	"	10 oz.	"	4%	"	= " 2.00	"	7.10	"	1.75%
VI.	"	12 oz.	"	4%	"	= " 2.40	"	*7.60	"	2.10%
VII.	"	14 oz.	"	4%	"	= " 2.80	"	*8.10	"	2.45%
VIII.	"	16 oz.	"	4%	"	= " 3.20	"	*8.50	"	2.80%

Formulas marked with an asterisk in the last two series are the only ones in which a special calculation of the sugar needs to be made. The usual amount (1 ounce to 20-ounce mixture) gives, as is seen, too high a percentage. It is seldom that infants taking the high percentages of fat and proteids of these formulas require the sugar to be even as high as 7 per cent. For the average case a good rule is to add only three quarters of an ounce of sugar to each twenty ounces for formulas containing from one half to three fourths milk, and more than that, only one half ounce to each twenty ounces.

A fourth series may be derived in a manner exactly similar to the foregoing, but using as a primary formula a 13-per-cent. milk obtained as already described. In this series the ratio of the fat to the proteids will constantly be 4 : 1.

A fifth series may be derived using the 16-per-cent. milk (cream) as the primary formula. In this the fat will be to the proteids in all the derived formulas as 5 : 1.

Such an array of figures as those given above may appear formidable to one not very familiar with the percentage method of describing a food. With closer acquaintance I do not think they will be found so. Many of these are ordinary modifications in daily use by most physicians. The percentages, however, form a useful means of statement of exactly what we are giving.

Application of These Formulas to Infant Feeding.—We come now to the second and more difficult part of our subject, viz., how to use the formulas we have obtained. The first year may be divided into three feeding periods. The first one extends from birth to the end of the third or fourth month; the second from the end of the third or fourth month to about the end of the tenth month; the third comprises the remainder of the first year. For the first period the best results in my experience have been obtained when the proteids are three times the fat, or the ratio existing in good breast milk; for the second period when the proteids are twice the fat; and for the third period when the two are nearly equal.

With the newly born child I ordinarily begin with No. II of Series A, fat 1.00, sugar 5.40, proteids .33 per cent. The strength of the food is gradually increased up to No. VI, fat 3.00, sugar 6.25, proteids 1.00 per cent.

This is usually reached by the sixth or seventh week. From this time it is generally desirable to increase the fat more slowly so that the food is strengthened mainly in the proteids. When this is required we pass to Series B, in which the fat is nearly twice the proteids, and begin with No. VII, or No. VIII. After this time the increase in strength is made more slowly. With Nos. IX, X, and XI we can progress very well until the ninth month, the quantity only being increased with the demands of the child. After this the proteids are further increased by passing to Series C. We may begin with No. VI or No. VII, from which the child is gradually shifted to whole milk.

The combinations of low fats and low proteids are found in the first three or four formulas of Series B and C. These combinations are useful for some infants during the early months who have particular trouble with the digestion of the fat, and with many at a later period who suffer from fat indigestion.

The formulas containing relatively high fats and low proteids have not been written out in full, but they may readily be derived from the 13- or 16-per-cent milk in which the fat is respectively four times or five times the proteids. Such combinations are sometimes useful in the early months with infants who have particular trouble with the proteids, but who are able at the same time to take a relatively high fat. Such proportions are not generally advisable except for short periods, and for the great majority they are not nearly so useful as the derivatives of 10-per-cent. milk in which the fat is three times the proteids.

No schedule can be followed with absolute regularity. To follow any one too closely is to violate the central principle of percentage feeding, which is to adapt the milk to the child's digestion at the time. A schedule is to be looked upon rather as a general guide showing the method according to which the gradations of the food may best be made in health. It represents the proportions which in my experience have succeeded best with average children of normal digestion.

The principles underlying this schedule must be understood if it is to be rightly applied. In Series A the ratio of fat and proteids is that of breast milk, i. e., three to one. I think I have obtained better results with most cases by maintaining this ratio during the early months, reducing the fat as well as the proteids to low figures during the early weeks. We must start with low percentages, and I believe that 1 per cent. of fat and 0.33 per cent. of proteids are not too low for the first days of life. The next point is the gradual increase; at first this is made every few days, as the child becomes accustomed to cow's milk and has power to digest it, the increase always being very carefully made lest we go ahead so fast that we derange the functions of digestion, after which all progress is difficult. The usual indications for an increase are an unsatisfied child who is digesting well. The rapidity with which the percentages are raised will thus vary much with different children; but the gradational steps of the increase may be advantageously followed with nearly all.

Except to start with too high a percentage of proteids, no greater mistake can be made in infant feeding than to continue long with a low percentage of proteids. Every day we see infants pale, anæmic, and exhibiting all the signs of malnutrition who have been kept too long on a low percentage of proteids, often 0.5 per cent., until they are three or four months old, or 1 per cent. until eight or nine months old. This in most cases is a serious mistake. We increase the power of digestion by gradually increasing the work the organs are given to do, not by giving them hardly any work to do. In effect the latter is like the continued use of predigested foods. Because of the slight discomfort or disturbance which is apt to follow an increase in the proteids, the physician is ofttimes inclined to go back to the weaker formula; while, if the stronger is continued, the child very soon becomes accustomed to it and quite equal to digesting it; the only essential is that the increase is not made too rapidly. Properly managed, the organs of an average infant can be trained to digest 1.5 per cent. proteids at the end of three months and 2 per cent. at five or six months.

During the first two or three weeks progress in infant feeding is not best measured by the scales. While the child is upon the low percentages advised, it is seldom that any material gain in weight occurs. However, if there is no vomiting or colic, if the child is comfortable and sleeps most of the time, and if the stools are gradually assuming a healthy color and normal odor, conditions may be considered to be entirely satisfactory. The food can be steadily strengthened with the demands of the child's appetite, and soon the increase in weight will begin, and when once begun it will be continuous. But nothing is easier than to derange the organs during the first weeks by too high percentages, and such disturbances, even though they appear trivial, often continue for many weeks.

I have dwelt so long on the first weeks for the reason that everything depends upon them. Close attention until the child is well started, and subsequent progress is a simple matter. Nothing has been said about quantity and frequency of feeding, not because these are unimportant, but these matters are fully considered in most of the recent books, whose schedules in general may be followed.

After weaning, or in the case of a child who has previously had no cow's milk, one must begin, even in the case of one who seems quite well, with percentages considerably lower than the age and weight would seem to demand. At three months it is better to begin with the proportions ordinarily taken by a bottle-fed infant at three weeks; or at nine months, with those usually taken by one of two or three months; making the increase in strength just as rapidly as the condition of the digestive organ warrants.

Where changes in diet are made, as in most cases they are, because the child is not thriving or has some evident symptom of indigestion, it is often difficult to know where in the schedule to begin. In such cases we must get out of our minds the notion that food can be ordered by the child's age or even by its weight, although both must be taken into account. The essential thing is the condition of the digestive organs, and, unless this is carefully considered, failure is almost inevitable. To decide as to percentages, one must know, besides the age and weight, the previous gain or loss, character and quantity of the food which has been taken, the appetite, the number and nature of the stools, and also whether any such symptoms are present as vomiting or regurgitation, colic, constipation, fretfulness, discomfort, or disturbed sleep. Nothing but personal experience will enable one to judge aright as to the combinations best suited to the existing conditions. In any case the first prescription must be an experiment. It is always wise to begin with low percentages and watch the result, making subsequent changes according to symptoms.

Conditions are often present in the individual child which may make particular modifications necessary. I will mention only a few of the most prominent ones. The most troublesome one probably with physicians generally is constipation. In the early weeks, while they are taking the low percentages advised, constipation is not infrequently present, and is simply due to the small food residue, owing to the low total solids in the milk. Unless, however, this produces a great deal of discomfort, it seems to me better to disregard it, particularly if the color and odor of the discharges are nearly normal. By gradually raising the proportions of fat and proteids along the general lines of the schedule, in nearly all cases these symptoms soon pass away, while if drugs are used or, worse, if the fat is rapidly increased, there usually results a disturbance of both gastric and intestinal functions which often ends in greatly increasing the constipation instead of improving it. Personally, I have found that anything higher than 3 per cent. of fat during the first six or eight weeks almost always works badly, and that over 4 per cent., at any time during the first year, can seldom be long continued without disturbing the digestion. I am confident that in using modified milk from the laboratories a great deal of the indigestion which has been seen has been due to too high fat percentages ordered, especially in hot weather.

Habitual vomiting or regurgitation is almost always due to excess of fat; if not to this, to excess in quantity. For an infant with such symptoms one should never begin with any formula in which the fat is more than twice the proteids, and often equal percentages are better.

Habitual colic is nearly always from an excess of proteids. For such a condition one should not give more than one third as much proteids as fat, and usually at first low percentages like those of the first series of formulas. This condition is usually associated with the presence of curds in the stools, which requires the same treatment.

Something should be said regarding the changes required in milk modification during very hot weather. At such times both the proteids and fat must be reduced, but particularly the latter. An infant can no more digest a high percentage of fat during hot weather than a soldier in a tropical climate can. It is seldom wise in any case, even of perfectly healthy children, to have the fat in the summer months over 3 per cent., and during short periods of excessive heat it should be reduced to 2 per cent. The reduction required in the proteids is not quite to the same degree. If we wish to reduce both fat and proteids, it is not necessary to change the formula given the mother, but simply to instruct her to dilute the whole food by taking out, according to circumstances, one fourth or one half the milk from the bottle, and replacing it with water during the short period while excessive heat lasts. Where a greater reduction in the fat than in the proteids is required, the change should be made from the first to the second series of formulas or from the second to the third. By these changes a large amount of indigestion incident to hot weather can be avoided and many severe attacks prevented.

The scope of this paper does not include a consideration of abnormal cases or those of infants with very feeble digestion, or of those who suffer from chronic indigestion, to which in many cases there is added a condition of malnutrition. Each one of these cases must be studied and treated by itself, and an adequate discussion of the subject would require a volume.

14 WEST FIFTY-FIFTH STREET.

DYSPEPTIC ASTHMA.

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HEMMETER (1) writes of dyspeptic asthma as follows: "A fear of smothering, with cyanosis, cool extremities, greatly hurried pulse and dyspnœa, occurring in the sequence of gastro-intestinal disturbances, represent a clinical picture, which we can designate as asthma dyspepticum."

In the chapter on chronic gastric catarrh, Einhorn (2) says: "After meals there is a sensation of fulness in the gastric region, and the patient feels oppressed. This feeling, if present in a higher degree, sometimes gives rise to symptoms of quite an alarming nature. Thus the patients complain of palpitation of the heart, and shortness of breath (asthma dyspepticum). The oppression experienced is relieved by belching."

Ewald (3), in speaking of pneumatosis or tympanites, says: "Here the stomach is filled with gas, and may become so distended that it causes, not alone the unpleasant sensation of marked tension, but even severe nervous symptoms, by pushing the diaphragm upward, and pressing against the heart. The patients are seized with typi-

cal attacks of asthma, the asthma dyspepticum of Henoch, in which there is only the annoying feeling of being compelled to take deep inspirations, after short periods of normal breathing. At the beginning this suffices; but later it develops into an incessant dyspnœa. Now there is also palpitation of the heart, pulsation of the peripheral vessels, fulness of the head, and even the feeling of impending death or complete unconsciousness. Relief can only be afforded by bringing up some of the gas, and then the attack rapidly subsides. In Allbutt's *System of Medicine* (4) the disease is thus described: "The asthmatic attacks (asthma dyspepticum) appear suddenly after meals, and are characterized by urgent dyspnœa, cyanosis, and a slow or irregular pulse. The symptoms rapidly subside after vomiting has taken place."

The authors quoted agree pretty closely in their description of the acute form of the disease, with its sudden onset and rapid subsidence of all the alarming symptoms so soon as the stomach is emptied of gas or other offending material. But there is another form of the disease, chronic dyspeptic asthma, which I have not heretofore seen described, and which is characterized by great shortness of breath on slight exertion, the condition being not paroxysmal, but continuous; it occurs in patients suffering from gastro-intestinal diseases, without any abnormal condition of the heart, lungs, or kidneys, sufficient to account for it, and yields readily to treatment directed against the existing dyspepsia.

Patients suffering from this form of the disease, do not experience shortness of breath to any great degree after eating. Vomiting has not occurred in the cases that I have seen, and the dyspnœa has, as a rule, not been relieved by belching. The shortness of breath is constantly brought on by some trifling exertion, as walking, going up stairs, stooping over to lace the shoes, or putting the clothing on or off. One man got quite out of breath in my office from simply taking off his coat, vest and shirt, for examination. As soon as he lay or sat down he was able to breathe quietly, only to experience shortness of breath again while dressing. One patient was obliged to sit down or lean against a building three or four times in going from his home to his place of business; and another had to rest in a similar manner seven or eight times while walking from the railroad station to my office, a distance of half a mile.

In some cases, slight exertion soon after meals caused greater shortness of breath than the same amount of exertion would cause at other times of the day. Some of the patients suffered from attacks of dyspnœa during the night. One patient, when an attack came on, would rush to an open window for air; another would grasp the mantel or head of the bed and struggle for breath; while yet another was relieved by rising and moving round the room. In all three, the attacks passed off in a few minutes without vomiting or raising gas, and without the administration of medicine.

As examples of chronic dyspeptic asthma the following cases may be of interest:

Case I.—On November 1, 1896, Mr. J. K. P., aged sixty-three years, came to me complaining that for four years past he had suffered from shortness of breath on slight exertion to such an extent that he was obliged to rest, either by sitting down, or by leaning against a building three or four times while walking from his house to his store, a distance of about a third of a mile. He also complained of bloating and belching, and had lost eighteen pounds in weight. His appetite was good, his bowels regular, and he slept well. *Physical examination:* His lungs were clear; at the apex of the heart, as well as over the aortic area, a loud systolic murmur could be heard; the liver was normal; the stomach in normal position, but distended with gas. Examination of the stomach contents after Ewald's test meal showed that free hydrochloric acid and rennet were absent; rennet zymogen was present; total acidity, 8. Treatment consisted in a regulated diet and lavage to be used three times a week. I did not see this patient again for a year, when he reported that shortly after commencing treatment he began to improve, and in four or five months the shortness of breath ceased to trouble him, he regained what he had lost in weight, and now considered himself perfectly well.

Case II.—September 29, 1898, Mr. J. P. D. complains of shortness of breath on slight exertion, as walking or leaning over to lace his shoes, or on any excitement, as going on the witness stand, the condition having lasted for ten years. Is short of breath without any exertion for about an hour after meals, feels best when the stomach is empty. In 1892 he had bronchial asthma. In 1893 he went to Colorado, and also took iodide of potassium, which cured his asthma; but the peculiar shortness of breath continued to grow steadily worse, so that now he has to rest seven or eight times while walking from the railroad station to my office, a distance of half a mile. Occasionally during the evening, while sitting reading, or after he has lain down, he is suddenly seized with an attack of urgent dyspnœa, which lasts only a very short time, and passes off as quickly as it came without anything being done for its relief. During the paroxysm he rises and grasps the mantel or head of the bed, and remains in that position till the end of the attack. These attacks only come on when he thinks of something that worries him. Appetite good, bowels constipated, he sleeps well and has lost fifteen pounds in weight. *Physical examination:* Lungs perfectly clear; simple hypertrophy of the left side of the heart; apex beat in nipple line and two inches below; stomach normal. Colon filled with gas. Examination of stomach contents after Ewald's test meal showed absence of both free hydrochloric acid and rennet. Rennet zymogen present. Total acidity, 4. His diet was regulated and intragastric faradization was used for some weeks. The patient improved quite rapidly and in about six months the shortness of breath ceased to trouble him. I saw him a few weeks ago and he told me he was quite well, and was only short of breath if he attempted to climb stairs or walk uphill too rapidly.

Case III.—May 18, 1899, Mr. J. H., aged fifty-four years, has complained for nine years past of great shortness of breath on making any unusual exertion, as running or walking rapidly uphill. For six months he has been short of breath on slight exertion. For instance, he can stand long enough to wash his face and hands, but

has to sit down while drying them. He has to rest after putting on each individual article of clothing, and goes through the same routine while undressing. He cannot stoop over to lace his shoes at all, and consequently wears gaiters; walking on level ground or going up one flight of stairs puts him out of breath so that he has to stop and rest frequently. Eating seems to make no difference in his case, but drinking water increases the dyspnœa. Appetite good, bowels regular. While sleeping he either talks in a mumbling sort of way, or moans as if in agony, but does not have to sit up on account of shortness of breath. *Physical examination:* Coarse râles round the base of the right lung; left lobe of the liver somewhat enlarged; heart normal. *Examination of stomach contents:* Free hydrochloric acid, rennet, and rennet zymogen, absent. Total acidity, 8. Treatment, regulated diet and lavage. I have not seen this patient since the first examination, but his son has informed me that since October, 1899, he has had no shortness of breath and sleeps quietly.

CASE IV.—February 20, 1900, Mrs. G., aged thirty-five years. Four years ago, during pregnancy, she had an attack of bronchial asthma, but for two years after the birth of the child she was free from it and felt well. Then she began to complain of shortness of breath on slight exertion, which has gradually grown worse, so that at present, walking on a windy day, walking rapidly, or going up stairs, causes so much shortness of breath that she has to stop frequently to rest. She occasionally wakes up at night gasping for breath and rushes to a window for air. The attack passes off in a few minutes. The patient looks well, has not lost flesh; the abdomen is prominent, so much so as to suggest advanced pregnancy. Appetite good, bowels regular, sleeps well when not short of breath. *Physical examination:* Lungs perfectly clear, heart normal, stomach and intestines greatly distended with gas. *Examination of stomach contents:* Free hydrochloric acid, 32; acidity, 56; urine normal. *Treatment:* Regulated diet, bismuth subgallate, and heroine to be taken if short of breath at night. March 8th, very much better, bloating nearly gone; she can walk half a mile quite rapidly without getting out of breath. May 14th, the patient feels well.

CASE V.—August 2, 1900, Mr. D. H. P., aged fifty years. Twenty years ago he had an attack of shortness of breath, which lasted three or four days, being worse at night. Ever since, he has had similar attacks once or twice a year. Two years ago, following an attack of acute bronchitis, he had an attack of acute Bright's disease with convulsions and loss of consciousness. For three or four months past he has had constant shortness of breath on slight exertion, as walking or going up stairs. He also sleeps badly and frequently has to rise and move round on account of being short of breath. He is quite corpulent, being 5 feet 8½ inches in height and weighing 180 pounds. He is much troubled with bloating and belching, and is gloomy and depressed. Appetite fair, bowels constipated. *Physical examination:* Lungs perfectly clear: heart normal; liver normal. Taking off clothing for examination causes shortness of breath. Urine contains neither sugar nor albumin. *Examination of stomach contents:* Free hydrochloric acid, 48; acidity, 60. *Treatment:* Regulated diet, bismuth subgallate and sodium bicarbonate; heroine at bedtime. August 28th, is feeling somewhat better. For the past two weeks he has not had to get up at all at night, although he has only taken the heroine occasionally. I have not seen this patient since August, and therefore do not know whether he continued to improve or not.

From the report of these cases it will be seen that three of the patients were suffering from achylia gastrica, one from hyperchlorhydria, while in one, the gastric secretions were about normal, so that chronic dyspeptic asthma is not constantly associated with any one form of stomach trouble. None of the five, however, came complaining of dyspepsia; what they did come for, was to obtain relief, if possible, from the distressing shortness of breath from which they suffered. It will also be seen that while an acute attack of dyspeptic asthma, coming on as it does after a meal, is relieved, for the time at least, only by emptying the stomach, the dyspnœa attending the chronic form of the disease, being induced by exertion, however slight, is temporarily relieved only by rest. In Case II the sudden attacks coming on at night were always the result of mental worry, and so it is fair to suppose that the attacks of a similar character experienced by Cases IV and V were also due to a disturbed condition of the nervous system. In both the acute and chronic forms of the disease, permanent relief can only come from restoring the digestive organs to a healthy condition.

References.

1. Hemmeter. *Diseases of the Stomach,* p. 365,
2. Einhorn. *Diseases of the Stomach,* p. 168.
3. Ewald. *Diseases of the Stomach,* p. 510.
4. Allbutt's *System of Medicine,* Vol. iv, p. 409.

515 PENN AVENUE.

SOME REMARKS UPON TUBERCULOSIS IN BONE.

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TUBERCULOSIS, like syphilis, is very apt to attack bone. But, whereas syphilis boldly attacks, as a rule, the firm, compact part of a bone—especially the shaft of a long bone—tuberculous inflammation generally makes for the delicate growing end of a diaphysis or the spongy tissue of a small bone.

Of all the small, spongy bones none are so often the seat of the disease as the bodies of the vertebræ. But I might become unduly wearisome if, following my own inclination, I were to enter upon the discussion of the pathology and treatment of spinal caries; so I will pass it by, and will make a few remarks upon tuberculous disease of the bones of the hand and foot, and upon what I will call the ultra-conservative treatment of tuberculosis of bones and joints.

Of all the bones of the foot, I think that the astragalus is the one most often the seat of primary tuberculosis, the disease most often following a sprain or twist, or some other injury. At first there are dull pains in the upper tarsal region, and, later, there is some tenderness on making deep pressure, but there is no discoloration of the skin, nor is there heat or œdema.

It might be impossible to make a precise diagnosis at this stage, but, later on, as the deposit increases, the ankle-joint becomes disturbed, effusion takes place into it and it is stiff. Then, as the inflammation extends forward, the joint between astragalus and scaphoid is implicated and local swelling and tenderness become marked. Could we at this time look into the interior of the bone, we should find that all the cancellous material had been replaced by granulations and that the articular lamellæ of compact tissue had also disappeared in places, as also the incrustation cartilage; that the neighboring synovial membrane was either represented by the same unhealthy granulations, or, if less damaged, appeared thick and œdematous. At this period there is considerable puffiness about the astragalus, and if a surgeon is seeing it for the first time he at once says to himself: "Is the ankle-joint affected or not?"

If he finds a bulging beneath the tendons at the front of the ankle, and also between the back of the joint and the tendon of Achilles, and if at the same time there is a fulness about the malleoli, there is then no doubt that the ankle-joint itself is diseased. Then, if the case is allowed to drift on, the granulation tissue will undermine and traverse the skin, fluid will escape, and permanent sinuses will form, in the depths of which the probe will discover soft, spongy, carious bone.

But possibly the sinuses have now been discharging many, many months.

What is to be done? "Scrape," says one surgeon. But if the scraping is thoroughly effected, it is found at last that a very small amount of respectably healthy tarsus has been left, and more sinuses than ever are left to discharge.

I have a full clinical record of a case of this sort, which has been under the care of a first-rate practical surgeon in the provinces for ten or a dozen years. The patient is now twenty-six years of age. He was sent to me first by the surgeon last May. There were many scars about the ankle and tarsus; the ankle-joint was synostosed in good position, but there was a tuberculous ulcer over the inner side of the astragalus, which, possibly, was connected with a little patch of diseased bone beneath. The old, extensive disease was, however, apparently at an end. "What shall I do?" said the surgeon. I advised his giving it a final scraping, which he did with excellent result, at any rate as regarded the ulcer and the sinus.

Last month I saw the young fellow again (for the second and last time). The ulcer was well, but he said that the foot ached if he ever tried to walk on it.

He told me that for over ten years the annoyance caused by this foot had clouded, even if it had not spoilt, his life; and that it had recently been the cause of his having to decline the proposal in a partnership business, which offered him all that he could have desired.

I asked him in a casual sort of way if his good surgeon had ever said anything about amputation. To this he replied that, years ago, he (the patient) had suggested amputation, but the surgeon thought that the improvement already obtained had put amputation out of the question. I reminded the patient that by his patience and skill the surgeon had been enabled to save the foot, which was in itself a matter of sincere congratulation. To this he gave a somewhat doubtful assent.

In connection with this case I am going to make the assertion that, knowing what we do about tuberculosis, we sometimes err in carrying conservative treatment too far. As a rule, the objection to radical measures comes from the patient or his friends. But in this case the patient himself had proposed the adoption of a radical treatment.

The boy felt that his foot was given him to walk on, and for ten years it had not only been useless to him, but a constant source of annoyance. He was far worse off than a certain man who had a fig tree planted in his garden, as only for "three years" had he sought fruit thereon and found none. "Cut it down," said he, the business man and proprietor; "why cumbereth it the ground?" "Give it another chance," said the husbandman. "Cut the useless foot off," said our patient. "Let it alone this year also," said the surgeon, "till I shall dig about it and dung it," or, in other words, "till I shall scrape it out and stuff it with iodoform."

I am not going to preach a sermon on this delightful parable, but I will remind the reader that the conservative dresser of the vineyard did not ask for *unlimited* time; he was going hopefully to carry out his treatment only for *twelve months.*

I do not know what reminds me of it, whether it is the Scriptural reference, the mention of serious articular tuberculosis, or my remark about it being possible for us to carry conservative surgery too far, but, as I write, the case of a clergyman recurs to my mind.

When he first came to me he was a weedy, pale-faced undergraduate at Oxford, and he showed me a knee with the ovoid enlargement of advanced tuberculous disease. I advised him, as nineteen surgeons out of twenty would have done, that he should let me excise the joint without delay. He said he thought I should advise that, but that he had a friend at college whose knee had been excised, and that his rigid limb was always in the way at church and at theatre, in train and omnibus, and that he had quite made up his mind to have amputation done and so effectively and entirely to rid himself of his disease. So, with much reluctance, I amputated in the lower third of the thigh.

Some years afterward, when I saw him as a curate, I asked if he had regretted the amputation, to which he replied: "Never for one moment!" This autumn he has proudly walked with a smart artificial leg into matrimony and a rectory, and I fully expect that by next Midsummer Day he will have christened his first pair of twins.

I do not think that a man with a resected knee-joint, and, therefore, with a stiff leg, could ever evolve into a

bishop, and possibly he was thinking of this when he decided in favor of an amputation and an artificial leg. And, personally, I am of opinion that his decision was the correct one.

No one will, I trust, from these remarks, rashly conclude that I am an advocate for radical treatment in all cases of tuberculosis. On the contrary, I think that if I make a mistake it is in the cause of conservatism in surgery. I was a student under, and a house surgeon to, Samuel Lane, himself a pupil of Brodie, and I had ample opportunity under him of seeing that, even in the latter half of the nineteenth century, Nature still retained a mighty healing power. And these old-fashioned ideas still cling to me, I am glad to say.

Nevertheless, I have, I admit, performed Syme's amputation in a very large number of cases of tuberculous disease of the tarsus in hospital work—though only once in private practice—and I have not seen reason to regret it in any one instance. But with leather splints, with lateral splints of plaster of Paris, and with Thomas's knee-splint much can be done in the way of the successful and conservative treatment of chronic tuberculous disease of the foot.

64 GREAT CUMBERLAND PLACE, HYDE PARK, W.

A CASE OF GANGRENOUS INFLAMMATION OF MECKEL'S DIVERTICULUM SIMULATING APPENDICITIS.

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IT is stated in the text-books that in about two per cent. of all autopsies a Meckel's diverticulum is found. Usually, however, it is very small and frequently amounts to nothing more than a mere sacculation or pouching of the ileum. In a number of instances it has been found to be the source of intestinal obstruction. Richardson (Dennis's *Surgery*) states that in some instances a diagnosis of intestinal obstruction has been erroneously made in a general peritonitis from perforation of Meckel's diverticulum, and mentions Doran's case of perforation by a pea as an instance. The same author says that he has twice made a diagnosis of acute appendicitis when the symptoms were due to obstruction caused by Meckel's diverticulum. In one of these cases the diverticulum was found to be distended and gangrenous.

I am, for want of facilities, unable to review the latest literature on this subject.

The following case was admitted to the hospital ship *Relief* on June 11, 1900:

H. M., a corporal of Company B, Twenty-eighth Infantry, U. S. Volunteers, native of New York, aged twenty-two years; admitted at Taal, Luzon, P. I., June 11, 1900, at 9.30 A. M. Diagnosis on transfer slip: "Undetermined." History: Had been on an expedition into the country a few days previous to the arrival of the *Relief* on the afternoon of June 10th. He was feeling well until about June 8th, when he had some pain in the abdomen, and a feeling of weakness and exhaustion. He arrived at Taal on the evening of June 9th, with pain in the abdomen and vomiting. He was admitted to the battalion hospital at Taal about 11 P. M., June 9th. He had tympanites, vomiting and pain and tenderness in the abdomen. A dose of magnesium sulphate was given, which he did not retain. Morphine was administered hypodermically to relieve pain. The bowels moved spontaneously at 3 A. M. on June 10th. This was the last natural fæcal evacuation. The distention and vomiting increased. Enemata were given without effect. About 3 P. M. the patient suddenly passed into a state of collapse. The surgeon states that the tympanites was very great at this time; temperature subnormal; pulse thready; surface cold, etc.

The *Relief* arrived in the harbor at 4.30 P. M.; the surgeon came on board immediately and reported the condition of the man, and stated that he considered the case one of intestinal obstruction which demanded immediate operation. Dr. Menage, acting assistant surgeon, and myself were detailed to examine the case, and saw the patient about 7 P. M.

His condition was as follows: Skin cold, pale, and clammy; features pinched and drawn; eyes sunken. He was in a condition of semi-narcotism, presumably due to the opiates which had been administered. The pupils were somewhat contracted, the respirations hurried, the pulse small and thready, 116 a minute. He vomited a yellowish green fluid at frequent intervals. There was moderate tympanites. There was tenderness all over the abdomen, most marked in the umbilical region. Temperature 100° F. Some rigidity of the abdominal muscles, rather more marked on the right than on the left side.

As the surgeon said his condition had improved considerably within the last few hours, and as the facilities for an operation were very poor, it was decided to wait until morning. On June 11th, at 7 A. M., his condition was unimproved; temperature 100.6° F., pulse 120; no bowel movement, although he had received repeated enemata. Vomiting continued at frequent intervals. The vomited matter had, at this time, a distinctly fæcal odor. He was transferred to the *Relief* at 9 A. M. After a careful examination, a diagnosis of appendicitis was made and an operation decided upon. He was operated on at midday, his temperature at this time being 100.5° F. The operation was performed by Captain DeShon, assistant surgeon, U. S. Army, assisted by Dr. Menage and myself. On opening the abdominal cavity in the right iliac region, the cæcum and appendix were found to be absolutely normal in appearance. There was no more than the ordinary amount of distention in the colon, and that of the ileum was rather less than normal. There was no excess of fluid in the abdominal cavity and no evidence of peritonitis. The small intestine was rapidly traced upward and presented in every part a normal appearance. The wound in the abdominal wall was closed and the usual dressings applied. During the operation about two pints of normal saline solution were injected under the skin in the left mammary region. His temperature at 4 P. M. was 99° F.; general condition good. At 7 A. M., June 12th, the temperature was 101° F.; pulse 100; no vomiting; condition good; his mental condition was normal, and he took the first nourishment he had had for three days. At 7 P. M. the temperature was 100° F.; pulse 80, full and strong. At 7 A. M., on June 13th: Temperature 99° F.; pulse 80; no vomiting; con-

dition good. At 3 P. M. his condition became suddenly worse, all his former symptoms having returned. Pulse rapid and thready; skin cold, pale, and covered with perspiration; vomiting; features pinched. At 7 P. M. his temperature was 101.2° F.; pulse 120; tympanites and tenderness were marked all over the abdomen. All the symptoms of a general peritonitis were present at this time. At 7 A. M., on June 14th, the temperature was 100° F.; condition very bad. He gradually became worse, death occurring at 11 P. M. on June 14th.

Autopsy.—Abdomen very much distended. Condition of the wound in iliac region good. On opening the abdomen a condition of intense general peritonitis was found. The peritonitis was rather less marked in the vicinity of the operation wound than elsewhere. There was in the abdominal cavity a great excess of fluid which was seropurulent in character. The vessels of the peritonæum and mesentery were extremely engorged. The intestines were much distended with gas. The cæcum and appendix were normal, barring the recent condition of peritonitis. On further examination, a Meckel's diverticulum was found springing from the ileum about 3 feet 6 inches from the ileo-cæcal valve. It was six inches in length, its distal extremity about one half the diameter of the other, being firmly attached to the abdominal wall at the umbilicus. It arose from the ileum at a right angle, and at its attachment the diameter was about two thirds that of the intestine, readily admitting the finger. It gradually diminished in diameter toward its distal extremity. It was patulous throughout its whole extent. There was no torsion nor kinking, nor was there any obstruction of the gut demonstrable at the autopsy. At its attachment to the ileum, and for about two inches from that point, the diverticulum appeared to be normal, but at the latter point began a large gangrenous patch which extended along the diverticulum for about one inch and a half, and which at its widest part measured three quarters of an inch. Near the centre was a perforation about two millimetres in diameter. The diverticulum contained about an ounce of offensively smelling fluid.

Remarks.

In considering this case a very interesting question arises, viz: Was the affection of the diverticulum primary or secondary? Was it, like acute gangrenous appendicitis, the cause of the apparent obstruction when the patient first came under observation, or did the diverticulum, acting as a band or cord, cause the obstruction, itself subsequently becoming gangrenous from pressure?

The early and constant, though not great, elevation of temperature, the evidence of severe infection, the incomplete obstruction of the bowels as shown by the small amount of tympanites, are compatible with the former view, while the fact that such marked improvement followed manipulation of the intestine at the time of the operation, might be taken as evidence that there was, at first, an obstruction caused by the diverticulum, and that the diverticulum became gangrenous in consequence of the pressure exerted upon it. When, during the operation, the obstruction was relieved, the patient's condition improved. The pressure on the diverticulum had so damaged it, however, that gangrene, progressing to perforation, ensued, and the return of the symptoms, followed quickly by death, was due to the general peritonitis following the perforation. This may be considered as being more probable from the fact that the diverticulum, having no mesentery of its own, was unable to resist pressure on it for any considerable length of time without serious interference with its nutrition, as the greater part of its blood supply was necessarily received through its intestinal attachment.

Considering the question pro and con., however, I am inclined to favor the former view as expressed above, viz.: That the diverticulum was primarily affected and that the morbid process in it was analogous to that occurring in acute gangrenous appendicitis. This opinion is based on the reasons expressed above and also on the great similarity of the symptoms in this case to the symptomatology of that disease. The temporary abatement in the severity of the symptoms can be referred, I think to the repeated subcutaneous injections of normal saline solution the patient received during, and subsequently to, the operation; his condition remaining fairly good until perforation took place.

The specimen of the diverticulum and contiguous portion of the ileum in this case has been sent to the laboratory of the First Reserve Hospital, Manila, P. I., for shipment to the Army Medical Museum, Washington, D. C.

Therapeutical Notes.

Injections of Cod-liver Oil Emulsion in Tuberculosis.—Zenner (*Therapeutische Monatshefte,* No. 6, 1900) reports a case of tuberculosis in which he has obtained good results from the use of rectal injections of an emulsion of cod-liver oil. The following emulsion was injected every morning in quantities varying between 60.0 and 100.0 grammes:

℞ Purified pancreatin. . . . . 5.0 grammes;
Inspissated ox-gall. . . . . 0.5 "
Sodium chloride. . . . . 1.5 "

M.

To be dissolved in fifty grammes of water and digested for two hours with 250 grammes of pale cod-liver oil; then add twelve drops of ethereal oil of eucalyptus.

The injections were well borne, and were retained in the intestine. Investigation of the fæces showed that only 24.6 grammes out of the 100 grammes introduced were again discharged before the next injection. It is not necessary to precede the nutrient enema with a cleansing injection.

For Lupus.—Beilage (*Dermatologisches Centralblatt,* June, 1900; *British Medical Journal,* December 22, 1900) recommends this formula as Unna's:

℞ Salicylic acid, } of each. . . . 2 parts;
Solution of chloride of antimony, }
Creosote, } of each. . 4 "
Extract of cannabis indica, }
Lanolin. . . . . 8 "

M.

The antimony is said to kill the bacilli, the creosote and cannabis indica to allay pain, and the salicylic acid to aid penetration. When the disease is deep the solution of chloride of antimony is applied on wooden matches, the ends of which are cut off and left *in situ* for forty-eight hours.

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NEW YORK, SATURDAY, JANUARY 12, 1901.

NEW YORK'S OPPORTUNITY IN PSYCHIATRY.

THE unfortunate incident of a man's having apparently been pounded or choked to death in the lunaties' quarters in Bellevue Hospital is not a proper subject for us to discuss, for it is before the courts. It may, however, and we sincerely trust it will, pave the way to an institution which New York ought long ago to have had, a hospital for acute cases of mental disturbance. In every other branch of medicine than psychiatry New York has unexcelled facilities for teaching, and the popular mind at the present time seems to have been prepared by the sad occurrence in question to demand the establishment of an institution of the kind desired. The general practitioner of medicine is rarely called upon to struggle with the problems of chronic insanity, but the varying phases of acute mental aberration confront him frequently; hence it is with those forms of disordered function that he needs to be made familiar.

The island institutions, now that they have come under State control, are fairly creditable retreats for indigent persons who are chronically insane, but they are not favorably situated for ready access on the part of our medical students, and, taking into account the average medical man's lack of interest in chronic insanity, we may say that they are hardly worth the trouble of an occasional visit, especially as the clinical instruction provided within their walls is scanty and wide of the general practitioner's scope. Let such a hospital for cases of acute mental disturbance be established in the borough of Manhattan, under the care of the State board of lunacy and in convenient proximity to the State pathological institute, and clinical teaching in psychiatry as it appeals to the family physician will at once take its proper place in the school curriculum. It is often the direst necessity that brings forth the best result, and we trust that New York's present apparent incapacity to deal scientifically, and consequently humanely, with persons suddenly deprived of their mental balance may prove the stimulus to such provision for the acutely insane as may be a boon to them and a precious agency in the education of coming generations of physicians. Now, when the case of supposed homicide is fresh in the public mind, is the time to strike for it.

THE BACTERIAL SELF-PURIFICATION OF STREAMS.
(*Second Article.*)

IN our last issue we gave a brief summary of Dr. Jordan's tests. No doubt the reader has been struck with the sudden and decided increase of bacteria at Wesley City, following upon a gradual and steady diminution from Chicago. This is attributable to the large amount of organic refuse that finds its way into the Illinois River with the sewage of Peoria reinforced by the waste of manufactories, distillery slop, discharges from glucose factories, and the sweepings of extensive stock yards. The Wesley City specimens of water were taken from a point about four miles below this "outpour of pollution," which is said to vary greatly at different seasons of the year and at different hours of the day, thus accounting for the great irregularities and fluctuations in the number of bacteria observed at that point. Beyond Wesley City the gradual process of self-purification goes on as before. Taking the purifying process, then, as practically continuous, we at once find ourselves interested in what Dr. Jordan has to say of the elements concerned in it. Before proceeding to present this, however, we must remark that he quite frankly points out that the observations are open to criticism on the score that the specimens of water examined were transported and for the reason that they were not taken simultaneously from the different points. It seems that the bacteria multiply when the specimens are not packed in ice, and that in ice-packed specimens they decrease in number at first, but subsequently multiply to a number exceeding in some instances the original proportion. Allowance being made for these sources of error, which in some measure probably correct each other, it is not to be doubted that the general drift of the observations and of the deductions drawn from them may be taken as correct.

Among the supposed causes of the gradual disappearance of bacteria, Dr. Jordan first considers mechanical agitation and aeration. In so sluggish a stream as the Illinois, he says, there is not sufficient agitation to prove at all injurious to bacterial life; indeed, Meltzer's experiments point to the conclusion that moderate agitation is

not detrimental to bacteria. Aeration of the water to the extent to which it takes place in a river of slow flow may also be dismissed as having little effect in promoting the destruction of micro-organisms. The immediate effect of dilution with purer water from underground sources or from tributaries must, however, be in the direction of diminishing the proportion of bacteria in a given quantity of water, and Dr. Jordan finds it difficult to understand, as we do also, why this effect is sometimes referred to as not being a "true" purification. If, he says, a sample of water contains a hundred typhoid-fever bacilli to the quart, and is diluted to twenty times its bulk with pure water, each quart will contain only five germs, and, "apart from any influence the dilution may have upon the life of the germs, a purification of the water will have occurred to just the same extent as if ninety-five per cent. of the typhoid bacteria had perished, and the danger from drinking a small quantity of such a water would be diminished in exactly the same proportion."

As regards the action of sunlight, ordinarily accounted a potent element in aerial purification, the author is not prepared to make any very definite statement, but remarks that such incidental evidences as were gathered do not warrant the attachment of great importance to it. The main bulk of a body of water, if even moderately high turbidity prevails, must, he thinks, be virtually unaffected by the sun's rays. Still, he does not affirm that they are always and entirely without effect upon the bacteria in river water, "although they certainly play an insignificant part in the case of turbid waters." The influence of the plankton, he remarks, is perhaps yet more problematical than that of sunlight, either by devouring the bacteria themselves or by consuming their means of sustenance. In the first place, he says, the albuminous substances that serve as food for bacteria cannot be so advantageously attacked by the plankton as by the bacteria; in the second place, there is ample laboratory evidence that a bacterial decrease always follows close upon a bacterial multiplication in sewage or polluted waters containing no plankton. In sedimentation Dr. Jordan finds a more potent element. When there is semi-stagnation of the water, he says, "the settling out of food substances, the entanglement of bacteria in slowly subsiding particles, and possibly the slow sinking of the bacteria themselves, all have the fullest play and must all work to diminish the number of suspended bacteria." "There can be no doubt," he adds, "that the various influences summed up by the term sedimentation are sufficiently powerful to obviate the necessity for summoning another cause." Nevertheless, he thinks that due weight is not generally attributed to diminution of the substances, minute floating albuminous masses, upon which the bacteria subsist, and there is no need to assume that their diminution is wholly or even in large part due to the process of sedimentation. He makes this important statement: "I have been struck by nothing in the course of the investigation so much as by the absence of extensive deposits of the foul, black mud popularly supposed to accumulate on the bottom of sewage-polluted rivers. The bed of the Illinois between Morris and Ottawa is singularly free from any deep deposit of organic matter, although the current is very sluggish and sewage in increasing quantities has been poured into the river for thirty-five years. The solid organic matter in the sewage, therefore, is destroyed either while still in suspension or shortly after deposit. The natural effect of this shrinking of the food supply is to cause a diminution of the bacterial population dependent upon it."

The purity of drinking-water, as every physician knows, is of preeminent importance in the preservation of health, and everything that tends to promote it must claim earnest consideration on the part of the sanitarian. We must look upon Dr. Jordan's article, therefore, as of exceptional value. It may well be studied in its entirety as it appeared in the December number of the *Journal of Experimental Medicine.*

GRAINS, OUNCES, ETC., AND THE METRIC SYSTEM.

We believe that a large proportion of American physicians would protest stubbornly against the obligatory use of the metric system of weights and measures, and evidently the last word on the subject has not yet been said in Great Britain. At a recent meeting of the Liverpool Medical Institution (*Lancet,* December 15th) Brigade Surgeon Lieutenant-colonel E. Nicholson read a paper on Medical Weights and Measures. He traced the evolution of the imperial weight from the Egyptian royal cubit through the Alexandrian talent and the Roman *libra,* and remarked that the ounce of the *British Pharmacopœia* differed from the Roman weight by only half a grain. He gave an account of the metric system and alluded to its fallacies. It was being vigorously pushed, he said, by advocates whose representation of the alleged irrationality and difficulty of the British system was due to ignorance of it. Anybody, he said, could decimalize the weights and measures for calculation or industrial

purposes, and he warned the medical profession against being lured into consent to the metric system by the plausible use of the word "scientific." He declared that even in France, after more than a century of official pressure and police action, the metric system was really disliked by the people, who merely submitted to it without accepting it, and evaded it whenever they could. If it was made compulsory in Great Britain, he went on to say, it would be really a revolutionary system, uprooting a great deal more than the weights and measures.

Dr. Karl Grossmann differed radically with Colonel Nicholson, looking upon the paper as an apology for the survival of the British system rather than an argument for its perpetuation. Whatever the ancient Egyptians had achieved, he said, their mode of measuring and weighing did not suit the present time, with its altered conditions of communication, so well as the decimal system. The relationship between the metre, the gramme, and the litre was simple and easily intelligible, and he maintained that the adoption of the metric system would do away with the useless incubus of the weights and measures in the old multiplication table and to that extent relieve the already overburdened brains of school children. The present English system did not show the survival of the fittest, but the persistence of the unfittest, and its proper place was with the cubit, in the museum among the relics of the past.

Neither disputant's contention seems to us to express much more than a personal conviction, and we do not believe that either system of weights and measures is essentially superior to the other; it is all a question of convenience. The school children of the present day, at least in the United States, are taught the metric system; to them it is familiar, and their difficulty is to reckon in grains, ounces, etc. To men and women of middle age, however, provided they have been brought up here and are not chemists or mathematicians, the metric system is a stumbling-block and must in most instances so remain. No doubt the metric system will be in universal use before many years have passed, but to the day of his death the physician who is in his prime now will shrink from the burdensome perplexity, to say nothing of the danger, of writing his prescriptions in grammes, decigrammes, centigrammes, and milligrammes; he will be apt, too, to take a humorous view of the practice of mingling the names of those weights with the word "drops" in a prescription. Hence, we think, the exclusive use of the terms of the metric system should not at present be adopted in medical writings.

THE PREVALENCE OF SMALL-POX.

While cases have of late been reported from widely distant points, we still think there is practically no danger of a serious epidemic, provided, of course, the energetic course pursued by the New York city board of health is at all closely approximated in other municipalities. According to the returns to the surgeon-general of the Marine-Hospital Service for the week ending January 4th, no alarming number of cases occurred anywhere. Some of the newspapers have done their best to frighten the community, but of what consequence are eleven cases in New York compared with the 152 reported in Paris for the first week in December? Fortunately, our people appreciate the value of vaccination, and no antivaccination zealot can hoodwink any considerable portion of them.

THE MEDICAL CORPS OF THE ARMY.

Eternal vigilance is required to prevent Congress from impairing the efficiency of the medical corps of the army. The tendency constantly is to keep the number of medical officers below a safe minimum, and now the corps is threatened with degradation. We publish in this issue a circular to the members of the American Medical Association by its president, Dr. Reed, which sets forth this fact clearly. Though dated December 29th, Dr. Reed's circular did not reach us till this week; consequently there is no time to correct an apparent error of statement in the fourth paragraph, referring to a decrease in the grade of lieutenant-colonel "from 5.2 to 5.7 per cent." We presume this is a copyist's error, and it does not affect the general drift of Dr. Reed's statement or impair the force of his appeal. When the inducements to enter the medical corps are lowered, the efficiency of the corps is crippled and consequently the capability of the army as a whole is weakened. Dr. Reed urges every member of the medical profession to send at once to his senator and representative an emphatic protest against the proposed provisions. No time should be lost in this matter. His advice should be followed without the slightest hesitation.

THE DANGERS OF SOME UNCOOKED VEGETABLE FOODS.

In our issue for February 10, 1900, we referred to the danger that tetanus and possibly other pathogenic bacteria might not infrequently be conveyed through the agency of celery, lettuce, radishes, strawberries, and other vegetable products that are commonly eaten uncooked. Yet other dangers arising from vegetable food products seem likely to be unmasked by the investigations of the laboratory commissioners recently undertaken in England as an outcome of the Manchester beer poisoning epidemic. It appears, according to the *Lancet* for December 22d, to have been established that plants actually take up arsenic in a soluble condition from the soil, and that such arsenic may easily accumulate in the soil in

dangerous quantities from the use of manures made by heating bone ash with commercial oil of vitriol. Cabbages and turnips gathered from fields manured with superphosphate of calcium are said to have given unmistakable evidence of the presence of arsenic. The repeated dressing of the fields with this fertilizer may cause the accumulation of the poison in the earth and its absorption in increasingly dangerous quantities by vegetables subsequently used in food. This is a condition undoubtedly deserving of serious consideration and investigation, and we trust that such investigation by competent authorities in this country will be forthcoming.

DYSTOCIA CAUSED BY RIGOR MORTIS OF THE FŒTUS.

Dr. J. H. Evans, in the *Australasian Medical Gazette* for November 20th, records two cases in which labor set in as a consequence of the death of the fœtus due to separation of the placenta. Both women were in the last month of pregnancy. Ordinary measures failing, the child was extracted in each case with the forceps, and was found to be in a state of extreme rigor mortis. While the possibility of rigor mortis as a possible cause of dystocia is not unknown, it is perhaps not sufficiently widely known. But few cases are on record, and very many textbooks do not refer to it. It is probable that rigor mortis may occur in the dead fœtus at any time after its muscles have become contractile, and will probably last longer and be more likely to prove an obstacle to parturition the nearer the gestation is to term. In both of Dr. Evans's cases the accident seems to have resulted from severe exertion, in one case thirty hours, in the other three, before labor set in.

FRAGMENTS OF GLASS FROM MILK BOTTLES.

The bottles now in use for the delivery of milk are most ingeniously devised as regards convenience and cleanliness. Sometimes, however, they appear to be roughly handled, so that small particles of glass are chipped off from the mouth of the bottle. Falling into the milk, these minute fragments probably escape detection as a rule, but sometimes they are found by those who are careful to search for them. Doubtless their ingestion by infants occasionally accounts for a stain of blood in the stools. When once a bottle has been injured in this way, be it in never so slight a degree, its further injury is likely to be speedy. Purveyors of bottled milk should therefore be warned that every bottle with a chipped mouth should be discarded.

A NEW SPECULUM METAL.

A highly reflecting metal unaffected by air and water is, of course, a very suitable material for specula. Such a metal, according to the *British Journal of Photography,* cited in the January number of the *American Journal of Pharmacy,* is magnalium, described as a silver-white alloy of aluminum and magnesium. As it is attacked by alkalies, however, it should not be brought into contact with soap.

News Items.

Society Meetings for the Coming Week:

Monday, *January 14th:* New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynæcological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

Tuesday, *January 15th:* New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, New York, Medical Association; Syracuse, New York, Academy of Medicine; Medical Societies of the Counties of Kings (annual) and Otsego (semi-annual—Cooperstown), New York; Connecticut River Valley Medical Association (Bellows Falls, Vermont); Baltimore Academy of Medicine.

Wednesday, *January 16th:* Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

Thursday, *January 17th:* New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement; Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

Friday, *January 18th:* New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynæcological Society.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from December 22, 1900, to January 5, 1901:

Adair, George W., Major and Surgeon, United States Army, is detailed as a member of the retiring board appointed to meet in St. Paul, *vice* Lieutenant-Colonel Calvin De Witt, Deputy Surgeon-General, United States Army.

Cloud, Marshall M., First Lieutenant and Assistant Surgeon, United States Army. The sick leave granted him is extended six months.

Driver, Gerry S., Acting Assistant Surgeon, United States Army, will proceed to Chicago for temporary duty as examiner of recruits.

George, William R. S., Acting Assistant Surgeon, is assigned to duty at the post of San Juan, Puerto Rico, and will proceed there on the first transport sailing from New York.

Jackson, Thomas W., Acting Assistant Surgeon, United States Army, is ordered to San Francisco for duty with troops *en route* to the Philippine Islands.

Presnell, James F., Acting Assistant Surgeon, United States Army, is assigned to duty on the transport *Thomas en route* to the Philippine Islands.

Richard, Charles, Major and Surgeon, United States Army, is detailed as an additional member of the general court-martial convened at Fort Leavenworth, Kansas.

Richards, William E., First Lieutenant and Assistant Surgeon. The leave of absence granted him is extended one month on account of sickness.

Warren, Hobart E., Acting Assistant Surgeon, will report to Captain Richard H. Wilson, Eighth Infantry, for duty.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the two weeks ended January 5, 1901:

Barber, G. H., Surgeon. Commissioned surgeon from June 7, 1900.

Bradley, G. P., Medical Director. Commissioned medical director from May 31, 1900.

Brinter, J. M., Assistant Surgeon. Ordered to the *Independence,* January 13, 1901.

Burr, C. R., Assistant Surgeon. Order of December 19th revoked, and he is ordered to resume duties on the *Monongahela.*

CRANDALL, R. P., Surgeon. Detached from the *Constellation*, and ordered to temporary duty in connection with recruiting in Milwaukee, and then home to await orders.
FITZSIMMONS, P., Medical Director. Commissioned medical director from November 19, 1900.
LEDBETTER, R. E., Assistant Surgeon. Detached from the *Monongahela* and ordered to the *Constellation*.
MCCLURG, W. A., Surgeon. Detached from the *Indiana*, and ordered to the Naval Training Station, Newport, Rhode Island, to relieve Surgeon R. P. Crandall.
RODMAN, S. S., Assistant Surgeon. Appointed assistant surgeon from December 14, 1900.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera and plague, were reported to the surgeon-general during the week ending January 4, 1900:

Small-pox—United States.			
Washington, D. C.	Dec. 15-22	1 case.	
Jacksonville, Florida	Dec. 15-22	1 case.	
Cairo, Illinois	Dec. 15-22	3 cases.	
Chicago, Illinois	Dec. 22-29	2 cases.	
Wichita, Kansas	Dec. 22-29	2 cases.	1 death.
Decatur, Nebraska	April 1-Dec. 14	416 cases.	4 deaths
Manchester, New Hampshire	Dec. 22-29	14 cases.	
New York, New York	Dec. 22-29	11 cases.	2 deaths
Ashtabula, Ohio	Dec. 22-29	5 cases.	
Cleveland, Ohio	Dec. 22-29	20 cases.	
Central Falls, Rhode Island	Dec. 26	1 case.	
Memphis, Tennessee	Dec. 22-29	2 cases.	
Nashville, Tennessee	Dec. 22-29	1 case.	
Galveston, Texas	Dec. 17	6 cases.	
Houston, Texas	Dec. 22-29	25 cases.	1 death.
Salt Lake City, Utah	Dec. 22-29	32 cases.	
Wheeling, West Virginia	Dec. 15-22	3 cases.	
Green Bay, Wisconsin	Dec. 23-30	1 case.	
Small-pox—Foreign.			
Buenos Ayres, Argentina	Oct. 1-30	22 cases.	14 deaths
Prague, Austria	Dec. 1-8	26 cases.	
Alexandria, Egypt	Nov. 26-Dec. 10.	4 cases.	4 deaths
London, England	Dec. 1-15	2 cases.	
Paris, France	Nov. 24-Dec. 1	103 cases.	17 deaths
Paris, France	Dec. 1-8	152 cases.	14 deaths
Athens, Greece	Dec. 1-8	1 case.	
Bombay, India	Nov. 21-27		1 death.
Calcutta, India	Nov. 17-24		8 deaths
Madras, India	Nov. 17-23		1 death.
Licata, Italy	Dec. 8-15		1 death.
Vera Cruz, Mexico	Dec. 15-22		1 death.
Moscow, Russia	Nov. 24-Dec. 1	3 cases.	1 death.
Odessa, Russia	Dec. 1-8	23 cases.	7 deaths
St. Petersburg, Russia	Dec. 1-8	5 cases.	3 deaths
Warsaw, Russia	Dec. 1-8		15 deaths
Glasgow, Scotland	Dec. 15-21	67 cases.	3 deaths
Yellow Fever.			
Havana, Cuba	Dec. 8-22		6 deaths
Vera Cruz, Mexico	Dec. 15-22		1 death.
Cholera.			
Bombay, India	Nov. 21-27		2 deaths
Calcutta, India	Nov. 17-24		35 deaths
Madras, India	Nov. 17-23		1 death.
Plague.			
Bombay, India	Nov. 21-27		58 deaths
Calcutta, India	Nov. 18-24		4 deaths
Osaka, Japan	Nov. 30-Dec. 4	4 cases.	
Tamatave, Madagascar	Oct. 29-Nov. 18.	1 case.	

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending January 3, 1901:

AMESSE, J. W., Assistant Surgeon. On being relieved by Assistant Surgeon L. P. H. Bahrenburg, directed to proceed to Manila, Philippine Islands, and report to the chief quarantine officer for duty.
BAHRENBURG, L. P. H., Assistant Surgeon. Bureau order of December 27, 1900, directing Assistant Surgeon Bahrenburg to proceed to Manila, revoked; and directed to proceed to Honolulu, Hawaiian Islands, reporting to the chief quarantine officer for duty.
BREADY, J. E., Acting Assistant Surgeon. Granted leave of absence for four days from January 2d.
BROWN, B. W., Passed Assistant Surgeon. Relieved from duty at Cape Charles Quarantine and directed to proceed to Baltimore and assume command of the service, relieving Surgeon George Purviance.
KOLB, W. W., Hospital Steward. Granted leave of absence for thirty days from January 29th.
LLOYD, B. J., Assistant Surgeon. Granted leave of absence for eighteen days from December 11, 1900.
OLSEN, E. T., Hospital Steward. Granted leave of absence for five days.
PURVIANCE, GEORGE, Surgeon. Relieved from duty at Baltimore and directed to proceed to Washington, reporting at the Bureau for duty.
STIMPSON, W. G., Passed Assistant Surgeon. To proceed to Denver for special temporary duty.
WERTENBAKER, C. P., Passed Assistant Surgeon. To proceed to Shreveport, Louisiana, for special temporary duty.
WILLE, C. W., Assistant Surgeon. To assume temporary command of Cape Charles Quarantine, relieving Passed Assistant Surgeon B. W. Brown.

Casualty.

Acting Assistant Surgeon A. R. Booth died at Shreveport, Louisiana, December 27, 1900.

To Succeed Dr. Henry Noyes.—Dr. John E. Weeks, University of Michigan, '81, has been appointed to the professorship of ophthalmology in the New York University and Bellevue Hospital Medical College, made vacant by the death of Dr. Henry D. Noyes.

The Brooklyn Society for Neurology.—At the annual meeting of the Brooklyn Society for Neurology, held on December 27th, Dr. W. H. Haynes was elected president and Dr. B. Onif secretary for the ensuing year.

The New York Odontological Society.—The thirty-fourth anniversary of the New York Odontological Society will take place at the Academy of Medicine Tuesday, January 15th.

University of Tennessee.—Dr. W. D. Haggard, Jr., of Nashville, has been elected to fill the chair of gynæcology and diseases of children, *vice* Dr. W. D. Haggard, Sr., resigned, who will become professor emeritus.

Old Officers of the Grady Hospital Reelected.—All the old officers and the staff of visiting physicians were reelected by the trustees of the Grady Hospital, Atlanta, Ga., at their annual meeting.

Epidemic of Grippe.—The grippe is reported to be prevalent at Milwaukee, and there are said to be between 300 and 400 cases of the disease in that city.

The Sing Sing Outbreak of Typhoid is stated to have been traced to a break in the prison water-supply pipe that runs through and around old-fashioned buildings having outside closets.

Chinese Practising Illegally.—Three Chinese doctors have been arrested in Kansas City, Mo., charged with practising medicine illegally.

The Eighth Pirogoff Congress will be opened in Moscow in December, 1901. Professor Bobroff has been appointed president of the committee on organization. There will be six sections: Biology, pathology, medicine, therapeutics, legal medicine, and hygiene.

Small-pox.—There appears to be no abatement to the epidemic which has struck the country, as reports come in from all points. Fortunately the disease appears to be of a mild type. In New York City but a few cases a day are reported. Other places at which the disease has broken out lately are Crawford and Cherokee counties in Kansas, Minnesota, and Kansas City, Mo. The Brook-

lyn Anti-Compulsory Vaccination League met recently in Brooklyn borough, and after changing its name to the New York City Anti-Vaccination League, Dr. Montague R. Leverson, the president, asserted that he had treated about thirty cases of small-pox without giving notice to the Board of Health, and that all his patients had recovered without a scar. For this bold admission the doctor may yet have to answer to the board, which has the case under advisement.

Gold Medals Presented to Physicians.—Dr. Francis Le Moyne, Dr. W. H. Daly and Dr. Emmerling, Sr., who now constitute the consulting staff of the West Penn Hospital at Pittsburg, Pa., were recently presented with gold medals for their services.

New York Produce Exchange Hospital Donation.—Contributions of members of the New York Produce Exchange for the benefit of the hospitals during the December collection of 1900 amounted to $1,966.

Small-pox in St. Petersburg.—The epidemic has been successfully stamped out. The disease was fought by a special corps of physicians and students under the direction of Dr. V. O. Hubert. Over 300,000 persons were vaccinated during two months. The total expense for the campaign against small-pox was 34,000 roubles. In July the number of small-pox cases was 276, and in October only 35.

The York County Medical Society.—The York County (Pa.) Medical Society held its annual business meeting and banquet recently. Dr. W. S. Thaver, of Baltimore, gave a polyclinic lecture on lessons to be drawn from recent investigations in malarial fever. The new officers of the society are: President, Dr. Roland Jessop, York; vice-presidents, Dr. N. C. Wallace, Dover; Dr. J. C. Murphy, York Haven; secretary, Dr. R. A. Harding, York; treasurer, Dr. J. F. Klinedinst, York; censors, Dr. Laura J. Dice, Dr. A. A. Long, Dr. W. F. Bacon, York; examiners, Dr. W. C. Stick, Glenville; Dr. H. E. Leckrone and Dr. G. Holtsapple, of York.

The Pan-American Medical Congress.—The Third Pan-American Medical Congress will be held at Havana from February 4th to 8th, inclusive. Delegates can go either by the land routes, which are all via Florida, or by the water route from New York City. Full particulars concerning these routes, excepting that of the Ward Line steamers from New York, will be found in the *Journal of the American Medical Association* for November 6th. Those coming from south of Washington and west of Pittsburg will probably select the Florida route, while those from the northeast will find the Ward Line more convenient. The steamer *Seguranca* of the Ward Line leaves New York on January 30th, arriving in Cuba on February 3d, the day before the beginning of the congress. The new Ward Line steamer *Morro Castle,* holding 135 cabin passengers, leaves Havana on February 9th, reaching New York February 11th. The round trip costs $70.00. Any one going by this route will be absent from New York twelve days. All information regarding transportation may be had from Dr. H. L. E. Johnson, 1402 L Street, N. W., Washington, D. C.

New Officers of the Western Surgical and Gynæcological Association.—Dr. A. F. Jonas, of Omaha, Neb., was recently elected president of the Western Surgical and Gynæcological Association. The other officers are: First vice-president, Dr. A. W. Abbott, of Minneapolis; second vice-president, Dr. C. E. Ruth, of Keokuk, Ia.; secretary-treasurer, Dr. George H. Simmons, of Chicago. Executive council, Dr. H. C. Crowell, of Kansas City; Dr. John P. Lord, of Omaha; Dr. James E. Moore, of Minneapolis; and Dr. M. S. Harris, of Chicago. Chicago was selected as the place for holding the next annual meeting.

Berrien County Medical Society.—At the annual meeting of the Berrien County Medical Society at Benton Harbor, Mich., recently, the following officers were elected: President, Dr. H. V. Tutton, Benton Harbor; vice-president, Dr. Robert Henderson, Buchanan; secretary, Dr. Wakeman Ryno, Benton Harbor; treasurer, Dr. Hattie Schwendener, St. Joseph.

German Medical Society of Cleveland.—The second annual meeting of the German Medical Society was held recently at Cleveland, Ohio, and the following officers were elected: Dr. C. Schmitz, president; Dr. T. Belkowsky, vice-president; Dr. M. Kahn, secretary; Dr. L. Reich, corresponding secretary; Dr. I. T. Propper, treasurer.

The New York State Medical Society.—The ninety-fifth annual convention of the New York State Medical Society will be held in Albany January 29th, 30th and 31st. Many papers will be read and a demonstration clinic will be held at the Albany Hospital under the direction of Dr. Albert Van der Veer, Dr. Willis G. MacDonald and Dr. Samuel B. Ward, with a discussion upon a paper to be presented by Dr. Charles A. L. Reed, of Cincinnati, president of the American Medical Association. Dr. J. Collins Warren, of Boston, will lead a discussion upon the Surgery of the Spleen.

St. Louis Medical Society Meeting.—The following papers were read and discussed at the recent meeting of the St. Louis Medical Society: Excision of the Intact Gasserian Ganglion, with a Report of Two Cases of Trifacial Neuralgia Successfully Treated by this Means, by Dr. Willard Bartlett, and A Report of the Microscopic Findings in the Above Cases, with a Literature Résumé on the Neuro-pathology of the Subject, by Dr. Sidney I. Schwab.

Officers of the College of Physicians at Philadelphia.—At a recent meeting of the College of Physicians of Philadelphia the following were elected officers: Dr. W. W. Keen, president; Dr. H. C. Wood, vice-president; Dr. William F. Norris, Dr. R. A. Cleemann, Dr. Arthur V. Meigs and Dr. S. Weir Mitchell, censors; Dr. Thomas R. Nelson, secretary; Dr. Richard H. Harte, treasurer; Dr. Frederick A. Taggart and Dr. Elliston J. Morris, councillors.

Richmond (Va.) Academy of Medicine and Surgery.—At the annual meeting of the Richmond Academy of Medicine and Surgery at Richmond, Va., recently, the following officers were elected: Dr. Stuart McGuire, president; Dr. W. F. Mercer, first vice-president; Dr. J. M. Winfree, second vice-president; Dr. C. R. Robins, third vice-president; Dr. Mark W. Peyser, secretary; Dr. W. F. Parker, assistant secretary; Dr. E. J. Moseley, Jr., treasurer; Dr. M. E. Nuckols, librarian; Dr. J. S. Wellford, Dr. H. H. Levy, Dr. A. C. Palones, Dr. W. S. Gordon, Dr. J. A. White, and Dr. Landon B. Edwards, judiciary committee.

A Physician Stabbed by his Patient.—Dr. John H. Kellogg, superintendent of the Battle Creek, Mich., Adventist Sanitarium, was stabbed recently by a patient who had suddenly developed homicidal mania. The wound is reported as not being severe.

Defendant Doctor Wins Damage Suit.—Judge Sommerville, in the Civil District Court at New Orleans, has handed down a lengthy decision denying the damages asked by Samuel Stern from Dr. Oscar Laang. The suit arose out of an operation performed on one of Mr. Stern's eyes by Dr. Laang. It was alleged in the petition that owing to negligence and want of skill the petitioner lost the sight of the eye by the treatment prescribed by Dr. Laang. For this the action of $10,106 damages was brought. In the ruling it is held that the loss of the sight of the eye was not proved to have resulted from any fault of Dr. Laang, and accordingly the demand for damages was denied.

Physicians Sued by a Patient's Widow.—Mrs. Mary A. Sietz, of Seattle, Wash., widow of a laboring man who died last week after undergoing a surgical operation, is suing to recover $15,000 from Dr. John Witherspoon, Dr. G. V. Calhoun and Dr. A. B. Bailey, alleging wrongful methods of treatment. The answers made by the defendants deny the allegations concerning improper treatment and surgery.

St. Luke's Hospital, Chicago, Sued.—A suit for $5,000 damages has been brought in the superior court at Chicago against St. Luke's hospital, and against Dr. Henry W. Cheney and Dr. Louis B. Curtis, on the ground that the death of a patient, the child of the plaintiff, was caused by tetanus due to lack of care in the treatment given him while in the institution.

A Portrait of Dr. Leidy Presented to the College of Physicians.—Through the courtesy of Mrs. Joseph Leidy, Jr., of Philadelphia, a life-size oil painting of the late Dr. Joseph Leidy, fellow of the College of Physicians, president of the Academy of Natural Sciences, and professor of comparative anatomy and biology at the University of Pennsylvania, has been presented to the College of Physicians of that city. On the occasion of the presentation an interesting letter was read which had been written to Dr. Leidy by Professor Huxley.

The Lying-in Hospital of New York.—The annual report for the year ending September 30th has just been issued. The new hospital now in course of erection, the gift of Mr. J. Pierpont Morgan, is described. It is situated at Seventeenth and Eighteenth Streets and Second Avenue. The basement will be devoted to the outdoor work, the first story to the executive offices, the second to the nurses' department, the third to the septic department, and the fourth, fifth and sixth stories to wards for patients, consisting of about two hundred beds. The seventh story contains the operating room, laboratory, kitchen and laundry, while the eighth story is a continuation of the laboratory, with additional amphitheatre seats for the operating room.

The number of births in the Borough of Manhattan for the preceding year is stated as 50,472. The number of applicants to the institution were 3,018, of whom 2,162 were cared for, with only eight deaths. The Ladies' Auxiliary has rendered important service in supplying nurses, etc.

A Grateful Physician Remembers his Nurse.—The late Dr. F. B. Smith, of Philadelphia, in his will has bequeathed to Miss Margaret Coyne, of North Scranton, Pa., half of his $80,000 estate. Miss Coyne is a graduate of the Training School for Nurses attached to the University Hospital. Her first patient was Dr. F. B. Smith. The case was one demanding skill and unremitting attention. Day and night Miss Coyne tended the sufferer, and after four months Dr. Smith recovered.

Medical Inspectors of Schools Organize.—The Philadelphia Association of Medical Inspectors of Schools recently effected permanent organization. The officers of the association are: President, Dr. J. H. McKee; secretary and treasurer, Dr. Frank C. Hammond. The executive committee consists of Dr. Charles A. E. Codman, chairman, with Dr. Charles A. Ayres, Dr. Truman Auge, Dr. George W. Bowen, Dr. William E. Robertson and Dr. Howard B. Martin. Meetings of the association will be held at least once a month, at which papers will be read and topics discussed having relation to school hygiene.

The Bertillon System for Classifying Diseases.—In adopting a report submitted by Dr. Roger S. Tracey, Register of Records, the New York City Board of Health decided recently to use the Bertillon system in classifying the causes of deaths in the Bureau of Records, after January 1. The Bertillon system adopted is not the Bertillon system of measurements as used by the police, but a system for the classification of diseases. It is intended to facilitate the gathering of statistics on diseases and causes of death so that they may be uniform all over the world. The system is now in general use abroad.

Eye Malady Epidemic in Chicago.—A new disease which attacks the eyes and in many respects resembles "pink eye" was recently reported epidemic in Chicago. It is infectious and is not confined to any particular part of the city or class of people. One explanation offered for the origin of the malady is that it is due to the clouds of dust driven about the streets since the windy season set in. The streets have been notoriously dirty, and even people not attacked by the disease have had reason to complain of the discomforts suffered by having their eyes filled with dirt. These dust particles are supposed to have caused inflammation which has developed an infectious affliction.

Baltimore's Sanitary Condition Said to have Caused Typhoid Fever Epidemic.—In eleven months 783 people have died of typhoid fever in Baltimore. The health commissioner blames the drinking water and lack of a sewage system for the prevalence of the disease, and he does not think conditions will improve until the city has a filtration system for the water supply. Other physicians say the sanitary conditions of Baltimore were never worse. Alleys all over the city are in a filthy state.

Medical Students Rebel.—Students of the Saginaw Valley Medical College, at Saginaw, Mich., recently held a mass meeting and decided not to attend lectures in consequence of a small-pox patient being confined in the college hospital. This decision was reached in the face of the announcement by the faculty that the lectures would be resumed.

Cuba Fairly Free from Contagious Diseases.—General Leonard Wood has written the following letter to the

adjutant general of the army regarding the sanitary condition of Cuba: "I desire to invite your attention to the sanitary situation now existing in Cuba in order that general public opinion in the United States may be corrected. The island is, as a whole, free from epidemic or contagious diseases at present, with the sole exception of Havana, where there still remain a few cases of yellow fever, though not enough to receive serious consideration.

The Death Rate in New York City.—The death rate of New York City in 1900 was 20.53 to the thousand, as against 19.47 in 1899, the increase being due to the epidemic of influenza in the spring and deaths from heat in the summer. During the first five months of the year the deaths were 4,987 more than in the corresponding period for 1899. There were 298 deaths from sunstroke, against 141 the year before, an increase of 50 per cent. in deaths from measles, 25 per cent. from typhoid fever, and 10 per cent. from diphtheria and croup, these later variations being regarded as normal. There were only twelve deaths from small-pox, against eighteen in 1899.

Report of New York State Health Board for 1900.—Dr. Baxter T. Smelzer, secretary of the State board of health, in his latest report, says that the work of the laboratory connected with the board has been of a larger volume than usual by reason of the great number of cases of typhoid fever. The disease in many instances was traced to the use of well water which had become contaminated. It is the hope of the board that in the near future the legislature will make a sufficient appropriation to warrant equipment with the necessary appliances of a modern laboratory and the employment of a sufficient force therein to do the work. The number of candidates who passed the State examination entitling them to operate as undertakers in 1900 was 121. During the past few years numerous complaints have been received by the State board of health concerning insanitary conditions existing at summer resorts, alleged to have caused typhoid fever and other diseases. In view of the results of the several investigations made, the board says that there is warrant for the recommendation that a general inspection of summer resorts be made by representatives of the board. During the year 160,000 certificates of births, marriages and deaths have been received for record and filing. There seems to be a laxity, says the board, on the part of clergymen and physicians, in reporting marriages and deaths to the boards of health of the municipalities in which the events occur. An increase over the $35,000 appropriated for the expenses of the board is asked for.

The Bellevue Hospital Investigation.—As a result of the Bellevue Hospital investigations, Dr. George Taylor Stewart has been placed in charge of Bellevue, Gouverneur, Harlem and Fordham hospitals by the Commissioner of Charities. William B. O'Rourke, formerly superintendent of Bellevue, has been made deputy superintendent of that institution, and the present deputy has been transferred to Gouverneur Hospital. Dr. Stewart was born in New Milford, Conn., in 1855 and took his medical degree at the Hahnemann Medical College, in Philadelphia, in 1882. He was for a time connected with the Ward's Island Hospital, later studied abroad, and engaged in private practice in Mexico and California and returned to New York City in 1890. He has been at the Metropolitan Hospital, Blackwell's Island, since 1894, and has established the reputation of being a strict disciplinarian. A year ago he reprimanded an interne at the Metropolitan Hospital, and, his associates siding with the physician reprimanded, he suspended the entire house staff consisting of twelve internes, who were subsequently discharged by the Commissioner of Charities. The appointment of Dr. Stewart was first submitted to the medical board of Bellevue and approved of by them. He is given ample authority over all employees of the department who are engaged at the hospitals under his charge. The Commissioner of Charities has discharged several additional nurses and twelve more have threatened to resign, making a total of forty-one nurses discharged or resigned from Bellevue since the beginning of the investigation out of the original number of seventy-two. The inspector detailed by the State board of charities to investigate the condition of Bellevue Hospital has reported to that body, condemning severely the general condition of affairs found at the institution, and concluding his report as follows: "Nothing, save a complete change throughout the staff of employees, will be satisfactory, for, with a few notable exceptions, inefficiency, callousness, and idleness characterize those who are employed to do the work of the hospital. The tests of efficiency and zeal, of character and sobriety, have not been applied, and it is by these that the new superintendent can make Bellevue what it should be—a model hospital. New buildings are needed, but a new spirit and motive far more." Commissioner Keller said of the inspector's report: "The report is all right. I am afraid that what he says is true, but it will now be remedied. That is all I have to say."

Changes at Bellevue Hospital.—A new ward, known as the tuberculosis pavilion, large enough for two hundred patients, was opened recently at Bellevue Hospital. Three graduate nurses will be in charge. Eight house doctors, each at the head of their division, completed their two years' practice at Bellevue on January 1st. The men who leave the hospital are Dr. Frank L. Christian, Dr. R. T. Joy, Dr. E. Sturge, Dr. J. R. Swanick, Dr. H. H. Pelton, Dr. L. C. Rice, Dr. C. G. Dougherty and Dr. G. F. Varhart.

A Dewey Sanitarium for the Consumptive Poor.—In a communication to the New York papers Dr. S. A. Knopf recently made the suggestion that the money which was collected for the purpose of erecting a permanent Dewey arch be used instead in the building of "The Dewey Sanitarium for the Consumptive Poor of the City of New York," such sanitarium to be situated in or near the city.

Columbia University Hospital.—The need of additional facilities for Columbia University Hospital, Washington, D. C., was strongly emphasized at the annual meeting. Officers were elected as follows: Dr. F. A. King, president; Rev. Dr. S. H. Greene, vice-president; Mr. S. W. Woodward, treasurer, and Dr. E. A. De Schweinitz, secretary.

State Consumption Hospital.—Dr. Willis G. MacDonald, of the board of trustees of the State Hospital for Treatment of Incipient Pulmonary Tuberculosis, has been designated to confer with State Architect Heins regarding the buildings to be erected in the Adirondacks, probably at Ray Brook. It is likely that the structure will be two-story, instead of one, as first proposed, and it will cost at least $100,000. Its construction will be frame with a veneer of brick. An appropriation of $100,000 more will be asked of the legislature this win-

ter. The cost of patients is estimated at $7 each a week. The hospital is to have a capacity of 200.

A Proposed New Children's Ward at Randall's Island.—At a recent meeting of the health board a resolution that a new children's ward be established on Randall's Island, to be used solely for children afflicted with contagious diseases, was approved, and Dr. Jenkins, Dr. Cosby, and Dr. Roberts were appointed a committee to call on Commissioner of Charities Keller and confer with him.

The New Cornell Medical College.—The contract for the building of the new Cornell Medical College has been awarded by the board of trustees of Cornell University to Driscoll Brothers, of New York. The building, which will be situated on the campus, is to cost $125,000. It will be situated next to the law college and will nearly complete the quadrangle. It is to be ready by the fall of 1902.

A New Hospital at Chicago is to be established under the auspices of the Sisters of Charity of St. Nicholas' German Catholic Church. The old Kirk homestead, at Ridge Avenue and Oakton Street, has been purchased by the Sisters for $35,000 and will be remodeled for hospital purposes. The hospital will be the second in Evanston and situated in the opposite end of the city from the present hospital. The Kirk mansion was built at a cost of $25,000.

Hospital Buildings and Endowments.—An effort has been made to secure from France an appropriation of $50,000 for the French Hospital in New York City. Changes are contemplated that will cost about $200,000. The plans will not be fully decided upon until enough money to go to work on the changes has been collected. The French Hospital now accommodates sixty patients. ——The Beahan Hospital, of Canandaigua, N. Y. (a private institution), has been incorporated at Albany, with a capital of $10,000. The directors are A. L. Beahan, M. R. Corson and O. J. Hallenbeck, of Canandaigua.——The State Board of Health and the Forest Preserve Board recently held a joint meeting at Albany to consider the selection of a site in the Adirondacks for the proposed State hospital for consumptives. The trustees have selected a second site at Raybrook, between Saranac Lake and Lake Placid, and not far from the Lake Clear site, which the trustees first selected and which developed such opposition that the Forestry Preserve Board and the State Board of Health did not approve of it.——In the will of Theodore D. Barnum, of Buffalo, N. Y., a bequest of $500 is made to the Homœopathic Hospital of that city.——Dr. C. L. Bard and his brother, United States Senator Thomas R. Bard, are to erect a hospital at Ventura, Cal., in memory of their mother. The hospital will be a three-story structure and when completed will cost about $15,000. It will be open to all regular physicians and surgeons and will eventually be presented to the city.——Funds for enlarging the St. John's Hospital in Woods Run, Pittsburg, Pa., have been raised by private subscription. A bid has been made for the purchase of property adjoining the present building, to cost $9,000. When the new addition is completed there will be room for forty more patients, thus increasing the capacity to one hundred patients.——Work on the Herman D. Cable memorial addition to the Evanston Hospital at Chicago will shortly be begun. The money for the edifice—$50.000—was given by Mrs. Herman D. Cable, widow of a piano manufacturer.——The Hospital of St. Vincent de Paul, at Norfolk, Va., which was partly destroyed by fire in September, 1899, and has been reconstructed at a cost of about $100,000, will be formally opened in January.——William C. Schermerhorn, second vice-president of the New York Eye and Ear Infirmary, at Second Avenue and Thirteenth Street, has presented to that institution $75,000 to constitute a fund for the construction of a pavilion for patients afflicted with diseases of the ear. In the last five months the hospital surgeons have performed two hundred mastoid operations for intercranial diseases. It is for these cases especially that Mr. Schermerhorn intends the new pavilion. It will be the first of its kind. The structure will be of brick, five stories high.

Births, Marriages and Deaths.

Born.

CLOUD.—In Fort Sill, Oklahoma Territory, on Sunday, November 18, 1900, to Dr. M. N. Cloud, United States Army, and Mrs. Cloud, a daughter.

Married.

BUSHNELL—NEWLAND.—In Springfield, Illinois, on Wednesday, December 26, 1900, Dr. William K. Bushnell, of East St. Louis, and Mrs. Annie Newland.

CLARKE—BURDEN.—In New York, on Wednesday, January 2d, Dr. Alexander S. Clarke, of Paris, and Mrs. Daisy McCoy Burden.

ELAM—MYERS.—In Chicago, on Thursday, December 27, 1900, Dr. W. T. Elam, of St. Joseph, Missouri, and Miss Alice B. Myers.

HAYES—COLWELL.—In Providence, Rhode Island, on Tuesday, January 1st, Dr. Albert Edwin Hayes and Miss Fannie A. Colwell.

MASSIE—BECHTOLD.—In St. Louis, on Monday, December 31, 1900, Dr. J. G. Massie, of Belleville, Illinois, and Miss Adele F. Bechtold.

NORTHRUP—WAGENSELLER.—In Kansas City, Kansas, on Wednesday, December 26, 1900, Dr. John F. Northrup and Miss Clara L. Wagenseller.

POPE—WIGHTMAN.—In San Francisco, on Tuesday, December 25, 1900, Dr. Saxton T. Pope and Dr. Emma Wightman.

RASIN—COBLENZ.—In Baltimore, on Tuesday, January 1st, Dr. Robert Cooper Rasin and Miss Anna Elizabeth Coblenz.

ROSS—FESSENDEN.—In Cherokee, Kansas, on Monday, December 31, 1900, Dr. Robert M. Ross, of St. Louis, and Miss Daisy Fessenden.

ROSWELL—READ.—In Woonsocket, Rhode Island, on Tuesday, January 1st, Dr. Joseph T. Roswell and Miss Harriet Read.

STEVENSON—SUNDERLIN.—In Dundee, New York, on Wednesday, December 26, 1900, Dr. George Stevenson, of Buffalo, and Miss Louise Sunderlin.

VAN ARSDALL—MAY.—In Kansas City, Kansas, on Wednesday, December 26, 1900, Dr. Alexander La Vere Van Arsdall and Miss Elizabeth Wolf May.

Died.

CLEMENTS.—In Chicago, on Thursday, December 27, 1900, Dr. H. C. Clements, aged fifty-two years.

COREY.—In Fort Scott, Kansas, on Tuesday, January 1st, Dr. Jay Corey.

HOWLAND.—In Flint, Michigan, on Thursday, December 27, 1900, Dr. George W. L. Howland.

JONES.—In Grass Valley, California, on Friday, December 28, 1900, Dr. William C. Jones, in the sixty-eighth year of his age.

NELLES.—In Thornhill, Ontario, Canada, on Saturday, December 29, 1900, Dr. David A. Nelles, in the forty-sixth year of his age.

RANKIN.—In Shields, Pennsylvania, on Tuesday, January 1st, Dr. David Nevin Rankin, of Pittsburg.

SCHNEIDER.—In Williamsport, Pennsylvania, on Saturday, December 29, 1900, Dr. Louis Schneider, in the fifty-sixth year of his age.

TARBELL.—In Boston, on Friday, December 28, 1900, Dr. George G. Tarbell.

Pith of Current Literature.

Medical News, January 5, 1901.

A Study of Eighty-one Cases Operated upon under Analgesia Obtained by Subarachnoid Spinal Cocainization. By Dr. George Ryerson Fowler.—Though the author's experiences with spinal cocainization have been generally favorable, he holds to the proposition that the ideal anæsthetic is one which, with absolute safety, will render the patient entirely oblivious, not only to the pain of the operative procedure, but to each and all of its disagreeable features as well. This is particularly desirable in surgical cases. In obstetrical practice, however, the patient is more or less prepared, by long looking forward, for not only painful, but disagreeable, and what under any circumstances cannot but be disgusting, features of the event.

The History, Aim and Purpose of the Medical Societies of the State and Counties of New York. By Dr. Frank Van Fleet.—Every member should have a feeling for his society and its constitution, second only to the reverence and admiration he feels for the United States of America and its constitution. The latter stands for the protection of the rights of man, while the former stands for the protection of the public health. Referring to the New York State Medical Association and its county branches, the author asserts that this organization has done, and is doing, its utmost to overthrow the Medical Society of the State of New York and its county branches. It represents a principle which is antagonistic to the medical laws of the State of New York, as well as to the spirit of the constitution of this State and of the United States. No more important subject will ever be brought before the people of this country than the subject of the proper regulation of the practice of medicine and the protection of the public health. The State of New York has placed this matter in the hands of the medical profession, and in accepting this trust the Medical Society of the State of New York and its county branches aim to so conduct themselves as to merit the approbation of all good citizens.

Pneumonia: Its Ætiology and Treatment. By Dr. D. L. Burnett.—The less often the word pneumonia is spoken in the sick room, the better will be the patient's chance of ultimate recovery. Though treatment does not shorten its course, the outcome of pneumonia is emphatically dependent on the treatment received. While lobar pneumonia is caused by the pneumococcus of Friedländer and the diplococcus of Fraenkel, bronchopneumonia is not thought to be so caused, but may be of a specific nature. As to treatment; an initial dose of a mild cathartic is indicated in ninety per cent. of all cases. After the bowels are thoroughly unloaded, the patient should be put well under opium for two or three days until the sudden shock to the nervous system is somewhat expended. Excessive fever should be controlled by cold sponging. The chief organ to watch is the heart, and a very serviceable combination is nitroglycerine, sulphate of strychnine, spirit of camphor, aromatic spirit of ammonia, and *spiritus vini gallici,* to which may be added an opiate if needed. Strychnine is often used with too much timidity. The patient should never be allowed to rise on his elbow to take nourishment or to cough. Insomnia should be met without a direct recourse to opium. One one-hundredth of a grain of hyoscyanine will often have the desired effect, especially if there is a tendency to delirium. Poultices properly made, and carefully attended to, are of great comfort in the first stages and when there are sharp pleuritic pains or a harsh, annoying cough. Lime-water and milk is an old and valuable means of nourishment. During convalescence the keynote of the treatment is tonics.

On the Prognosis of Hysteria: A Contribution to the Question of Fatal Hysteria. By Dr. Joseph Fraenkel.—The author believes that when death occurs in hysteria it is due to irritation or paralysis of splanchnic or vegetative functions, and that a case of hysteria with more or less constant splanchnic or vegetative symptoms is from a prognostic standpoint, both as regards health and life, to be adjudged very cautiously.

Boston Medical and Surgical Journal, January 3, 1901.

Experiment and Experience with the Rifle. By Dr. Henry G. Beyer.—The author has written a very interesting and instructive article on this subject. When we consider that, at the battle of Colenso, in the Anglo-Boer War, 97.5 per cent. of all the wounds were due to rifle fire, the necessity for an intimate study of, and acquaintance with the work done by this wonderful piece of cachinery should be evident to the surgeon. Much use is made of the work of Kocher on the subject, and the author points out that it was he [Kocher] who first proved by experiment and observation that every increase in the frontage or the cross area of the attacking surface of a projectile was followed by diminished penetration and increased explosive effect. The penetrative power of a bullet is primarily dependent on its velocity, next on its specific gravity, and, thirdly, upon its hardness or consistency.

In the heart, liver, intestines and bladder, the hydraulic effect begins to appear with velocities of about two hundred and fifty metres, and it depends upon the quantity of fluids which the tissues contain. As regards the benign character of abdominal wounds occurring in South Africa, Sir William MacCormac says, "I can only explain this considerable immunity by the frequently empty state of the intestinal tract at the time of the injury."

Clinical Notes and Comments: Degenerative Disease of the Spinal Cord Associated with Anæmia. By Dr. Robert T. Edes.—Certain cases showing fairly definite spinal symptoms on the one hand, and conditions of malnutrition of the blood on the other, were at first spoken of as spinal degeneration, dependent upon pernicious anæmia. The present tendency, according to the author, is to put the anæmia more or less into the background, and to speak rather of a toxæmia which may be the common cause of both conditions. The presence of such a toxæmia is rendered very probable by the sequence of the condition spoken of upon quite a number of infectious diseases. Which set of symptoms has existed at first cannot always be known, though the nerve symptoms are the first to attract attention. The early sensory symptoms are numbness in the extremities, inability to use the hands for fine work, and a sense of extreme coldness in the feet. The motor symptoms are those of general weakness of motion and coordination rather than of distinct paralysis of any group of muscles or special movements. Illustrative cases follow.

The Differential Diagnosis of Intestinal Obstruction. By Dr. Z. Boylston Adams.—The most important distinction from the point of view of treatment lies between strangulation and impaction or closure of the intestines occluding the lumen, whether from within or from without. When palpation under ether fails to disclose the nature of the tumor, the anamnesis is of importance.

The family tendency, the fact of injury or of surgical operations, of previous attacks, of hernias, of the ingestion of indigestible substances, should be inquired into. The clinical history should be carefully considered. Examination *per rectum* should never be omitted. The employment of purgatives or opium is unadvisable. Whenever the diagnosis of intestinal obstruction is made, a surgeon should be called to the case. The operation of cœliotomy, in experienced hands, is comparatively safe, and may be the means of saving many lives. The fatal result usually comes from overdistention of the gut above the seat of obstruction.

A Physiological Solvent in the Treatment of Pus Cases. By Dr. Carl E. Munger.

Journal of the American Medical Association, January 5, 1901.

Specialties and Specialists. By Dr. Joseph Zeisler.—The author asserts that specialties are the legitimate result of increased medical knowledge. While an enumeration of the present existing specialties may be startling, the general practitioner will always keep the management of acute diseases, and should be the trusted medical counselor of the household in everything pertaining to hygiene, sanitation, development of children, etc. The author insists that the specialist should not only have a most thorough preliminary education, and a broad, comprehensive medical training in college and hospital, particularly in pathology, but should also have devoted from two to four years to his special studies. He should never lose the intimate contact with general medicine. The author devotes some space to the consideration of the specialty of dermatology, its scientific and practical importance, and what it has done for medical science, and he asserts that there is need of more thorough instruction in medical schools in this particular branch.

Ætiology of Dysentery. By Dr. Simon Flexner.—The author is disposed to view tropical dysentery as consisting of a bacillary and amœbic form, separable in their early and later stages by their clinical histories, their ætiology and pathological anatomy. The view expressed by Shiga, to the effect that the bacillus isolated by him is the cause of the epidemic disease occurring in Japan, may be followed by the establishment of the same organism as the cause of other epidemics. The author's observations prove the wide distribution and pathologic activities of the organism as well as its relation with a certain class of dysenteries.

Notes on Tropical Dysentery. By Dr. John Herr Musser.

Case of Malignant Endocarditis, with Recovery. By Dr. N. S. Davis.—A hard and fast line cannot be drawn between simple and malignant endocarditis. Anatomically, they are identical. Those cases in which high fever seems to originate from endocarditis are usually called malignant. In the author's case there were none of the usual sources of infection, and he believes that the chronic gastritis present may have made infection possible. The patient in this case recovered. Recovery is very rare. Not much is known of treatment; though, in those patients who have recovered, the majority were treated with remedies believed to have some specific value in combating streptococcous or staphylococcous infection.

External Drainage of Lung Cavities. By Dr. Le Moyne Wills.—The author details two cases in which this procedure has been resorted to, and, while the results are encouraging, further work along this line is necessary before we can come to a decision as to its availability.

Surgical Errors in Skiagraphy. By Dr. Carl Beck.—That skiagraphs are not always conclusive in estimating functional disability, and that some injuries require the greatest care and experience for their interpretation, are demonstrated by the author.

Walled Off. By Dr. John B. Deaver.—Pus is an avoidable complication in the treatment of appendicular inflammation, and the patient's welfare is best preserved by avoiding any of the complications incident to pus formation. The walled-off abscess is an evil to be avoided by prompt surgical intervention so soon as the symptoms of inflammation manifest themselves. Operation on cases of walled-off pus imperils the patient's chances for recovery, on account of liability to infection of the peritoneal cavity. Fæcal fistula as a result of a walled-off appendicular abscess is an avoidable sequel to appendicular inflammation and it should not be permitted to occur. The latter statement is true of all complications and sequelæ of appendicitis due to pus formation.

The Army Surgeon in the Philippines. By Dr. William J. Lyster.

A Normal Acoumeter. By Dr. E. Amberg.—The principle of this apparatus is an old one. A steel ball of a certain weight falls through a certain distance on a metallic block. Such an instrument, according to the author, excludes errors to a greater extent than Politzer's acoumeter does.

Amblyopia Following the Intoxicating Use of Jamaica Ginger. Subsequent Recovery of Vision. By Dr. Edward Steiren.

The Douche in the Treatment of Ophthalmia Neonatorum. By Dr. E. E. Holt.

Medical Record, January 5, 1901.

The Prevention and Relief of Postoperative Intestinal Obstruction. By Dr. Clement Cleveland.—The protection that the Trendelenburg position affords to serous surfaces is referred to. After operation there should be no raw surfaces; every stump or particle of raw tissue should be cauterized or covered with peritonæum. To leave the abdominal cavity half filled with decinormal salt solution on closing the incision is good practice. In addition to other advantages, the presence of the solution may lessen the amount of plastic lymph thrown out, and thus lessen the amount of adhesions. The author has been much impressed with the importance of the insufflation of oxygen gas as an agent of relief in this form of obstruction, and his results in several cases are given to illustrate.

A Case of Æstivo-autumnal Fever with Unusual Symptoms. By Dr. George L. Peabody.—The puzzling question in this case is as to the exact condition of the patient's spleen. It was absolutely immovable for several weeks, being always distinctly palpable, and temporarily imposing upon several who examined the patient, to the extent of causing them to consider it a tumor of the kidney. At present it offers nothing unusual to palpation in regard to its size, position and mobility. The presence of this form of malarial fever in this immediate vicinity is of interest.

Intestinal Indigestion. By Dr. A. P. Stoner.—The author combats the impression that disturbances of digestion in the intestinal tract invariably lead to catarrh and diarrhœa. Among the most prominent local symptoms

are a feeling of distress and an abnormal fulness referred to the hypogastric or gastric region, but without tenderness except upon deep pressure. There is a constant desire to eructate gas. Each case is largely a problem in itself, and must be treated individually. Most cases are caused by abnormal fermentation; therefore starches, sugars, and fats, should be interdicted, and proteids in the form of lean meats given. However, excessive amount of proteids may be the cause of the disorder, in which case all albuminous substances should be expunged from the diet list and some form of carbohydrates substituted. The author does not place much dependence upon predigested foods and artificially prepared enzymes.

On the Effect of Topical Applications of Excessive Strength and Improper Diet and Hygiene in Prolonging and Causing Skin Diseases in Infants and Young Children. By Dr. S. Sherwell.—As the gist of his experience, the author would recommend the milder measures, and the necessity of considering the individual case as to diathesis, etc., these all having a direct bearing on the treatment of any particular case. In internal treatment, not only in the subjects of skin diseases, but in all those in whom perverted metabolism and its results occur from abnormities of secretion in the *primæ viæ,* the author prefers mercury with chalk in fractional or other doses. In any case, the remedy acts as mild stimulant of, and aid to, proper secretion in the glands and guts, and is as certainly to a large extent disinfectant and antiseptic.

The Clinical Value of the Heart Reflex. By Dr. Albert Abrams.—This reflex can be observed only with the aid of the Röntgen rays and is best produced by friction of the skin of the præcordial region by means of a rubber. The author regards the heart reflex test as pathognomonic and far exceeding all other methods yet recommended in distinguishing a dilatation of the heart from pericardial effusion. If, in a given case of cardiac dulness, we vigorously rub the skin of the præcordial region by means of a rubber, and note, after two minutes, a reduction in cardiac dulness, we are justified in concluding that we are dealing with cardiac dilatation and not with a pericardial effusion.

A Case of Perforating Gastric Ulcer. By Dr. A. B. Atherton.

Philadelphia Medical Journal, January 5, 1901.

A Physician's Holiday at Karlsbad. By Dr. James Tyson.—On the whole the life at Karlsbad is an ideal one, with just sufficient amusement, exercise and treatment to occupy the time pleasantly. The purposes of the treatment are: 1. To prevent the injurious consequences of a sedentary mode of living, or of one-sided muscular action. 2. Ailments and disorders of the "organs of movement." 3. Dilatation of the stomach and bowels, chronic constipation, enlargement of the liver, hæmorrhoids, neuralgia, writer's cramp and similar affections, chorea, cases of paralysis and weakness of various kinds. 4. Obstructions to the circulation of the blood, diseases of the heart and their attendant consequences. 5. Diabetes mellitus, uric-acid diathesis, gout, adiposity and chronic metal poisoning. The most suitable and the most popular months for visiting are June and July.

Primary Branchiogenic Carcinoma. By Dr. Frederick Shimanck.—This is an extremely rare affection. Radical operations are impossible in many cases, treatment being limited to palliation and symptomatic treatment, curettement, chloride of zinc and cauterization.

The Resources of Modern Minor Gynæcology. By Dr. Augustin H. Goelet.—The author enters a protest against gynæcology becoming a surgical specialty, and asserts that there is much that we can accomplish by minor gynæcology, and that there are many gynæcological disorders that are curable by office treatment. Among our diagnostic resources he enumerates the microscope, uterine endoscope, cystoscope, the use of steel dilators, anæsthesia, and, finally, exploratory abdominal and vaginal section. The therapeutic resources are by no means limited, and he regards uterine irrigation as being one of the most important, because it is the only reliable method of cleansing the uterine cavity, and it affords the most effective method of application to the surface of the endometrium. Under the head of internal medication, he mentions a combination of bromide and potassium iodide as being particularly beneficial as a sedative for painful conditions in the pelvis, and for promoting absorption of inflammatory exudates.

The Home Modification of Milk for Infant Feeding. By Dr. L. Emmet Holt.

A Criticism of the Diagnosis "Composite Teratoma of the Ovary" Made in the "Pathological Report" of Dr. E. A. Jones. By Dr. S. W. Bandler.

Some Cases of Tetany in Infancy. By Dr. John Lovett Morse.—In every case but one [there are seven cases detailed], conditions were present evidently capable of causing toxic products, absorption of which into the circulation, with the resulting action on the nervous system, seemed to offer the most reasonable explanation as to the cause of the disease. The conclusion seems warranted that tetany is due to the action of the toxic products of many diseased conditions on the nervous system.

The Relation of State and Local Boards of Health to Outbreaks of Diphtheria. By Dr. G. E. Tyler.—Competent bacteriologic facilities should be offered free of charge to every citizen. Free antitoxine should be provided. If Pasteur's aphorism, "It is in the power of man to cause all parasitic diseases to disappear from the world," is true, there is need of greater ability in applying our present knowledge concerning this one. In small communities it is quite out of the question to maintain a public laboratory, and it then becomes the duty of the State board of health to supplement the local board by furnishing the necessary facilities.

Lancet, December 29, 1900.

The Association of Inguinal Hernia with the Descent of the Testis. By J. Langton, F. R. C. S.—The descent of the testis is a developmental process which exerts a dominant influence as a cause of hernia in infants, an influence, however, less powerful as age advances. The journey of the testicle from its original site of development below the kidney to its ultimate destination in the scrotum materially weakens the lower abdominal walls, and thus contributes in no small extent to the extrusion of some of the abdominal viscera, especially if associated with a congenitally elongated mesentery. Thus want of parietal integrity is chiefly manifested in the early periods of life, but the weakness left by the passage of the testis exists to a greater or less degree throughout life and thus acts as a predisposing factor of hernia at all ages. Inguinal hernia occurs eleven times more often in boys than in girls under the age of twelve months. Of 3,505 infants with hernia, 3,215 were boys and 290 girls. These numbers refer to the date of the first application of the patients for relief, and not to the date of the first discovery of the lesion. Inguinal hernia

in infant boys is three times more frequent on the right side than on the left, whereas in infant girls the two sides are nearly equal. This may be accounted for, firstly, in the structural weakness in the abdominal walls caused by the passage of the testis through them during intra-uterine life, whereby the walls are unable effectually to resist the constant pressure from within, and, secondly, to the failure in the perfect occlusion at birth of the processus vaginalis. Children born prematurely are very liable to hernia at birth, most frequently on both sides. Herniæ are largely associated with testes which fail to descend to their normal position in the scrotum (retained, partially descended, and ectopic testes), but instances frequently occur of testes permanently retained in the canal without a hernia. The author does not believe that such retained testes are specially liable to become the seat of malignant disease in later years. Misplaced testes should be classified as follows: (*a*) Complete retention within the abdomen; (*b*) retention within the inguinal canal; (*c*) placed outside the external abdominal ring; (*d*) situated high up in the scrotum, in the inguino-scrotal region; (*e*) placed in a skin pouch in the cleft between the scrotum and the thigh without any dartos tissue (cruro-scrotal testes, so-called); and (*f*) ectopic testes placed in unusual positions by the action of an errant gubernaculum in the thigh, perinæum or penopubal regions.

Congenital herniæ are classified as follows: 1. Herniæ into the cavity of the tunica vaginalis testis, which strictly includes the majority of so-called interstitial herniæ. 2. Herniæ into the funicular process which descend into the enclosed funicular process of the vaginal peritonæum. 3. Herniæ into a post-tunica vaginal sac, commonly known as infantile hernia, in which the protrusion is situated behind a dilated tunica vaginalis extending as high as the internal abdominal ring. The author discusses the anatomy and the relative occurrence of the above-mentioned three varieties of congenital herniæ, giving tables and diagrams. He pays special attention to interstitial herniæ, which he classifies as follows: 1. The hernia may ascend and separate the aponeurosis of the external oblique from the muscular internal oblique. This is the common interparietal or intermuscular form. 2. The hernia may split the aponeurosis of the external oblique from the outer ring to a variable distance, or it may pass through the external ring and take various directions. This is the pre-parietal or pre-aponeurotic variety. 3. The hernia may pass between the abdominal peritonæum and the fascia transversalis, lying in the subperitoneal fascia. This is the post-parietal, or post-muscular, variety.

In women interstitial hernia is probably due to distention of the abdominal muscles during pregnancy. Most of the cases are mothers of large families.

The Causation, Prevention, and Treatment of Post-partum Hæmorrhage. By Dr. G. F. Blacker.—The causes of post-partum hæmorrhage may be classified as follows: 1. Feebleness, exhaustion or malnutrition of the patient. 2. Over-distention of the uterus and undue stretching of the uterine muscle, such as occurs in cases of hydramnios or multiple pregnancies. 3. Exhaustion of the uterine muscle from frequent child-bearing and prolonged labor. One of the commonest causes of post-partum hæmorrhage is the application of forceps and the delivery of the child when pains are absent and the uterus is exhausted—the so-called "temporary uterine inertia." 4. Pathological conditions of the uterine wall, such as fibroid tumors, fatty degeneration of the uterine muscle, etc. 5. Some mechanical hindrance to the contraction and retraction of the uterus, such as the retention of the placenta, or the presence of adhesions. 6. Too rapid emptying of the uterus, either by forceps or by version. 7. Extreme nervous depression and shock, such as follow the birth of a dead child. 8. The administration of chloroform has often been regarded as a cause of uterine inertia. 9. Deficient coagulability of the blood, as occurs in cases of septic infection and hæmophilia.

Prevention.—All patients should enter upon labor in as favorable a condition of health as possible, and attention should always be paid to the general health. Women with a history of hæmophilia should be given calcium chloride, in ten-drop doses, three times a day for the last weeks of labor. Medical attendance should be sent for the moment labor begins. Where hæmorrhage subsequent to delivery is feared, it is often wise to rupture the membranes even before the cervix is fully dilated. Uterine inertia, secondary to fatigue, should be recognized and the use of forceps avoided. Where the pains are feeble, large doses of ergot should be given. Post-partum hæmorrhage too often occurs as a sequel of hasty and premature attempts to deliver the placenta. No such attempt should be made until from twenty to thirty minutes after the completion of the second stage of labor. When post-partum hæmorrhage does occur the author recommends the following line of treatment. If the placenta is retained it must be at once expressed, or if this is impossible, removed by the hand. A hypodermic injection of ergotin may be given, and the uterus kneaded through the abdominal wall, while the nurse prepares a hot douche. If the hæmorrhage is profuse, bimanual compression may be necessary, until the hot douche is ready. In the small number of cases where the douche fails to excite contraction, recourse must be had to continued bimanual compression, to plugging the uterus with gauze, or the application of a styptic. As regards the hot douche, the water must be used in large quantities and at a temperature of not less than 117° F. to 120° F. The uterine tube should be carried up to the fundus; this is facilitated by drawing down the uterus with a volsella, which manœuvre alone sometimes serves to check the hæmorrhage.

Calcium Iodate as an Iodoform Substitute and Gastro-intestinal Antiseptic. By Dr. W. Mackie.—Calcium iodate is an iodine compound containing 51 per cent. of iodine and in addition 16 per cent. of available oxygen. On contact with putrescible organic matter, whether in acid or alkaline media, like other iodates, it slowly liberates iodine. It acts more as a destroyer of the products of bacterial life than as a bactericide of any decided degree of potency. But it does inhibit bacterial growth. It is prepared by mixing solutions of iodine and bleaching powder, when it crystallizes out as a white powder, which is both tasteless and odorless. The author gives the results of experiments to determine its potency, and also cites several surgical cases in which it was successfully used as a substitute for iodoform.

Circumcision as a Preventive of Syphilis and other Disorders. By E. H. Freeland.—The author holds that if it were possible to secure the efficient circumcision of every male in infancy, not only would many of the disorders incidental to the genito-urinary organs in childhood, adolescence, and adult life, be prevented, but also syphilis would be materially diminished. To bring this about it is necessary to show (1) that the operation is free from risk; (2) that the deprivation of the structure will not inflict any physical disability on the individual,

and (3) that the benefits which are likely to accrue are substantial and commensurate with the sacrifice. These questions the author answers *seriatim* and most conclusively.

On a New Method in the Discission of Soft Cataracts. By P. Dunn, F. R. C. S.

A Case of Hydatids Primarily Affecting the Lung. By Julius Cæsar, F. R. C. S.—Hydatids primarily affecting the lung are very rare. The author reports such a case; his belief that the hydatids originated in the lung is based upon the following facts: (1) the liver was of normal size; (2) the hydatids could not have originated in the pleura, as there was no fusion of the costal and the pulmonary pleura; (3) there was no discoverable communication between the abdominal and pleural cavities; (4) the growth sprang from or was attached to the base of the lung. There was nothing in the history of the patient to suggest the source of the infection. Among the points of interest as regards diagnosis, were the following: (1) the very low temperature, which was never above 100° F., up to within a couple of days before death; (2) the character of the expectoration, with the well-defined streak of blood; (3) the intermittent and severe dyspnœa; (4) the diarrhœa; (5) the fact of the patient having years before suffered from drinking foul water.

British Medical Journal, December 29, 1900.

City Life in 1800. By Dr. G. F. Blandford.—War and Scarcity—London in 1800—Dress—The Streets—Public Amusements—Eating and Drinking Houses and their Water Supply—Municipal Police—Churchyards and Burial Grounds.

Anatomical Teaching in 1800. By Dr. A. Macalister.—Minute Anatomy—Textbooks of the Day—The Bones—The Muscles—Joints—Circulatory System—Special Senses—Abdominal Viscera.

Physiology in 1800. By H. Power, F. R. C. S.—Blood —Circulation— Secretion— Respiration—Animal Heat—Digestion—Nervous System—Embryology—Applications to Hygiene.

Pathology in 1800. By D'Arcy Power, F. R. C. S. —Terminology—Fever—Diseases of the Heart—No Knowledge of Microscopical Anatomy—Pathological Chemistry—Parasitology—General Accuracy with many Deficiencies—Pathology in Scotland—Pathology in Ireland.

Medicine in 1800. By Dr. T. C. Allbutt.

Lunacy and its Treatment in 1800. By C. Mercier, M. B.—Chains, Manacles and Muzzles—Lunacy Law—Corporal Chastisement—Medical Treatment of Insanity —Theories of the Nature and Causes of Insanity.

Midwifery and Gynæcology in 1800. By G. E. Herman, M. B.—Pelvic Deformities—Urethral Growths and Uterine Polypi—Ovarian Dropsy—Abdominal Palpation —The Forceps and the Vectis—Puerperal Diseases—Cæsarean Section.

Surgery in 1800. By S. Paget, F. R. C. S.—Abdomen — Achilles Tendon — Amaurosis — Amputation—Amputation of the Heads of Bones—Antrum Maxillare — Bronchocele—"Bronchotomy"—Cancer— Cataract—"Cirsocele"— Electricity—Empyema—Fractures—Gonorrhœa— Hæmorrhoids— Hernia— Hydrocele— Intussusception—Joints—Lumbar Abscess—Mamma—Mortification—Nephrotomy, etc.

Sanitary Knowledge in 1800. By Dr. W. H. Corfield.—Small-pox—Lead Poisoning—Scurvy—Jails and Jail Fever—Vaccination—Diseases of Occupations—Hospitals — Ventilation — Water Pipes — Sewers and Drains, etc.

The Poor Law in 1800. By Dr. J. M. Rhodes.

Military Medicine in 1800.—Naval Medicine—Scurvy and its Ravages, etc.

Presse médicale, December 12, 1900.

Rhachitis and Ancient Medicine. By M. Armand Delpeuch.—A historical paper.

Culture of the Germ of Soft Chancre.—M. F. Benzançon, M. V. Griffon, and M. L. Le Sourd report the successful culture of the bacillus of the soft chancre in gelatinized blood. The cultures appear in chains of different forms according as they are developed upon different media. Cultures from the pus of chancroid buboes can thus always be employed to settle a difficult or doubtful diagnosis.

Gazette hebdomadaire de médecine et de chirurgie, December 9, 13 and 16, 1900.

Herniated Appendicitis, Simulating Intestinal Strangulation.—M. Monchet reports such a case in which the vermiform appendix was found in a hernial sac. The symptoms were those of intestinal strangulation. Recovery followed the operation.

Abdominal Urticaria in Symmetrical and Segmented Bands.—M. Charles Achard reports two cases, one of the condition stated, the other of erythema of the thorax appearing in segments together with a pleurisy. The author thinks these cases prove the spinal influence of origin in these particular cases.

Purulent Rhinitis in the Course of Scarlatina.—M. Chausserie-Laprée speaks of different varieties of purulent rhinitis that may develop during scarlet fever, and suggests thorough irrigation of the nose in all scarlatinal cases as a prophylactic measure.

Tuberculosis of the Optic Thalamus. By M. Louis Spillmann and M. L. Nilus.

Progrès médical, December 8, 1900.

Chronic, Rheumatic, Suboccipital Arthritis.—M. Paul Coudray reports such a case which resulted in a permanent torticollis. The author advises in such cases *redressement forcé* under chloroform narcosis, to be followed by immobilization. Extension by the patient is then to be practised. The results in this case of this treatment were satisfactory.

Lyon médical, December 9, 1900.

Gastric Syndrome in Nurslings.—M. E. Weill and M. Péhu record two observations of a form of chronic dyspepsia in infants, characterized by regular, easy vomiting. The vomitus has no odor, no evidence of fermentation, and appears in from half an hour to an hour after feeding. No gastric dilatation or diarrhœa are present. The appetite is normal or exaggerated. No abdominal lesions can be demonstrated. There is a hyperacidity demonstrated by the vomited matter. The authors think a self-intoxication may be the basic ætiologic factor. They advise that alkalies be added to the milk.

Intestinal Ulcerations in Arteriosclerosis. By M. F. Mouisset.

Indépendence médicale, December 19, 1900.

A Case of Coxalgia. By M. Tillaux.

Treatment of Strictures by Linear Electrolysis.—M. J. A. Fort condenses in a short article the details of his treatment of urethral stricture by means of linear electrolysis by apparatus of his own devising. The patient is cured in three days, he says. The first day is devoted to the operation, the second and third days to antiseptic lavage and catheterization.

Wiener klinische Rundschau, December 16, 1900.

Questions in Light Therapy.—Dr. H. Strebel says that from a study of 324 cases of leucoplakia, the disease is principally found among men. It is caused mainly by syphilis and tobacco, and when luetic in its nature, is a parasyphilitic disease. About thirty per cent. of the cases become cancerous and the disease is exceedingly refractory to antisyphilitic treatment. The prognosis among syphilitics is bad, as many of them die of buccal cancer following leucoplakia.

Ætiology of Early Ulcerating Syphilide. By Dr. Jaroslav Bukovsky. (*Continued article.*)

On Aspirin. By Dr. Ludwig Müller.

Wiener klinische Wochenschrift, December 6, 1900.

Treatment of Peptic Ulcer of the Stomach.—Professor Anton Gluzinski, in an elaborate article, considers the various methods of treatment. He speaks of the difficulty of exact diagnosis as to whether hæmorrhage comes from an ulcer or from an eroded artery. Some cases should be treated prophylactically, so far as bleeding is concerned; one or two years' careful internal treatment subsequently, achieves excellent results. Cases with disturbed gastric motility usually represent the later stages of the disease, and are due, not to atony, but to pyloric stenosis. These cases must be treated by diet, by efforts to rid the stomach of its contents and by attempts at reduction of acidity. If the stenosis is not functional, but actually cicatricial, surgical measures constitute the treatment. Even after the relief of the stenosis, treatment must be vigorously continued. Perforation of an ulcer demands immediate surgical intervention, even though the result may be doubtful on account of the usual posterior location of the ulcer and the usual severe hæmorrhage.

Blood Pressure in Relation to Lymph Circulation.—Dr. Friedrich Friedmann reports a case of lymphæmia with cardiac insufficiency, in which after prolonged administration of digitalis, the hugely enlarged lymphatic glands in the neck became very small, while those in the axilla and other parts of the body lost the greater part of their increase in size. At the same time, the lymphocytes in the blood increased. The author attributes these phenomena to the increased blood pressure caused by the digitalis.

Phlegmonous Appendicitis as a Sequel to Tonsillitis.—Dr. R. Kretz reports such a case.

Remarks on Ureteral Fistulæ. By Dr. K. Büdinger.

Wiener medicinische Blätter, December 20, 1900.

Treatment of Persistent Dropsy.—Dr. Alfred Roth considers the various phases of treatment in dropsy due to heart or kidney disease. Withdrawal of unnecessary fluids, and diaphoresis and diuresis constitute the main elements of treatment. Diuretin, caffeine, sparteine, strophanthus, calomel, squills and digitalis are the drugs recommended for diuresis, while hot-air baths and pilocarpine, sometimes Nauheim baths, are advocated to bring about diaphoresis.

Pathological Anatomy and Clinical Varieties of Myocarditis (*continued article*). By Dr. J. Wahringer.

St. Petersburger medicinische Wochenschrift, December 8, 1900.

Spontaneous Cure of Ectopic Gestation.—Dr. A. Kupffer reports the case of a woman with a typical history who refused operation. Some months later, a fœtal bone was passed by way of the rectum and at this time the gestation sac could be plainly felt behind the symphysis. At various times fœtal bones passed away by the rectum and at one time considerable purulent fluid escaped by the same route. Three years later, the patient was perfectly well. Bimanual examination disclosed several sears in the fornices, and a tumor, sensitive to pressure, could still be detected behind the symphysis pubis.

Schneider's Dry Hæmatogene. By Dr. E. Sommer.

Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten, November 30, 1900.

Ætiology of Tropical Dysentery. Dr. Simon Flexner concludes from his studies in Manila that tropical dysentery is a bacillary and probably an amœbic form of the disease. The disease may be acute or chronic, the latter presenting a different pathological picture from the variety hitherto known as "amœbic" dysentery. The bacillary disease offers a micro-organism which is morphologically, culturally, and pathogenetically like that held by Shiga responsible for the epidemic dysentery of Japan. They are probably identical, and the bacillus dysenteriæ has undoubtedly a wide distribution in Nature.

Diphtheria in the Horse.—Dr. Louis Cobbett believes from his studies and experiments that horses are susceptible to diphtheria and may help to spread the disease.

New Form of Infectious Pulmonary Disease in Guinea-pigs. By Dr. F. Strada and Dr. R. Traina.

Changes in Anthrax Bacilli in Putrescent Cow's Blood.—Dr. E. Berndt has placed cultures of anthrax bacilli in cow's blood, which, after removal from the body, was allowed to putrify at room temperature. Bacilli could be demonstrated for thirteen days. Their death seems to begin in the centre, losing the staining power first.

Blood Filariæ Transmitted Entirely by Insect Bites.—Professor Grassi and Dr. Noè show experimentally, in a preliminary communication, that the filariæ the embryos of which circulate in the human blood, are deposited there invariably by insect bites, just as the plasmodium malariæ is deposited by the mosquito.

Three New Cestodia from New Guinea. By Dr. St. von Ratz.

Berliner klinische Wochenschrift, December 10, 1900.

Scrofula and Tuberculosis in their Relation to Conjunctival Tuberculosis. By Dr. W. Uhthoff.

Functional Ability of the Fatty Heart with Aortic Insufficiency.—Dr. Arthur Hasenfeld has performed a number of experiments to determine this point. He employed phosphorus to induce acute fatty degeneration and hypertrophy of the cardiac muscle. His studies

show that animals so poisoned, can withstand aortic insufficiency much more poorly than normal animals. He also finds that a hypertrophic heart with aortic insufficiency is somewhat prone to fatty degeneration. Moderate degrees of acute poisoning influence the strength and functional power of a hypertrophic cardiac muscle, whether in ordinary or extraordinary labor. Extensive acute fatty degeneration leads to diminished strength of a heart affected with aortic insufficiency, or it may even produce death.

Attempted Cure of Hernia of the Lung.—Dr. Oscar Vulpius describes the case of a man who suffered severe crushing injury of the right side of the chest, eventually resulting in a hernia of the lung at the site of the third rib. By resection of the second, third and fourth ribs an attempt was made to reduce the hernia. It proved unsuccessful owing to the large size of the prolapsed area of lung; but the author believes it might have had a different result had it been undertaken earlier.

Dietetic Treatment of Gastric Hyperacidity.—Dr. E. von Sohlern, on theoretical grounds, has long been using the carbohydrates in this condition of the stomach with gratifying results. He has now entirely discarded the exclusive meat-diet.

Diabetes Mellitus.—Professor Carl von Noorden says that the century has not produced any single drug which has a decidedly curative effect in diabetes. He speaks lightly of several vaunted remedies, and says that their virtue lies in the fact that patients are kept upon a strict diet at the same time that they receive the drugs. (*Conclusion*).

Deutsche Medizinal-Zeitung, December 17, 1900.

Problem of Malaria Therapy.—Dr. A. G. Cipriani recommends very highly the following formula in all forms of malarial fever, malarial cachexia, or other forms of malarial disease:

℞ Eosolic quinine.... } of each 7.5 grains;
Reduced iron..... }
Strychnine sulphate. } of each 1.5 grain.
Arsenious acid..... }
Extract gentian.....q. s. to make 50 pills.
M.

The dose is two pills three times daily at mealtime; for children, from one to two pills daily. The same pills were found very useful in anæmia and chlorosis. Eosolic quinine is the neutral quinine salt of trisulphoacetyl creosote.

Deutsche Aerzte-Zeitung, December 15, 1900.

Treatment of Spasm of the Glottis.—Dr. Fischbein believes that this condition in children is due to a self-intoxication which arises by irritation of the peripheral ends of the vagi through toxines developed in the intestines. He gives a purge at once, takes away milk from the diet and substitutes gruels. He believes a good many cases arise from impure milk.

Hedonal, a New Hypnotic.—Dr. Wedekind says that this drug is of excellent hypnotic power, does not diminish the blood-pressure and does not evoke a drug habit. It has a slightly disagreeable taste. The drug is not very soluble and cannot, therefore, be given subcutaneously. The dose is from fifteen to thirty grains, taken dry on the tongue or in wafers. It is contraindicated in alcoholics, and in diseases which produce præcordial pain and dyspnœa.

Schneider's "Hæmatogene." By Dr. E. Sommer.

Klinitchesky Journal, November, 1900.

Two Cases of Operative Treatment of Cortical Epilepsy. By Dr. M. A. Luntz.—The author reports two very interesting cases in which Wagner's method was used in order to expose the cortex of the motor area and to remove, if possible, whatever lesions would be found. The first patient was a woman aged fifty-three years with a typical history of epilepsy. Her attacks began by twitching of the left lower extremity. The contractions gradually spread and the patient lost consciousness when the upper limb became involved. All methods of treatment were found to be of no avail. There was no history of syphilis, but scars were found in the region of the shoulder joint, and the patient related that she had suffered for a long time with a suppurative process in the shoulder. The author concluded that this process was probably tuberculous, and thought that the epileptic phenomena might possibly be due to tuberculous deposits in the motor area. Accordingly, an operation was decided upon. After shaving and disinfecting the scalp, the Rolandic fissure was located according to the method of Poirier, and the location tested according to Bennel and Godlee's rule. The osteoplastic resection of Wagner was then performed, the size of the bone-periosteum-skin flap being 7 by 5 centimetres. The flap was everted after severing the bony base with a fine saw, and the dura was found adherent to the bone for a distance of about three centimetres in the region of the upper third of the central convolutions. The dura was then incised for a distance of six centimetres, and it was found adherent to the cortex in the region mentioned. The cortex was not altered in any way, except by adhesions, as stated above. A scalpel was thrust several times into the cortex in the upper portion of the central convolutions, and no resistance was encountered, nor was any empty space felt or any fluid discovered. The adhesions were separated, the opening in the dura was sutured, and the bone flap replaced. The postoperative period was uneventful. The epileptic convulsions disappeared and during three months and a half after the operation the patient had only one mild attack of twitchings in the left leg, without loss of consciousness. The general condition of the patient remained the same, however. She was weak and complained of occasional headache and noise in the ears. A slight paresis of the right foot, which existed before the operation, remained unchanged.

The second patient was a woman, aged twenty-two years, who denied syphilis and alcoholism, but gave a history of epilepsy. At first she suffered from severe headaches; then came attacks which began with twitchings of the right side of the face. She had the appearances of optic neuritis in the fundus of the eye, and a difficulty in speech was noticed. These symptoms made the author think of a new growth, but the nature of the growth could not be stated. There was no history of syphilis and antisyphilitic treatment was of no avail. Tuberculosis was also a possibility, but there were no indications in that direction. The operation was performed essentially in the same manner as in the first case. The result was not satisfactory. Complete aphasia set in at first, and there was an increase of the paresis of the right upper extremity which had been very slight before the operation. The attacks of convulsions were absent for a short time only, and returned with the same intensity and frequency as before. The aphasia and the paresis disappeared to a certain extent when the patient was discharged, but the difficulty in speech was worse than before the operation. The lesions found in this case were as follows: The dura and pia were adherent to the subjacent cortex in the re-

gion of the Rolandic and Sylvian fissures. On removing the adhesions and lifting the membranes, a focus of nodules of the size of a cherry-pit with a grayish, softened centre, was found in the region of the lower part of the central convolutions, particularly the anterior, and encroaching upon the third frontal. Immediately behind the posterior central convolution there was a second focus of the size of a pea. These foci were removed with a scalpel. Microscopic examination showed that these lesions were tuberculous.

Concerning Corset Liver. By Dr. G. A. Leventhal.—The author gives a comprehensive review of the subject of corset liver and reports a case in which corset pressure produced a very pronounced lobulation of the liver, giving rise to a tumor in the abdomen. A pronounced corset liver occurs, according to Leue, who examined 3,184 cadavers of persons over sixteen years of age, in 25.3 per cent. of women and in 1.9 per cent. of men. Quincke gives the percentage of corset livers in women as 56.3 per cent., in men as 5.7 per cent., but his figures include cases in which there is only a furrow in the liver substance due to tight lacing, in addition to those in which there is pronounced corset liver.

The term "corset liver" is not exact, for furrows may be the result of tight lacing without corset, *e. g.*, by any form of belts, petticoat-strings, or other constrictions about the waist. The author agrees with Langenbuch and Thiersch that a corset which is not tightly laced rather protects the abdominal organs from the still more injurious effect of the tight waistbands. The latter are especially injurious in cold weather when the weight of heavy skirts is added to the compression. In these cases the corset becomes a *point d'appui* which supports the weight of the heavy clothing. The author analyzes the classification of corset liver as adopted by Hayem, by Quincke, and other authorities, and reports the case of a Russian peasant woman, aged twenty-seven years, who gave the following history: She lived in the country until her seventh year, then in Moscow. Until her fifteenth year she wore a waist with whalebone supports; after fifteen and until twenty years of age, the long corset. She rarely laced excessively. When she became pregnant for the first time seven years ago she substituted tightly drawn waistbands for the corset, and resumed the corset after labor. She entered the hospital complaining of severe cough, dyspnœa, weakness, and vertigo. On examination she was found to be a poorly nourished woman with a thorax paralyticus, *i. e.*, an evenly constricted lower portion of the chest (Quincke). Tuberculosis of the right apex, Koch's bacilli in the sputum. The right upper portion of the abdomen was more prominent than the left, and palpation in this region revealed a smooth, hard, triangular tumor which disappeared into the hypochondrium. The lower edge of the tumor was sharp and movable upward, but no sulcus could be distinguished. The liver dulness was continuous with that of the tumor. The diagnosis of corset liver was made by excluding all other causes of liver tumors. In moderate cases of corset liver no treatment is necessary. If perihepatitis, chronic congestion, or complicating affections of the gall-bladder or ducts occur, as they frequently do, the condition present must be treated. Landau recommends the wearing of elastic abdominal belts, but Langenbuch does not think this measure effective. Good results have been obtained by Billroth and Tscherning (Czerny?) by ventrofixation of the floating lobe. Resection of this lobe has been successfully performed by Langenbuch. The chief point is prophylaxis—reform of woman's dress.

Concerning the Œdema of Bright's Disease. By Dr. I. Kabanoff (*concluded*).—The lymph exchange of the skin depends upon a series of factors: 1. The secretion of lymph. This is increased when the activity of the kidneys is lowered, as in toxæmia, in acute or subacute infection of the kidneys. 2. The condition of the circulation in the skin—the peripheral resistance. More lymph is secreted when the pressure is high, less when there is arteriosclerosis, with atrophy of the skin and empty capillaries. 3. The vital energy of the skin cells, as reflected in the function of perspiration. 4. The circulation of the lymph, depending upon the condition of the heart and blood-vessels. In pure parenchymatous nephritis the conditions are most favorable for a marked general œdema, and it is in this form of Bright's disease that we meet with the most marked cases of disturbance of lymph circulation. The occurrence of œdema in Bright's disease therefore depends upon a series of external factors, *e. g.*, cold, exogenous toxæmia, etc. Internal factors, however, are the most important ones in all cases, and as the basis of these there are inherited or congenital peculiarities of the organism as a whole, and of the vital organs in particular. The author adds that his conclusions need further testing by physiologic experiments and by clinical observations.

Vratch, November 18, 1900.

Should Exudative Pleurisy be Treated with Drugs Only? By Dr. S. V. Levaschoff.—The author gives his experience with various drugs employed externally and internally in serous pleurisy. In eighty-two cases thus treated he has not seen any improvement from the use of the various cathartics, diaphoretics, diuretics, cardiac stimulants, etc., nor from the application of cantharides, iodine, or iodine mixed with guaiacol. He does not think that these external remedies can have any effect on the absorption of the exudate, and frequently the only results from the use of iodine solutions are severe blistering and desquamation of the skin. He found, however, that these counter-irritants were very efficient, so far as allaying acute pain was concerned. The author's view concerning the inefficiency of cathartics, diaphoretics and diuretics is supported by the testimony of many modern observers in England, Germany and France. The author concludes that the ancient method of treating pleuritic exudates is not to be relied upon. As regards salicylates, he began using these drugs in the eighties and has found that they are the only class of remedies that can be said to be of value in causing the absorption of pleuritic exudates. They may be used in mild cases with small quantities of serum in the pleura, with the expectation that they will arrest the inflammatory process and cause the absorption of the exudate. Too large doses should be avoided, as they are not more efficient than doses of medium size. If the salicylates fail to give favorable results within from fourteen to twenty-one days, their use is to be discontinued, the serum evacuated by puncturing the pleural sac, and the effusion replaced by some neutral fluid. Salicylates will be sufficient in about one third of the cases; the remainder must be treated by puncture and evacuation. There are a number of cases, however, which tend to get well spontaneously, simply with the proper mode of life and with the removal of all influences increasing the effusion. Therefore, all observations concerning the value of a method of treatment in pleurisy with effusion must be made after waiting a sufficient period of time to see whether the effusion does not tend to disappear of itself.

Phototherapy in Surgery. By Dr. Minime.—In a previous article the author called attention to the anæsthetic and absorbent qualities of blue electric light, even when obtained from such a weak source as a sixteen-candle incandescent lamp surrounded with blue glass and provided with a reflector (see *Revue internationale d'électrothérapie et de radiothérapie,* July, 1900). Chronic inflammations are less readily affected by blue light than acute processes. Hæmorrhagic effusions are more readily absorbed on the second or third day after their appearance than at the beginning. In chronic eczemas, blue light is worth using, especially in cases of so-called nervous eczema. The author reports a case of facial eczema in a man in which illumination with the blue lamp for ten to fifteen minutes every other day, the lamp being held at right angles to the skin and about seven or eight inches from the surface, gave very good results. After the third sitting, the itching and pain became less severe, and the skin lost its pronounced hyperæmic color. The skin was perfectly normal after the eighth sitting. In hæmorrhagic effusions due to traumatism, two or three minutes of blue illumination are sufficient to diminish the pain, and the effusions are very rapidly absorbed under the influence of this mode of treatment. The author reports two cases to illustrate this point. In his hospital the treatment of ecchymoses is as follows: A warm general bath is given and the extremity, if injured, is raised. Blue light is then applied. Occasionally warm compresses of one-per-cent. solution of boric acid and alcohol are added. In ecchymoses of moderate size the effusion disappears in from one to three days. Two cases of this kind are reported as examples. The author also thinks that light very readily penetrates into the stomach and the intestines. He reports a case in which he arrested vomiting by illuminating the stomach through the abdominal wall. In another case persistent hiccough was also arrested in the same way. He suggests that illumination be tried in vomiting of pregnancy. Effusions into the joints are very markedly influenced by illumination. Articular rheumatism, articular neuralgia, intercostal neuralgia, and coccygodynia have also been successfully treated by this method. The author reports a case of uric-acid deposits in the basilic and cephalic veins extending from the fingers to the axilla in a woman aged sixty-five years. After five sittings with the blue lamp the deposits disappeared. Inflammatory infiltrations are very easily treated by means of blue light. The swelling and painfulness of the spermatic veins which follow Bassini's operation for hernia are removed in a few sittings by this method. The author concludes that the analgetic effect of blue light and the absorbent action of this method of treatment are more rapid and efficient than any other therapeutic measure known.

Annals of Surgery, December, 1900.

Structure, Fracture, and Refracture of the Patella. By Edward M. Corner, M. B., B. C., F. R. C. S.—The author directs attention particularly to the ætiology of these fractures. In quadrupeds, the patella is practically never broken, for though it bears a constant strain it is a strong bone. In man, in consequence of the erect position, the body-weight is transmitted directly from the femur to the tibia, leaving the patella comparatively functionless and hence weak. When the patella is struck, the femur acts as an anvil, and a stellate fracture results if the anvil is rendered firmer by the circumstance of the knee being bent. If the force area is greater than or equal to the contact area a stellate fracture will result. If the force area is less than the contact area a transverse or oblique fracture results. The lower half of the patella is weaker than the upper, and statistics demonstrate that fractures about the centre and lower half of the bone form about eighty-three per cent. of all cases. The influence of contact areas upon the lines of cleavage has much to do with the causation of fractures. The liability of the male to fracture of the patella reaches its maximum at the ages of from thirty-five to forty years. The years of maximum liability in the female are from thirty to thirty-five. The percentage of cases in which refracture occurs is 13.5. Osseous union as a result of the operation of wiring seems now to give the best results. The osteogenetic powers of the patella are comparatively small, and no bony union will occur unless there is close approximation of the fragments.

Suppurative Pericarditis and its Surgical Treatment, with an Analysis of Fifty-one Cases Reported in Literature. By Dr. Charles Burnham Porter.—As a result of his study, the author concludes that pericardotomy is indicated in all cases of suppurative pericarditis. Because of the uncertain and varying relations of the pleura, and because of the anterior position of the heart whenever the pericardial sac is distended by fluid, aspiration of the pericardium is a more dangerous procedure than open incision when done by skilled hands. Incisions of the pericardium can be done quickly and safely by resection of the fifth costal cartilage, and in many cases under local anæsthesia. In many cases of serous effusion, open incision without puncture will offer less risk and speedier cure than aspiration. The method and detailed technique of the author, proposed in 1897, have been followed out by the majority of recent operators.

The Radical Cure of Inguinal Hernia in the Female. By Dr. William B. Coley.—While most authorities agree that inguinal herniæ in women and children are more amenable to cure by mechanical treatment, the author's experience has led him to believe that the difference is very slight. As to the opinion of Kelly, that removal of the sac is of little importance, the author believes such an opinion erroneous. The transplantation of the round ligament is never indicated. In the author's cases—one hundred and twenty-three in number—the method employed was Bassini's, the single step of transplanting the cord being omitted. Rubber gloves are advocated by the author, and in support he cites the bacteriological findings in thirty-five examinations of the nails and hands of surgeons. Of sixty-eight cases in which portions of the skin were removed from the field of operation just before the primary incision was made, fifty-three were found to be sterile. Chromicized catgut or tendon may be rendered perfectly sterile, and the author prefers it to silk, silver wire, or silkworm gut. In the operation itself the cutting of the internal oblique muscle is not only unnecessary, but likely to weaken the canal. There has been no mortality in the author's cases. Seventy-three patients were under fourteen years of age, and fifty were between fourteen and seventy years. In eight cases suppuration occurred, limited to stitch-hole infection. The average time in bed was eight days, departure for home was permitted in two weeks, and a spica bandage was kept on for two weeks longer. Not a single relapse has been observed. The prognosis, from these notes, would seem to be better in the female than in the male. In 545 cases of inguinal hernia in the male, operated upon after Bassini's method by the author, there have been six relapses.

Echinococcus Cyst of the Liver. By Dr. Russell S. Fowler.—In the production of an echinococcus cyst, the exciting cause is the *Tænia echinococcus*—a parasite that has its habitat in the upper portion of the small intestine of dogs. Introduced into the intestinal canal of man, the ova undergo partial development. Digestion destroys the covering of the ovum and its contained scolices are liberated, burrow into the intestinal wall, and thus enter the circulation. Should they, as is commonly the case, enter a radicle of the portal vein, they are carried to the liver. Here, or in other tissues, cysts are formed in the immature, or cysticercus, stage, and are known as hydatids.

The contributing cause is close companionship with dogs. The symptoms are due to pressure effects. Most frequently the tumor will be found springing from the inferior surface of the liver. The posteriorly placed cysts are the most difficult of detection. Untreated, the disease may progress indefinitely or death may occur from intercurrent disease; a spontaneous cure may be effected or death may ensue in a variety of ways. Their growth is very slow, as a rule. Modern treatment consists in the stitching of the sac wall to the edges of a wound in the abdominal parietes and then incising it in one or two stages. The cyst may be best reached in certain cases by the transpleural route or through the lumbar region. Aspiration lessens sac tension. Keep the fluid out of the peritoneal cavity. The healing may take many months. A liver fistula may persist indefinitely.

A Complete Series of Clinical Charts for Keeping the Records of Surgical Cases. By Dr. Charles H. Frazier.

Result of Operation for Cancer of Penis. By Dr. Nathan Raw.—Although the penis was removed at the level of the abdomen, it was still cancerous; so, a deeper dissection was made and each crus detached from its corresponding pubic ramus and cut off. The wound healed by first intention. The patient passed urine through a catheter for twenty-four hours, when it was removed, and he afterwards passed water voluntarily and with complete control of his bladder. Cure was complete in a month, and eight months afterward there was no sign of recurrence of the growth. Microscopically, the growth was an epithelioma.

Fracture of the Spine. By Dr. Walter Lathrop.—In partial lesions we should operate. Where the lumbar region is involved with lesions of the cauda equina, operation offers the best chance for recovery. In fracture of the spinous process, laminæ, or entire neural arch, *operation is demanded.* Should immediate operation not be done, and we wait for from six to eight weeks, with the result that paralysis of the bladder and bowel continues, with cystitis and severe bed-sores present, we may be sure that Nature cannot relieve the case, and an operation is not only indicated *but demanded.*

Transperitoneal Urethrolithotomy. Report of a Case in which the Stone was Located by the X-Ray. By Dr. George N. J. Sommer.

Letters to the Editor.

ECHINOCOCCUS DISEASE IN THE UNITED STATES.

BERLIN, *December 9, 1900.*

To the Editor of the New York Medical Journal:

SIR: In a recently received article by Dr. Cary and Dr. Lyon, of Buffalo, entitled Primary Echinococcus Cysts of the Pleura,* which bears the marks of much painstaking work, I notice the following statement (page 9):

"Hooklets were mentioned in only seven out of the sixty-seven cases of hydatid disease collected by Sommer (2) from the United States."† This statement is somewhat ambiguous. In the first place, it suggests that I collected sixty-seven cases of hydatid disease, an ambiguity which would have been avoided by the addition of the word "literature" after United States, as in reality I gave but few cases not already reported in the literature by other authors, by Osler especially, who in turn had also extracted his cases from the literature. Further, I really collected one hundred cases in man, published respectively thus: Sixty-seven in the *New York Medical Journal,* November 23, 1895, and thirty-three cases in the *New York Medical Journal,* August 26, 1896.

Of a publication in the *Medical Record,* November 23, 1895, I have no knowledge. What the percentage of "hooklets found" in the thirty-three cases was, I do not remember. It is regrettable that the "hooklet statistics" are weakened in usefulness owing to the fact that the hooks were not always looked for by the observers.

It will be remembered that Osler's statistics included Canada, whereas I purposely confined myself to the United States. Incidentally, I wish to add that I endeavored to make statistics for Mexico by cooperation with a Mexican colleague of high professional position, but without success, I regret to say, as especially in that land is the contact with dogs very intimate. Whether the Mexicans have a Bureau of Animal Industry, I do not know, but the investigation of echinococcus disease in Mexico should be a field of work for some investigator. Van Cott's case, reported by me in 1896, occurred in a Mexican. Whether the geographical source of infection in that case was determinable, I do not know.

H. OTTO SOMMER, M. D.

JOHIMBINE AS A REMEDY.

NEW YORK, *December 24, 1900.*

To the Editor of the New York Medical Journal:

SIR: Your column entitled Therapeutical Notes has always seemed to me one of the most attractive departments of the *Journal,* and I rarely let a week pass without eagerly reading the paragraphs on advances in therapeutics which appear under this heading.

In your issue of December 22, 1900, page 1096, there appears a brief paragraph in the department of Therapeutical Notes, concerning the treatment of impotence. Quoting from Mendel (*Therapie der Gegenwart,* July, 1900), your contributor says: "'Johimbin' (whatever that may be) has given the best results in the author's hands." I feel that the subject is of sufficient interest to render an explanation of the nature of johimbine worth printing, and therefore write what I can gather from my reading concerning this remedy.

Johimbine is an alkaloid which was first isolated in 1899 by Spiegel and Thomson, working independently but simultaneously, from the bark of *Yumbehoa,* or *Johimbehe,* and is said to be a most efficient and at the same time a harmless aphrodisiac. In addition to Mendel, whose recent article on the subject is quoted by your

*Excerpted from the *Transactions of the Association of American Physicians,* Vol. xv, 1900.

†"(2) Echinococcus Disease in the United States. *Medical Record,* New York, November 23, 1895."

contributor, the action of this alkaloid has been tested on the generative organs of animals by Oberwirth, and in a recent article in the *Berliner klinische Wochenschrift* (1900, No. 42) A. Loewy, of Berlin, gave some very interesting details concerning the action of this drug. He found that hypodermic injections of johimbine into rabbits produced a marked hyperæmia of the epididymis, the testes, and the penis, as a result of which an erection followed. No irritating effects on the kidney were observed. In men, the internal administration of johimbine in doses of five milligrammes, two or three times daily for two or three weeks, had no injurious effects upon the kidneys, but stimulated the erectile reflex. The new alkaloid certainly deserves to be tested in cases of functional impotence, and if the statements made for it are substantiated by further experience, it will supersede the aphrodisiacs now in vogue.

MEDICUS NEO-EBORACENSIS.

DANNEMORA AS A SITE FOR A STATE SANATORIUM FOR CONSUMPTIVES.

801 MADISON AVENUE, NEW YORK, *December 20, 1900.*

To the Editor of the New York Medical Journal:

SIR: It is a cause for regret to the friends of the anti-tuberculosis movement in the State of New York that difficulty should be encountered in the selection of a site for the first State hospital. One would suppose that certain broad principles underlying the modern sanatorium treatment of this disease had been settled by the experience and discussion of the past fifty years. One would also suppose that these principles were universally applicable, whether the sanatorium were located in England, Germany, or the State of New York. No country in the world, so far as I know, has deliberately selected a site within one or two miles of a State prison and an asylum for insane convicts as admirably suited to the treatment of tuberculosis. New York State is the first civilized community that is considering the advisability of taking such a step in the selection of Dannemora, Clinton county.

It would appear to me that such a step would be inexpedient unless there were absolutely no other place available in the Adirondacks, to which region the trustees are, by law, limited in their choice, or unless the spot selected with this incubus of an insane and convict population presented special climatic or other advantages. The first of these alternative suppositions may be dismissed, because, as a matter of fact, the trustees have inspected more than twenty other sites, any one of which would be possible. A recent visit to Dannemora, an inspection of the site offered at that place, conversation with the prison physician, a study of his plea made in favor of Dannemora at the joint hearing before the State Board of Health and the Forest Preserve Commission, together with a study of the annual reports of the New York Weather Bureau, have convinced me that the second supposition may also be dismissed. A good deal of the medical evidence offered to prove the special advantages for this site has no bearing on the question, and would not appeal to a jury of physicians as entitling it to preference over other places. I refer especially to the pneumonia, typhoid, and tuberculosis statistics. The statistics of the mean temperature and the mean annual rainfall are at variance with the official reports of the weather bureau of the last ten years. The entire plea suggests the ease with which any place may be made to blossom out as a veritable Garden of Eden for the unfortunate consumptive, if sufficiently watered and fertilized by local enthusiasm and the imagination of its promoters. In spite of the cheerless and even depressing influence of the Dannemora surroundings as compared with other places in the Adirondacks, nobody will deny that it offers some of the requirements laid down by the trustees for the selection of a site; it has proper elevation, exposure, and water supply. Nor will anybody deny that incipient tuberculosis may be cured at Dannemora—or indeed at any place in the Adirondacks—still, no one would think of erecting a private sanatorium there, and it is the plain duty of the trustees to act for their poorer fellow citizens with the same discriminating judgment.

Let us not be blinded to the fact that the main arguments in favor of Dannemora are the gift of the land and the labor for the construction of the buildings. This is tempting bait; yet it is to be hoped that the trustees will not yield to it. The natural and commendatory desire on the part of the prison officials to secure labor for their convicts should not lead the trustees to subordinate the interests of the consumptive poor to those of the convicts.

This is to be only the second State hospital for incipient consumptives in this country, and upon its success may depend the fortunes of the whole movement in this and other States. Patients are to go there voluntarily, and much, perhaps all, depends upon getting them there early; there ought to be no prejudice in their minds against the place and its associations; no risks should be taken in the choice of site that would entail hesitancy on the part of the patient. Furthermore, be it remembered that the incipient consumptive is not a helpless invalid easily controlled by reason of his very helplessness, but well enough to assert his own individual prejudices.

At some future time, when the movement in this State is itself no longer in the incipient stage, and when the advantages of early sanatorium treatment of consumption have won their way into the hearts of our tenement-house population, the objections against Dannemora may weigh less in the balance, but for the present, at least, Dannemora ought to be eliminated from the list of available sites. ALFRED MEYER, M. D.

Book Notices.

Cancer of the Uterus. Its Pathology, Symptomatology, Diagnosis, and Treatment. By THOMAS STEPHEN CULLEN, M. B. (Toronto), Associate Professor of Gynæcology in the Johns Hopkins University. With Eleven Lithographic Plates and over Three Hundred Colored and Black Illustrations in the Text, by MAX BRÖDEL and HERMANN BECKER. Pp. xvi-693. New York: D. Appleton & Company, 1900.

THE comprehensive title of this book, published in the same sumptuous style as Kelly's recent work on operative gynæcology, by the same publishers, with the same wealth of beautiful illustrations, and upon a subject in which all the world is deeply interested, raises one's expectations and hopes that now a troublesome riddle is to be solved. But the riddle remains unsolved and we are apparently as far as ever from satisfactory conclusions in regard to that most elusive subject, the ætiology of cancer. This is only saying that the author, like all who have preceded him in his search for the ultimate cause of this scourge of the human race, has been unsuccessful.

Though disappointed that this question still remains open, we are bound to express our satisfaction with the general arrangement and contents of this book. It is

based upon an immense amount of painstaking work, and furnishes a fund of information which probably no other book of its kind has given us. The detailed accounts of many autopsy reports illustrating varied important phases in the pathology of this disease make it a most valuable help to those who are more or less frequently confronted with cancer in its various forms.

The interesting remarks on the anatomy and treatment of the ureters in relation to this disease show the impress of the author's teacher. Work upon these tubes is about as difficult and little likely to succeed, except in the hands of the unusually dexterous, as any variety of work within the abdominal cavity. It is well that this point should be emphasized.

An important part of the work deals with the diagnosis between cancer and other disease. It shows the extreme probability of the existence of cancer among those who had passed the menopause in the presence of certain readily recognizable symptoms, but it also insists upon the utility of the microscope, especially when the primary attack is upon the endometrium. The author would not deny, we think, that an observer of experience could in most cases depend upon the clinical phenomena in making a diagnosis, especially if the disease was limited to the cervix or the cervix and vagina.

The technique of the operative measures for the removal of cancerous tissues offers no new procedures, so far as we have been able to discover, the admonition being to make the removal as thorough as possible, cutting as widely as practicable from the manifestly diseased structures and removing glands which are likely to become infected. The extension to the lymph glands is not so universal as we had supposed, in view of the media by which the cells are transported. This is especially true in cancer of the body of the uterus, and probably explains the superiority of ultimate results after hysterectomy for this variety of the disease. The preference of the author is for abdominal rather than vaginal hysterectomy. This method certainly does permit of the more careful inspection of the tissues and a wider removal than is usually permissible by the vagina.

There is no book with which we are acquainted, certainly no American book, which so beautifully illustrates pictorially the various lesions of tissue which occur with cancer. A careful study of it is almost equivalent to a course in the laboratory and dissecting room, and is not half so laborious, for the specimens are all prepared and displayed to the best possible advantage. We congratulate the author, we congratulate the publishers, and we welcome the book as a praiseworthy contribution to the literature of a most important subject.

A Treatise on Diseases of the Nose and Throat. By Ernest L. Shurly, M. D., Vice-President and Professor of Laryngology and Clinical Medicine, Detroit College of Medicine, etc. Illustrated. Pp. xvii-744. New York: D. Appleton & Company, 1900.

The field of laryngology, with everything usually included under that term, has been pretty thoroughly covered by the various volumes of the last few years, yet the record of a clinician and scientific worker so well and so favorably known as Dr. Shurly cannot but be interesting and profitable. His book has been written "for the perusal of the general practitioner and medical student rather than for the specialist"; hence he has not speculated on unimportant theories or dwelt upon mere historical details, but has endeavored to fairly present both sides of controverted questions.

The general arrangement of the work calls for no special comment. The chapters have been written according to a classification based on the general nature of a given disease, rather than according to the anatomical site involved. Thus, we find Tuberculosis of the Upper Air-passages, with subheadings relating to the nose, mouth, palate, pharynx, etc. The volume as a whole is a fair exposition of the science of laryngology as currently taught, especially by American instructors.

Perhaps the chapter on tuberculosis is the one which will be read with greatest interest. While the author is fully abreast of the times on the tuberculosis question and has done much valuable original work along this line, he is not willing to accept without reservation some of the conclusions drawn by certain enthusiastic sanitarians. He has shown his faith by his works, and has had, we understand, one or two differences of opinion with the Michigan State Board of Health. Speaking of the general acceptance of the doctrine of the causation of the disease by the bacillus of Koch, he says that "unfortunately for a strict interpretation of the doctrine, the expected 'tissue reactions' do not always regularly follow upon the evidence of bacillary invasion, nor do the clinical data in many cases confirm either the presence or the operation of the tubercle bacilli." He is inclined to believe "that the rôle of the bacillus in spreading disease has been overestimated and that the independent powers ascribed to it have been also exaggerated." He is also skeptical as to the accuracy of conclusions based on many of the cases of reported contagion from food and milk. These are, however, only isolated statements, and the chapter as a whole evinces a much wider conception of the tuberculosis question on the part of the writer than is possessed by many a rabid critic of the views here expressed. The volume is creditable alike to the author and to the American profession.

Appendicitis and its Surgical Treatment, with a Report of One Hundred and Eighty-five Operated Cases. By Herman Mynter, M. D. (Copenhagen), Professor of Clinical Surgery in the University of Buffalo. Third Revised Edition. Pp. 3 to 231. Philadelphia and London: J. B. Lippincott Company, 1900.

It is the main object of the author to sum up the weight of evidence for and against the operative treatment for appendicitis. That the opinion of the profession foreign to this country is at variance with the general practice adopted here, is best expressed by quoting from the preface of the writer, in which he states that, while in the United States this disease is considered almost exclusively a surgical lesion, that is by no means the case in other countries. We find there men of undoubted authority, whose opinions are entitled to respect and attention, in the ranks of the conservative physicians, who operate only in exceptional cases and advise against surgical intervention as a standard treatment. He further shows that this conservative line is not warranted by the results obtained, judging from the statistical tables, and concludes that, although radical treatment is not so popular in other countries as it is with us, yet, if their testimony is carefully sifted, it will be found that their mortality is much higher than ours, and consequently it must be admitted that the greatest safeguard to life lies in prompt and energetic treatment, which at once rids the patient of his peril and places him beyond the possibility of a repetition of his troubles. He perhaps will not always find acceptance for the statement that the prevailing custom here is to operate as soon as the diagnosis is established; there are many radical surgeons who frequently find mild cases in which they adopt palliative measures;

not, however, without careful watching and having made preparations for an immediate operation, should it become necessary.

In the opening chapter we find a brief historical sketch which is most interesting and instructive; following in natural sequence, we find chapters on the anatomy, histology, ætiology, pathology, classification, symptomatology, complications and sequelæ, diagnosis, prognosis, and treatment. In the treatment advised we naturally expect to find a strong leaning toward radical measures. The writer ably and succinctly describes the various procedures, practically omitting all details pertaining to operative work in general, the reader being expected to be already conversant with the necessary surgical technique. The monograph closes with statistics of a hundred and eighty-five cases in which the author has been the operator and also personally conducted the after-treatment; these few cases, however, have by no means been the limit of the author's experience, but include only those cases which he has been able to follow to a termination.

This little book is most interesting and attractive, collating as it does many opinions of our most prominent surgeons, and is further enhanced by sound and safe ideas expounded by the author.

Ulceration of the Bladder; Simple, Tuberculous, and Malignant. By E. Hurry Fenwick, F. R. C. S., Surgeon and Pathologist to St. Peter's Hospital for Urinary Diseases, London, etc. Pp. vi-85. London: J. & A. Churchill. .Philadelphia: P. Blakiston's Son & Company, 1900. [Price, $1.75.]

Mr. Fenwick's monograph is a clinical study of a large number of cases of simple, malignant, and tuberculous ulceration of the urinary bladder. The author has laid special stress upon the diagnosis and treatment of these conditions, and, therefore, it is an instructive and interesting work. The author admits that the treatment is not always satisfactory and hopes that with the advance of serotherapy these results may be improved. He utters a warning against promiscuous instrumentation, but insists upon an accurate knowledge of the pathological condition before definite treatment is instituted. As a contribution to genito-urinary surgery, this little book is valuable.

BOOKS, ETC., RECEIVED.

King's American Dispensatory. By Harvey Wickes Felter, M. D., Adjunct Professor of Chemistry, Pharmacy, and Toxicology in the Eclectic Medical Institute, Cincinnati, etc., and John Uri Lloyd, Phr. M., Ph. D., Professor of Chemistry, Pharmacy, and Toxicology in the Eclectic Medical Institute, Cincinnati, etc. Entirely Rewritten and Enlarged. Eighteenth Edition. Third Revision. In Two Volumes. Volume II. Pp. viii-905 to 2172. Cincinnati: The Ohio Valley Company, 1900.

An American Text-book of Physiology. Edited by William H. Howell, Ph. D., M. D., Professor of Physiology in the Johns Hopkins University, Baltimore. Second Edition, Revised. Volume II. Muscle and Nerve; Central Nervous System; the Special Senses; Special Muscular Mechanisms; Reproduction. Pp. 11 to 553. Philadelphia and London: W. B. Saunders & Company, 1901. [Price, $3.00.]

A Clinical Treatise on Fractures. By William Barton Hopkins. M. D., Surgeon to the Pennsylvania Hospital, etc. Pp. 3 to 268. Philadelphia: J. B. Lippincott Company, 1900.

Obstetric Clinic. By Denslow Lewis, Ph. C., M. D., Professor of Gynæcology in the Chicago Policlinic, etc. A Series of Clinical Lectures on Practical Obstetrics delivered to Students and Practitioners in Cook County Hospital, Chicago, together with Remarks on Criminal Abortion, Infanticide, Illegitimacy, the Restriction of Venereal Diseases, the Regulation of Prostitution, and other Medico-sociologic Subjects. Pp. viii-652. Chicago: E. H. Colegrove, 1900. [Price, $3.00.]

A Manual of Medicine. Edited by W. H. Allchin, M. D. Lond., F. R. C. P., F. R. S. Ed., Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital, etc. Volume II. General Diseases—Continued. Diseases Caused by Parasites; Diseases Determined by Poisons Introduced into the Body; Primary Perversions of General Nutrition; Diseases of the Blood. Pp. vi-380. New York and London: The Macmillan Company, 1901. [Price, $2.00.]

The Essentials of Practical Bacteriology. An Elementary Laboratory Book for Students and Practitioners. By H. J. Curtis, B. S. and M. D. Lond., F. R. C. S., Late Surgical Registrar, University College Hospital, etc. Pp. xvi-291. New York and Bombay: Longmans, Green, & Company, 1900.

Experimental Research into the Surgery of the Respiratory System. An Essay awarded the Nicholas Senn Prize by the American Medical Association for 1898. By George W. Crile, A. M., M. D., Ph. D., Professor of Clinical Surgery, Medical Department, Western Reserve University, Cleveland, etc. Second Edition. Pp. 5 to 114. Philadelphia: J. B. Lippincott Company, 1900.

On the Use of Massage and Early Passive Movements in Recent Fractures and other Common Surgical Injuries, and the Treatment of Internal Derangements of the Knee-joint. Three Clinical Lectures delivered at St. George's Hospital. By William H. Bennett, F. R. C. S., Senior Surgeon to St. George's Hospital, London, etc. With Twelve Illustrations. Pp. x-97. New York and Bombay: Longmans, Green, & Company, 1900.

The Present Position of the Treatment of Simple Fractures of the Limbs. An Address delivered in opening a Discussion at the Meeting of the British Medical Association held in Ipswich, August, 1900. By William H. Bennett, F. R. C. S., Senior Surgeon to St. George's Hospital, London, etc. To which is Appended a Summary of the Opinions and Practice of about 300 Surgeons. Pp. 41. New York and Bombay: Longmans, Green, & Company, 1900.

On Some Cirrhoses of the Liver. Being the Lumleian Lectures for the Year 1900, delivered before the Royal College of Physicians, London. By Walter Butler Cheadle, M. A., M. D. Cantab., Senior Physician and Lecturer on Clinical Medicine, St. Mary's Hospital, London, etc. With Illustrations. Pp. 109. London: Smith, Elder, & Company, 1900.

Transactions of the American Gynæcological Society. Volume XXV. For the Year 1900.

Medical and Surgical Reports of the Boston City Hospital. Eleventh Series. Acute Yellow Atrophy of the Liver. By Stephen Smith Burt, M. D. (Reprinted from the *Lancet.*)

The True Suspended Position. By George J. Engelmann, M. D., of Boston. (Reprinted from the *Transactions of the Third International Congress of Gynæcology and Obstetrics.*)

Treatment of Typhoid Fever. By Stephen Smith Burt, M. D. (Reprinted from the *Medical News.*)

Diagnosis of Diseases of the Stomach. By Charles D. Aaron, M. D., of Detroit. (Reprinted from the *Medical Standard.*)

Miscellany.

Foreign University News.—In the University of Kieff 150 candidates appeared at the examination for the license to practise. The government commission rejected five of these applicants. Twenty-two received the license with honors, and the title "Woman Physician" was granted to two women, one a graduate of the University of Berne, the other of the University of Paris.——Graduates of foreign universities are entitled at present to admission to the examination for the title of "Physician" which is held periodically in the Russian universities. The diploma obtained after passing this examination entitles the holder to practise medicine throughout the empire. Heretofore foreigners were allowed to take this examination in Latin or in one of the modern languages, and they were admitted to the examination without presenting the "certificate of maturity," which represents a collegiate education. On the other hand Russian subjects were obliged to take the examination in Russian for a certificate of graduation from a "gymnasium" of recognized standing, in addition to certificates testifying to their attendance upon medical courses for a period of five years.——In 1900 there were 148 applicants for the title of "Physician" at the University of Charkoff, a degree lower than that of Doctor of Medicine but entitling the holder to practise in Russia. This title is the regular credential of the average Russian practitioner; only those who are specially gifted or who intend to enter State service or an academic career, usually apply for the degree of M. D., which is obtained on passing a special examination and on successfully defending a dissertation which must embody original research. As a rule this takes two or three years after graduation from the regular medical course. Of these candidates not one was rejected, twenty-seven received honors, and three were women.——The number of applicants for the title of "Physician" at the University of Kasan was 114, of whom six failed at the examination, fifty were awarded honors, and eleven were women.——The number of students in the first year of the medical course which was opened at the University of Odessa this year is 125.——The Austrian Minister of Public Instruction has issued an order according to which there will be triennial increase in the salaries of assistants, prosectors, etc., in the universities until the ninth year of service has been reached. From that time on, the salary will remain fixed, unless the recipient is promoted. This order will go into effect on October 1, 1901, and its execution will materially assist in improving the condition of those of the lower grades in the academic service, who have been heretofore proverbially underpaid. ——Professor Kossel, of Marburg, has been called to the chair of physiology at the University of Heidelberg in place of the late Professor Kuehne.——Professor R. Paltauf has been appointed to the vacant chair of general and experimental pathology at the University of Vienna, and has given up the chair of bacteriology.——The competition for the chair of obstetrics and gynæcology which was announced some time ago at the University of Kieff, brought applications from eighteen candidates, of whom three were rejected as not satisfying the conditions of the competition. The remaining fifteen candidates presented a total of 472 works to the appointing commission. The three candidates whose names will be submitted to the Minister of Public Instruction for appointment are Professor Grammatikati, Professor Muratoff, and Dr. Massen.——The antagonism against classics has expressed itself rather vigorously in the recent promulgation of the requirements for entrance to the medical school for women in St. Petersburg (The Imperial Medical Institute for Women). Beginning with next year, the students will only be required to be able to translate easy Latin authors like Cæsar and Sallust, and the examination will be oral. The Minister of Public Instruction in Russia has appointed a commission to investigate the advisability of admitting to the university faculties of medicine and natural sciences candidates who are graduates of scientific schools (Real-gymnasia). The solution of this question is of great importance to hundreds of young men throughout the empire.

The Medical College of Cornell University.—While the new building of the Medical College of Cornell University on First Avenue between Twenty-seventh and Twenty-eighth Streets, has been in use for some time, it was formally opened on Saturday evening, December 29th. Professor Schurman, president of Cornell University, presided over the exercises, which were held in the main lecture room of the building. Seated with the president were Mr. Seth Low, president of Columbia University, Governor Roosevelt, Dr. Wm. M. Polk, dean of the college; and Dr. Lewis Atterbury Stimson, professor of surgery in the institution.

In his opening address President Schurman said that never before in the history of the world had such a gift been made for medical research as that which made possible the erection and maintenance of the new Medical College of Cornell University, and that the generosity of the donor, Colonel Oliver H. Payne, and his high aim in making the donation, imposed very grave responsibilities upon the college authorities. Dr. Stimson in his address spoke of the philanthropic work done by Colonel Oliver H. Payne. He said that the building of the medical college was only one of a series of gifts made by Colonel Payne in the interests of medical science. Dr. Stimson also outlined the system of teaching in the college, and spoke of the opportunity afforded for research by the erection of the building and the endowment of it. He also referred to the course of instruction in the medical schools a century ago and outlined the steps taken for the development of medical science and medical instruction since then.

Governor Roosevelt followed Dr. Stimson, and devoted the major portion of his remarks to the obligations imposed by riches, citing the munificence of Colonel Payne, which made the erection of the new college building possible, as a striking instance of a proper appreciation and fulfilment of the obligations imposed by the possession of riches.

President Low spoke briefly, as did Dr. Polk, the dean of the faculty. Dr. Polk was in charge of the reception. He was assisted by all the other members of the faculty, together with a number of other physicians. The committee of the faculty having the reception immediately in charge was composed of Dr. James Ewing, Dr. Irving S. Haynes, Dr. W. Gilman Thompson and Dr. F. W. Gwyer.

The structure, which cost with equipment about $750,000, is located on First Avenue between Twenty-seventh and Twenty-eighth Streets, opposite Bellevue Hospital. In architecture, the building follows a severe style of Renaissance. Indiana limestone and red brick are the principal materials used in its construction.

The interior of the building represents the latest stage of equipment for medical purposes, including a cold storage plant, incineratory furnace, operating theatres, Röntgen-ray laboratories, chemical, bacteriological and medi-

cal laboratories, amphitheatres, dispensary and dissecting rooms, class rooms, libraries and offices, all of which are models of excellence in design and equipment. The building itself is fireproof throughout, brick, marble, tile and steel being components. Even the trim of the doors is iron, treated with enamel paint, and disinfection of the entire building is comparatively simple. In connection with the college building proper, the Loomis laboratory will be employed as a place for the study of materia medica, therapeutics and pharmacology, both in museum and work room. The gift of Colonel Payne includes a munificent endowment fund, the income from which is applied to the general expenses of conducting the institution.

Wisconsin's Proposed New Marriage Law.—A marriage law is to be presented at the next session of the Wisconsin legislature, which is attracting attention. The bill provides, among other things, that a board of medical examiners be formed and maintained by the State. No license to marry shall be issued to persons contemplating marriage unless they shall have received from the board a certificate setting forth that they are free from insanity, consumption and tainted blood.

Research Work in Mental Pathology.—At a meeting of the New York Neurological Society, held on January 1st, the following report was read and unanimously adopted:

"The Committee of the New York Neurological Society, appointed at the request of the president of the New York Commission in Lunacy, to offer suggestions as to a scheme of scientific study of mental diseases in connection with the State's hospitals for the insane, begs leave to report as follows:

"1. It is to the interests of the State that original research work should be carried on in relation to insanity, in order that the science should be advanced and better methods of prevention, treatment, and cure discovered. This is of direct interest to the taxpayer, upon whom falls the burden of the care of the insane.

"2. There should be one central laboratory in the State, wherein the energies of the best scientific men in the various departments of medicine related to insanity should be devoted wholly and exclusively to the prosecution of original research.

"3. Such a laboratory, combining the labors of well-qualified workers in general pathology, neuropathology, psychology, chemistry, anthropology, and other requisite branches, should be able to produce from year to year results which would be creditable to the State as a patron of science, as well as invaluable in advancing the knowledge of the methods of treatment and cure of mental disorders.

"4. Each hospital for the insane should have upon its staff of medical officers one physician whose sole duty it should be to conduct ordinary autopsies and to carry on the routine duties of a clinicopathological microscopist.

"5. The central laboratory, or pathological institute, should be freely open to any qualified scientific men for the prosecution of original research work, under the direction of the laboratory experts, preference always being given to the qualified men in the State hospitals. But systematic teaching of fundamental principles should not be required from any of the departments of the laboratory. The scientific men in charge of the various departments of the pathological institute should devote all their energies to original investigation, and not be taxed, hampered, or interfered with by medical men who are able to obtain instruction in fundamental principles elsewhere without cost to the State.

"6. The central laboratory for original research should be a part of a reception hospital for the insane situated on Manhattan Island."

[Signed] Frederick Peterson (president), B. Sachs, Charles L. Dana, Græme M. Hammond, Ralph L. Parsons, J. Arthur Booth, Joseph Collins, Samuel B. Lyon, Lewis A. Conner, William D. Granger, Edward D. Fisher, M. Allen Starr, Pearce Bailey (secretary).

The Late Dr. J. Henry Fruitnight.—The following preambles and resolutions were recently passed by the Northwestern Medical and Surgical Society:

Whereas, It has pleased Divine Providence to sever by death the membership of Dr. J. Henry Fruitnight in the Northwestern Medical and Surgical Society, a membership lasting nearly a quarter of a century; and,

Whereas, We, the members of this society, desire to place on record our appreciation of the noble and self-sacrificing character of our late colleague, sadly cut down in the prime of life; therefore be it

Resolved, That in the death of Dr. Fruitnight this society has lost a modest and congenial companion, a true friend, and a valued professional colleague, whose earnestness of purpose and unselfishness of motive peculiarly fitted him for a large and useful medical career; that he is a severe loss to this society, in which he took a warm personal interest, to the many other medical bodies of which he was a member, and also to the medical profession and the entire community; that his published writings, concise discussions, and discriminating thought are worthy of our highest regard.

Resolved, That we sincerely extend our heartfelt sympathy to the members of his bereaved family, wishing for them that consolation which the memory of such a noble life alone can give.

Resolved, That a copy of these resolutions be spread upon the minutes of this society; that duplicates be sent to the *Medical Record,* the *New York Medical Journal,* the *Medical News,* the *Archives of Pædiatrics,* and *Pædiatrics;* and that an engrossed copy be prepared for the family of the deceased.

For the Northwestern Medical and Surgical Society,
[Signed] A. M. Jacobus,
E. S. Peck,
A. E. Bieser,
Committee.

To the Members of the American Medical Association: Your attention is called to the fact that there is at present pending in Congress certain proposed legislation that seriously disturbs the present status and efficiency of the medical corps of the United States Army.

The proposed law is entitled An Act to Increase the Efficiency of the Military Establishment of the United States (Senate bill 4300) and in a general way modifies the existing organization of the army, while at the same time it provides for a damaging and offensively invidious discrimination against the medical corps. This fact is shown in the following particulars, viz:

1. It decreases the percentage of composition of the corps in the grades of colonel from 3.1 per cent. to 2.4 per cent.

2. It decreases the percentage composition of the corps in the grade of lieutenant-colonel from 5.2 to 5.7 per cent.

3. It decreases the percentage composition of the corps in the grade of major from 26 per cent. to 18.6 per cent.

4. It *increases* the percentage composition of the corps in the grade of assistant surgeon with the ranks of captain and first lieutenant from 65 per cent. to 74.7 per cent.

The significance of these proposed changes can be understood when it is remembered that, even under the existing law, it requires more than eighteen years to reach the grade of surgeon with the rank of major, while under the proposed law it will require at least twenty-five years to reach the same grade and rank. With this fact reduced to a mathematical demonstration, the inevitable result will be, first, that the more worthy young men will not apply for commissions, and, secondly, that the relatively less worthy men who do enter the service, discouraged by the certain impossibility of reasonably prompt promotion, will resign, leaving their places to be filled by untrained and consequently less efficient men. The ultimate disaster from this contemplated change, however, will consist, not alone in a lowered status of the medical service, but (1) in increased disease and death rate among the men, (2) in a diminished and otherwise weakened force on the firing line, and (3) in a material augmentation of the pension roll.

In view of the foregoing facts, and in view of the fact that every other corps of the army is better graded than is the medical, every member of the American Medical Association and every member of the medical profession is hereby earnestly solicited to send at once to his United States senator and congressman an urgent and emphatic protest against the proposed provisions in Senate bill 4300 relative to the medical corps of the United States Army.

[Signed] Charles A. L. Reed,
President of the American Medical Association.
Cincinnati, O., December 29, 1900.

Out-of-School Work Forbidden in Russia.—In a recent circular dealing with the reform of secondary education in Russia, the minister of public instruction ordered that the custom of giving the scholars work to be done during the summer vacation be abolished, and that a series of instructive summer excursions and voyages be organized for the scholars under the supervision of competent teachers.

The Death Rate from Contagious Diseases in St. Petersburg has been on the increase for the past six or seven years, thus placing the Russian capital in marked contrast with the other large cities of Europe and America. Thus in the year 1891, 2,489 persons died in St. Petersburg of typhoid, typhus, small-pox, diphtheria, or scarlatina; in 1893 and 1894 about 3,000. in 1896 and 1897 over 3,000, and in 1[illegible] mortality from tuberculosis shows a s[illegible] number of deaths ranging from 3,50[illegible] These facts do not speak well for t[illegible] ation of the Russian capital.

Mosquito Inoculation S[illegible] General Sternberg recently received [illegible] Walter Read, of the Medical Departi[illegible] ing that the experiments with mosqui[illegible] been entirely successful in eighty p[illegible] s under treatment. These experime[illegible] cted by Dr. Read and other surgeon[illegible] Havana. So far the inoculation has b[illegible] ish immigrants intending to settle i[illegible] of making have voluntarily presented themselves for inoculation with a full understanding of the nature of the experiment.

University Medical College Addition.—The University Medical College of Kansas City has recently completed its additions, which practically double the capacity of the school. A feature of the new college is its amphitheatre for surgical clinics, which combines the best features of Eastern institutions. A chemical laboratory occupies the third floor, and on the fourth floor are located the pathological and bacteriological laboratories. In the basement are eleven clinic rooms. The entire fifth floor is used as a dissecting room. The building, with its finishings and equipment, represents an expenditure of $35,000.

Library for Rush Medical College.—Four thousand volumes of medical and surgical writings have been presented to the library of Rush Medical College, Chicago, by Dr. Christian Fenger. Comprised in the gift is a practically complete collection of theses presented for the degree of doctor of medicine at German universities, which embody in a sense the entire history of surgery for the last fifty years. This part of the gift is looked upon as almost priceless, because it is rare that an opportunity to obtain a duplicate occurs. The collection was originally made by Thiersch.

Foreign Hospitals, etc.—The administration of the city hospital of Odessa has handed in an estimate for the maintenance of this institution for 1901 to the city government. They ask about 470,000 roubles, or 50,000 more than last year. These figures are interesting when compared to the budgets of other city hospitals in Russia. According to the *Archiev Pathologyi*, etc., for October, 1900, Odessa spends one-tenth of its city revenue for the maintenance of its medical institutions—more than any other Russian city. The mortality of Odessa, on the other hand, is lower than that of St. Petersburg or Moscow. In 1900, Odessa spent 1,083,175 roubles for its hospitals, charities, and sanitary administration, while the whole city revenue for that year was only 5,239,350 roubles.——The city administration of St. Petersburg has decided to establish in that city twelve dispensaries for the outdoor poor in buildings belonging to the municipality. The sum of 90,000 roubles has been apportioned for the support of these institutions for the coming year. In addition to the regular day service, there will be also a night emergency service with a physician on duty at each of these dispensaries. Physicians in private practice will be appointed to these positions, and will be paid for each visit made during the night.——Eleven hospitals which are supported by the municipality of Moscow cost that city 1,487,400 roubles during the year 1900.——Professor Hochenegg has been appointed director of the surgical clinic of the late Professor Albert in Vienna. Professor Hochenegg directed this clinic in 1896, during Albert's sickness.

Colleges Recognized by the Michigan Board.—At a recent meeting of the Michigan board of registration in medicine, the following five colleges were added to the list of those recognized by the board as being colleges of good standing: Western Reserve College, Cleveland; University of Buffalo, Buffalo, N. Y.; Albany (N. Y.) Medical College; women's department of the Northwestern University, Chicago; Illinois Medical College, Chicago, and Hahnemann Medical College, Philadelphia. This makes a total of forty-two colleges the diplomas of which are recognized by the Michigan board.

Original Communications.

A PECULIAR CASE OF MIGRATORY FOREIGN BODY, WITH X-RAY ILLUSTRATIONS.*

BY D. BRADEN KYLE, M. D.,

PHILADELPHIA.

I DESIRE to report this case of migrating foreign body in the face on account of its unusual interest and the complicated and varied symptoms which were present.

While the marked symptom in each attack was the frightful neuralgic pain, yet the change in the site of the pain, soreness, and swelling was the misleading factor. At times one would almost suspect mastoiditis, again facial neuralgia, again ethmoiditis, and, lastly, all the symptoms of confined suppuration of the maxillary sinus. Yet when the attack was over and the acute inflammatory symptoms had subsided, there was such an absence of any symptoms that it was impossible to locate any special diseased area.

An interesting feature of the case was the x-ray burn which resulted in our endeavors to locate the foreign body. Twenty-four hours after the x-ray picture had been taken an acute dermatitis developed on the right side of the face. The hair came out in handfuls extending almost to the median line. Later on the skin blistered and peeled off. There was no bad effect systemically from this burn, and to-day, curiously enough, the portion of the head on which the burn extended is covered with hair again, although it is short, being only two or three inches in length.

The history of the case, as given by the patient and the physician in attendance, is as follows: The first attack occurred in the latter part of January, 1887, and lasted for nine weeks. The beginning of the attack was rather curious. There was a sensation of something crawling, not on the scalp but underneath, that seemed to extend from the back of the neck forward over the top of the head. This was followed by considerable swelling and severe pain. The attack continued for nine weeks, and sometimes from the pain and extreme swelling the patient would become almost comatose. During this time the patient gave birth to a month's fœtus.

The symptoms gradually lessened after about nine weeks, until they would almost entirely disappear, but for three years, or until 1890, the patient would have repeated attacks, although not quite so severe as the attacks which occurred in 1887. The swelling, which was at first largely in the back of the head, with each attack traveled farther forward, and the tenderness and swelling over the mastoid region were quite pronounced. During all this time the patient, who was considered hysterical, described the sensation as that of something crawling underneath the scalp, and insisted that on each attack that peculiar sensation extended farther forward. In 1890 another severe attack occurred in which the swelling and tenderness over the mastoid were so pronounced that a diagnosis of acute mastoiditis was made. The patient refused an operation at that time. In a few days the symptoms gradually abated until all the swelling and tenderness disappeared. From 1890 to 1895 no severe attacks occurred, but there was continually present that peculiar crawling sensation. Another curious symptom was this: Frequently, and especially when the peculiar crawling sensation was aggravated, there was a profuse sweating from the scalp and the skin of the face, which did not occur in any other part of the body. This was a peculiar pasty, sticky material. The same material was discharged from each ear.

In December, 1898, an acute attack occurred. The peculiar sensation of which the patient had complained all these years had finally reached the forehead. The attack which occurred in December, from the symptoms given by the patient and the physician, was almost identical with the confined suppuration of the frontal sinus.

FIG. 1.

There was considerable external swelling, besides the dull, boring pain which is almost characteristic of a confined suppuration. Without any surgical interference there was a profuse discharge of pus from the nostrils, which gave almost immediate relief to the patient. Shortly after the first discharge of pus the patient, in freeing the nostril by rather forcible blowing, felt some hard substance in her handkerchief. On examination, she found a small piece of needle, about one half of a needle, as it afterward proved. In a few days the discharge cleared up, and the patient was free from any discomfort. The portion of needle which was discharged at that time, unfortunately, the patient did not keep, but the doctor and three members of the family who saw the piece of needle all agreed in their statement as to the size and discoloration of the needle. The surface of the needle was not roughened, but was simply oxidized. After the discharge of this portion of the needle the peculiar crawling sensation ceased.

*Read before the American Laryngological Association at its twenty-second annual congress.

When I first saw the patient, on August 23, 1899, there was a pronounced swelling on the right side of the face, reaching the antrum and up into the orbit, and at the base of the nose. There was marked tenderness on pressure, and the patient suffered severe pain, the pain at times being so severe that opiates had to be administered. At the time she was under the care of Dr. Lawrence Simcox, of Wissahickon. He had attended her through several previous attacks. There was considerable discharge from the nostril, although it was nothing more than would have followed a severe cold. Examination of the nasal cavities revealed nothing. Transillumination of the accessory cavities also gave negative results. I therefore hesitated to use any surgical interference on account of the previous history, similar swellings having occurred elsewhere about the face and head. This attack subsided and the patient was fairly free from pain for some three weeks, when another attack as severe as the former occurred. It was then that, while I did not attach much importance to the history of the discharge of the piece of needle, as a last resort it occurred to me that possibly there was a foreign body somewhere in the cranial cavity that was setting up this curious chain of symptoms. The patient consented to have an x-ray picture taken. It was with considerable difficulty that we seemed to outline the foreign body, the picture which I present being the best of a number taken. However, we felt satisfied that there was a foreign body present. The second x-ray picture showed a slight difference in its location, as is shown in the photograph.

Granting that the x-ray picture was true, we decided to explore the antrum. It was impossible to determine whether this black line shown by the x-ray picture, which we believed to be the foreign body, or needle, was within the antrum or in the bony posterior wall, or anterior wall of the antrum, or even outside of the antrum. The exploratory opening was made into the antrum and the whole antral surface explored, not only with the probe, but with the electric magnet. Dr. William M. Sweet, who has had great success in the removal of foreign bodies from the eye with the Hirshberg magnet, was present and used the instrument. Once or twice he was positive that the instrument was attracted to some metallic substance, but he was unable to locate it. As we could find nothing in the antrum, and did not know the positive location of the foreign body, we decided to do no further cutting, but, if possible, to locate with the x-ray the exact position of the needle, which we now believed to be there. A few days after the operation there appeared, just about a quarter of an inch back of the opening which I had made into the antrum, which was in the canine fossa, a swelling which looked much like an ordinary gum boil. This continued for a day or two, when it opened and, on examination by the patient's husband, at the suggestion of the patient that the boil had ruptured and that there was something causing considerable pain, he discovered projecting from the tissue the point of this needle. Catching it with a pair of ordinary scissors he withdrew the body, and here it is.

FIG. 2.

FIG. 3.

The patient made a rapid recovery, and since that time has had no return of the symptoms, and is in perfect health to-day.

How the needle entered nobody knows. What course it pursued we cannot tell, but it is reasonable to suppose that the chain of symptoms was produced by the moving body. I have made a careful search of the literature and I do not find any similar case reported. We all meet with curious and unexplainable cases, and I have reported

this case hoping that possibly it might be a help to some of us from a standpoint of diagnosis, as I frankly confess it was a most puzzling case to me, and it was with little faith that I started in search for that portion of the needle.

The x-ray prints are not so clear as they should be, or so clear as is shown on the negative. The case also shows the value of the x-ray as a diagnostic aid.

TWO CASES OF HÆMARTHROSIS OF THE KNEES.

By RUSSELL A. HIBBS, M. D.,

NEW YORK.

These two cases were shown at the meeting of the Orthopædic Section of the Academy of Medicine, April 20, 1900. The patients are brothers, aged respectively eleven and fifteen, and were first seen by me at the New York Orthopædic Dispensary, July, 1899. There was at this time a distinct effusion in the knees of both, and some tenderness and slight thickening of the synovial membrane, with such limitation of motion as would be produced by the effusion, viz., the extremes of flexion and extension, but no reflex muscular spasm. They were practically in the same condition when shown at the Academy.

The father died of some acute illness, the mother is healthy. Two hæmophiliac brothers died in infancy, and one sister is alive and well.

These attacks have been recurring at frequent intervals

Fig. 1.

for several years, leaving the joints so painful that walking is difficult or impossible for a few days afterward, and sufficient time had not elapsed between the attacks for the effusion to entirely disappear. Thus, there is a constant condition of chronic synovitis. Elastic knee caps were

Fig. 2.

advised and afforded some relief. In the case of the elder, however, the attacks have become more frequent and the disability so marked that it has been necessary to apply a support to more fully protect the joint. In the younger they are becoming less frequent and no other treatment has been required.

It is evident from the histories that these attacks of synovitis are due to hæmorrhage into the joints, and that they illustrate a comparatively rare form of joint lesion.

No other joint has been involved and these attacks are not always accompanied by other hæmorrhages.

Photographs Nos. 1 and 2, of the elder and younger respectively, show the joints as they appeared when first seen. Radiographs do not show evidence of bony change.

REPORT OF TWO CASES OF DERMOID CYST OF THE NOSE.*

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The comparative rarity of the occurrence of dermoid cysts of the nose and the interest attached to tumors of this nature are my excuse for adding two more cases to the literature on this subject.

*Read before the American Laryngological Association at its twenty-second annual congress.

The first case, for which I am indebted to Dr. Cornell, of Brockville, Ont., concerns a young man, sixteen years of age, who consulted me three years ago on account of a "discharging sore" situated near the tip of the nose, in the middle line.

His father gave the following history concerning his son: At birth it was noticed that there was a small round

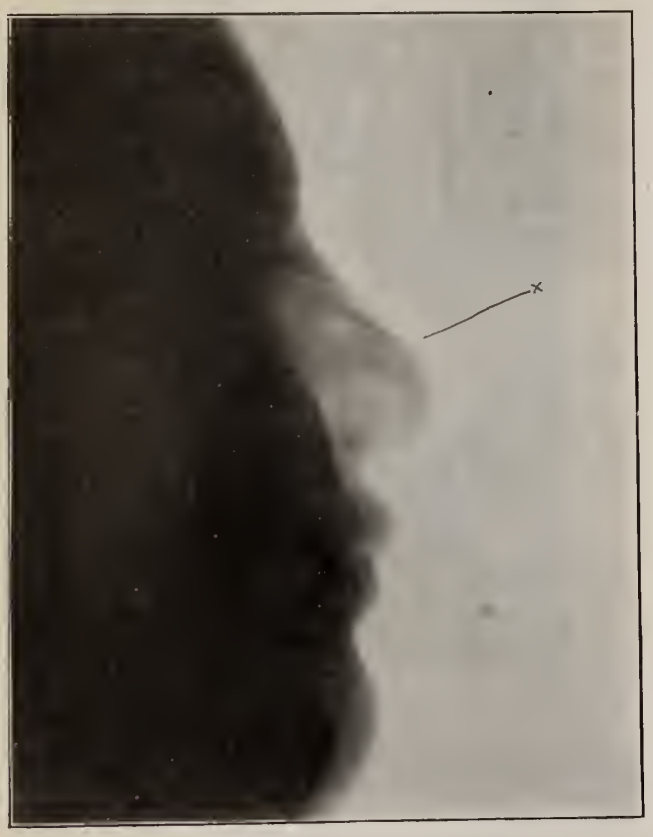

FIG. 1.

lump, of about the size of a large pea, on the nose near the tip. This remained so, unaltered in size and shape, until August, 1896, when it burst and gave exit to a small quantity of thick, curdy-looking pus. The opening was enlarged and the lesion curetted elsewhere. The resulting wound soon closed and remained so for several weeks, when the lump made its reappearance and broke, and has continued to discharge ever since. Upon examination, there is noticed a small opening, circular in shape and about two millimetres wide, situated in the middle line of the nose and about five millimetres from the tip. A skiagram was made of the nose, with the object of ascertaining whether a sinus existed, as it seemed impossible to find it with a probe. The result was that the skiagram showed a fine dark line, leading from the centre of the opening directly upward and backward into the sæptum. The result of the skiagraphy is shown in the accompanying picture (Fig. 1, X). After a good deal of difficulty, a very fine probe was successfully passed into the sinus and took a direction as indicated in the skiagram (X). The sinus was opened and freely and thoroughly curetted, and solid nitrate of silver applied. The sinus itself was found to be lined with a dense fibrous membrane, with sebaceous material covering its surface. At the distal end of the sinus and within it, several fine hairs were found close to the opening. The wound thus made was allowed to heal up thoroughly from the bottom, leaving a very wide cicatrix which is seen upon close examination of Fig. 2. This was subsequently dissected out, and the edges were freshened and united. The result, which was extremely satisfactory, is shown in Fig. 3.

The second case, for the history of which I am indebted to my house surgeon, Dr. R. J. Tooke, concerns a young boy, aged eight years, who, according to his parents' statements, has had a growth on his nose since birth, which, though small at the time, has recently slowly increased until reaching its present size. Upon examination, a tumor, somewhat oval in shape, is noticed occupying the greater portion of the bridge of the nose. It extends from one-fourth of an inch above a line drawn horizontally from the eyebrow on the one side to that of the other, and continues downward for an inch, reaching to about the centre of the nose. At the upper portion it is broader and gradually narrows below, assuming thus somewhat of a pear-shape, and at the lower point a few fine hairs are noticed. In length it measures an inch and a quarter, and in breadth, at the widest part, half an inch (see accompanying Figs. 4, 5, 6). These photographs show remarkably well the disposition of the tumor and its shape. The tumor is soft in consistence, semi-fluctuating, and has very limited movement over the underlying structures.

A skiagram shows no deep involvement and no separation of the nasal bones. As a result of the exposure to the X-rays, the tumor next day showed a slight diffuse redness, and distinct fluctuation was to be felt. The skin covering the cyst was incised vertically in the middle line from base to apex, and the wall carefully dissected out. The wound was closed in its entirety by horse-hair sutures, except a very small part of the lower end of the incision, which was left open, and into this a small gauze drain was inserted. The object of this was that, in case of any discharge setting in, it should freely drain away without interfering with the primary union of the upper portion of the incision. This proved beneficial, as there was a slight purulent discharge for a few days, which gradually diminished, and in the course of three weeks the opening had completely closed, leaving a very imperceptible scar. The result is seen in the accompanying photographs, Figs. 7 and 8.

The pathological report from the laboratory of the hospital is as follows: "Soft contents of a homogeneous-

FIG. 4. FIG. 5. FIG. 6.

looking caseous material resembling mortar, microscopically of cellular débris, flat crystals, and fine, pale hairs. Cyst wall is largely of unstriped muscle, but contains a small amount of fibrous tissue and fat, with blood-vessels. Some free hæmorrhage."

Sutton makes the following remarks regarding the

development of the nose in connection with dermoid cysts: "In the early embryo the rudiment of the nose is

Fig. 2.

Fig. 3.

represented by that process of the primitive skull known as the frontonasal plate, and this is separated from the lateral portions of the face by the orbitonasal fissures. The rounded angles of the frontonasal plate are known as the globular processes. Each process forms a portion of the ala of a nostril and the corresponding præmaxilla. These processes fuse in the middle line and give rise to the central medium piece (philtrum) of the upper lip.

Fig. 7.

Fig. 8.

These dermoids are invariably situated in the line of the internasal fissure, and are in all probability due to incomplete fusion of the globular processes."

From old and recent literature which has been consulted, I have been able to find only six similar cases in addition to those under consideration. Ligorio (2) reports one; Lawrence (3) two; Bramann (4) three. There are many recorded cases of dermoid recesses, but only the above-mentioned cases were instances of distinct tumors.

Stewart (5) reports a case of deformity of the nose which, from the history given, had its origin in a dermoid cyst, but its nature at the time of the first operation was not recognized.

Note.—Since writing the foregoing, I have had the good fortune to see a third case of dermoid cyst of the nose. This concerns a female child, nine months of age, who at birth presented a definite tumor of about the size of a small pea, situated in the middle line and near its tip. Owing to the parents' leaving at once for the seaside, it was impossible to get a photograph taken in time or to perform any operation, but this will be done on the child's return to town this fall.

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2. Ligorio. Un caso di ciste dermoide mediana del naso. *Clinica moderna,* Pisa, Vol. iv, 1898, page 251.

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THE METHOD OF EXAMINATION OF INFANTS.

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THE examination of infants differs in many respects from that of older children and the adult. In the following paper I shall confine myself to these points of difference.

During the examination, two things must be borne in mind, in order that undue weight should not be laid on seemingly abnormal conditions.

1. What is normal to the infant as against older children and the adult?

2. Are there any abnormities in the particular infant under examination which are not due to the present illness? If such are present, they may be either congenital peculiarities or the result of previous disease.

As an illustration of the value of a knowledge of such a congenital peculiarity, I shall cite a case which Professor Filatow mentions as occurring in his own family. A child of two years was attacked with diphtheria. As soon as the diagnosis was made, the other children were isolated. However, on the very first day the examination of the throat of one of these children showed the presence of an irregular grayish-yellow spot on the right pillar of the fauces. This was incorrectly assumed to be a diphtheritic patch. Later, a true membrane appeared, and the first proved to be a congenital peculiarity. I have recently seen a similar spot in a patient who had absolutely no throat trouble.

How is such a knowledge of the infant to be obtained? If one child in a family has, let us say, some throat affection, it will be not only justifiable, but desirable, to examine the throats of the others. If the child has some local affection, the other organs which are probably not involved may be examined. In this way, the personal error, as it were, of that particular patient may be determined. It is just in this respect that the family physician has the advantage over the consultant. The latter may have a greater general knowledge, but the family physician is better acquainted with the peculiarities and idiosyncrasies of that particular patient.

In order to have a permanent record of the size of various organs or of the position of murmurs or lesions, they may be marked with an aniline pencil upon the skin, and then traced through linen prepared for this purpose. Paper stamped with the outline of the body and ribs may also be used. These graphic records will be valuable for future comparison.

In general, the physical examination of the infant is more difficult than that of older children and adults, on account of the lack of voluntary cooperation on the part of the patient. For this reason, and also in cases in which the examination is extremely painful, the administration of chloroform may be necessary.

The interpretation of the results of the examination, however, is simpler. One organ only is usually primarily affected, and that acutely. There are no misleading statements with regard to subjective symptoms.

Peculiarities to be remembered are the tendency to collapse in weak or atrophic infants, the sudden fall in temperature, said to be due to a paralysis of the heat-producing centre, the sudden rise in temperature due to paralysis of the heat-regulating centre, and the tendency to convulsions due to the diminished activity of the inhibitory centres with a normal irritability of the peripheral nerves.

If the examination of different parts is here taken up in regular order, it is only for convenience. In practice, this is not always possible. Advantage must be taken of favorable moments for the examination of certain organs. As a general rule, those parts of the examination which are the most unpleasant for the child should be performed last (*e. g.,* the throat).

A complete examination will not always be made. Lack of time or inclination will interfere. As the infant usually falls asleep after being fed, in families in which this is done at regular intervals, the visit may be so timed that the patient can be observed in sleep. This is a great advantage. It is only at such a time that the frequency of the respiration and pulse or even the height

of the temperature can be accurately determined, for all these are increased by the fear and struggling of the infant. This is a favorable time, also, for observing the position of the body, whether the patient lies quietly, on the back, or on the side. The position of the head, arms, hands, legs, the expression of the face, and movements, if any, of the mouth and lips, are also noted.

A sufficient amount of information will be obtained from the mother with regard to hereditary influences, previous pregnancies, her condition during the last pregnancy, the birth of the infant, its age, previous condition, how fed, when the first tooth appeared, and when it began to walk; also as to the possible cause of the present trouble, when and how it began and what symptoms she has noticed since. An intelligent mother will often observe slight changes unperceived by the physician. When resting, moreover, the child is so dressed that the covering may be easily removed. If possible, it should be brought to the window, facing the light.

Physical Characteristics.—As the tables of the size and weight of normal infants given by different authors differ greatly, and as it is often impossible to refer to such a table, the figures most easily remembered are the best for practical purposes. If the length at birth is taken as 20 inches, during the first year there is an increase of 8 inches. During the second year, an increase of half as much, or 4 inches.

At Birth.	1st yr.	2d yr.
20″ +	8″ =	28″ + 4″ = 32″

At Birth.	1st yr.	2d yr.
7 lbs.	+ 12 =	19 + 6 = 25

If the weight at birth is taken at 7 pounds, during the first year there is an average increase of 1 pound a month. During the second year of half as much, or half a pound a month. The head is relatively large and the circumference (fronto-occipital) greater than that of the chest at the level of the nipples.

Circum.	At Birth.	7th mo.	21st mo.
Head.	33 to 35 ctm.	44 ctm.	47.5 ctm.
Chest.	31 to 33 "	43 "	47 "

The general development and state of nutrition, best ascertained by palpating the inside of the thigh and the gluteal region, are noted. Also the general appearance, the color of the skin, whether pale, cyanotic, icteric, œdematous. On the head, the size of the skull, its form, soft spots, if any; the size of the anterior fontanelle (open until the eighteenth month), whether it is prominent or depressed. Auscultation of the fontanelle gives, normally, from the sixth month, a systolic murmur synchronous with the systole of the heart. It is usually more distinct in anæmic and rhachitic infants, and often disappears when fluid accumulates in the cranial cavity.

The eyes, ears, nose, and lips may be next inspected, also the size of the neck. The thyreoid gland, the large vessels of the neck, the cervical and submaxillary glands, and the sternocleidomastoid muscle should be palpated. Then follow the examination of the chest, abdomen, extremities and genitals.

Temperature.—It is hardly necessary to dwell on the importance of taking the temperature in all cases in which an acute infectious disease is suspected, more especially as in the exanthemata the characteristic eruption does not appear for some hours. The hand placed on the surface of the body is not reliable, as it is possible to have a normal external with a high internal temperature.

The temperature should always be taken in the rectum, for this requires less time (from one and a half to two minutes), is more accurate, and is not painful. The infant lies on its side in the mother's lap. She steadies the pelvis. The bulb, covered with a little vaseline, is introduced about one inch with a rotary motion, so as not to catch in the folds of mucous membrane. It is well to be prepared for a movement of the bowels. The daily maximum and minimum must be taken into account. Anything below 100° F. in the rectum is normal in infants up to the end of the second year.

Some infants are subject to a pretty marked increase of temperature from comparatively slight causes (indigestion, cold, psychical causes). I have noticed this oftener in rhachitis and in the scrofulous diathesis.

We are taught that, in measles, for example, a high temperature after the eruption has begun to disappear, indicates the probable existence of some complication. Still, many such cases will show no complication, but will run a perfectly normal course.

The range of temperature is much greater than in the adult. As low as 77° F. in sclerema neonatorum, and as high as 108° F. just before death in tuberculous meningitis.

Owing to the tendency to collapse already mentioned, it will sometimes happen that infants under six months

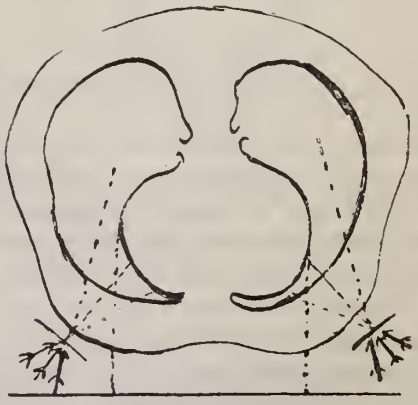

Fig. 1.—Infant.

will show no increased temperature, and even a subnormal temperature, although the physical examination shows the persistence of the inflammatory lesion.

A chill is rarely distinct. At most, there is pallor and cyanosis, cold hands and feet. A convulsion will often be its equivalent at the beginning of an infectious disease.

Examination of the Chest.—A cross-section of the in-

fant's chest will show that it is more circular than that of the adult. (Figs. 1 and 2.)

It is well to examine the chest even when no symptoms (cough or dyspnœa) point to a lesion of that organ.

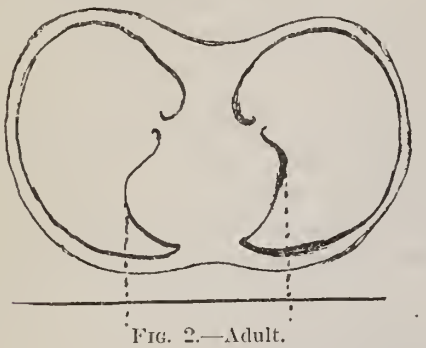

FIG. 2.—Adult.

For the reason already given, it may be desirable, in some cases, to change the usual order and auscultate before percussing.

In the new-born, the *inspection* of the chest will often show the presence of a few drops of fluid in the mammary glands; and in older infants, the presence in some cases of the rhachitic chest, with the lateral flattening, the prominent sternum, and, where there is very little fatty and muscular tissue, the rosary at the costocartilaginous junction of the ribs, and the groove at the attachment of the diaphragm to the ribs. (Fig. 3.)

Drawing in of the lower part of the chest is sometimes seen in infants, without respiratory impediment. In such cases it is due to the traction of the diaphragm on

FIG. 3.—Cross-section of a rhachitic chest.

the soft flexible ribs, combined with the pressure of the atmosphere which is not counteracted by the forcible expansion of the lungs. Of greater importance is the additional action of the accessory muscles of respiration.

The number of *respirations* in one minute should be counted. Normally there are from thirty-two to forty in the new-born; about thirty during the first two years, and the relation of respiration to pulse from one to three and a half or four. An increased frequency, unless marked, cannot be considered pathological, as it is not uncommon in weak or rhachitic infants in whom the breathing is very superficial. During the first few months the breathing may be irregular. Infants will hold their breath for several seconds during the examination. Even when it assumes a character similar to the Cheyne-Stokes respiration, it has not that great diagnostic significance which it has later.

For the *percussion* of the posterior surface of the chest, the child is best held on the arm of the mother, the chin resting upon her shoulder. She should not press the child against her chest; the spinal column should be straight. If there is a pathological curvature, allowance must be made.

In cases in which slight dulness is found on one side as compared with the other, it is advisable to place the infant on the other arm and percuss again.

The percussion should be performed gently, finger upon finger. If the hands are cold, it is best done over the thin shirt. If percussed strongly, the tone from small spots of consolidation will be masked by that of the adjoining normal pulmonary tissue. The finger will often perceive an increased resistance in cases in which fluid is present.

If the infant is crying, a pronounced dulness will be obtained during expiration, posteriorly on the right side below. This is due to the relatively large liver. Percussion during inspiration will give a normal pulmonary note.

In the adult we have the same phenomenon, when, on deep inspiration, at the boundary line between lung and liver, the liver dulness changes to the pulmonary resonance.

Almost all clinicians agree that it is very difficult to percuss the thymus gland in the infant. To render it somewhat easier, it has been suggested to incline the head and chest forward. The same may be said with regard to the percussion of enlarged bronchial glands. If the diagnosis is often corroborated at the autopsy, it is largely because the lesion is so common.

In *auscultating* the lungs, the ear may be placed against the chest. However, for the purpose of more definite localization, it is better to use the binaural stethoscope. In the auscultation of the heart it should always be used. Dr. Koplik has devised a special stethoscope for use in infants, the shape and size of the bell of which is shown in Fig. 4.

For my own use, I have had a pair of hard-rubber ear tips made from plaster casts of the ear. They have the advantage that they fit more accurately, and therefore exclude to some extent the external sounds; and they do not irritate the meatus by friction. (Figs. 5 and 6.)

It may sometimes be necessary to have the mother give the breast for a few moments to stop violent crying.

During the first few months, the breathing is superficial, and not distinctly heard when the child breathes quietly. For this reason, it is sometimes an advantage to have the child cry, so that on deep inspiration the breathing, and any râles which may be present, will be more distinctly heard.

As the infant grows older, the breathing assumes that peculiar sharp blowing character known as puerile. Owing to the larger bronchus, the breathing on the right side is somewhat louder.

The anterior and lateral surfaces of the lung should

always be examined, for it is not uncommon to find a few resonant crepitant râles over a very small area (in the supraclavicular region, in the axilla, or over the lingua). The child may be placed on its back or seated in the lap of the mother.

The auscultation of the lung is even more important than the percussion, for whereas small or deep-seated

Fig. 4.—Natural size.

Fig. 5.—Posterior surface.

Fig. 6.—Anterior surface.

areas of consolidation or infiltration give no dulness, crepitant resonant râles may be transmitted to the ear from these parts.

It is well to remember that the lesion is usually greater than the result of the physical examination would lead one to expect, for only the involvement of comparatively large areas gives distinct physical signs.

In testing the voice and fremitus, the cry of the child will have to take the place of the counting in older children. The fremitus is best felt with the ulnar edge of the hand, especially in cases in which it is wished to determine the height of a pleural exudate. Coarse râles are often better felt than heard.

The *diagnosis* between pneumonia and pleuritis has often been neatly arranged in two adjacent columns. Notwithstanding, in some cases the distinction is difficult and the needle alone will decide. The same may be said with regard to the character of a pleuritic exudate.

Crying will often bring on an attack of coughing; when it does not, and one wishes to hear it, pressure may be made on the trachea just above the sternum, or the postpharyngeal wall may be touched. The character of the cough is sometimes pathognomonic. Four varieties may be distinguished: First, the simple catarrhal; secondly, the suddenly interrupted dry, short cough, which causes pain (pleuropneumonia); thirdly, the croupy; and, fourthly, the spasmodic paroxysmal (pertussis).

The character of the cry is less important. It may be strong and lusty or hoarse or weak and moaning or piercing; continuous or intermittent, and of short duration, with flexion and extension of the legs as in ordinary intestinal colic.

In the infant, the *heart* lies somewhat higher and is more horizontally placed. This is largely due to the relatively large liver and the higher position of the diaphragm. It is also relatively large compared to the lungs, the relation being in the first months as one to three and a half or four. Later the lungs increase much more rapidly in size. In the examination the possibility of *congenital lesions* must be kept in mind.

The inspection of the precordial region will often show a pulsation in the fourth intercostal space, also occasionally in cases with rhachitic chest, a pulsation in the epigastric region. The apex is usually felt in the fourth intercostal space, sometimes in the fifth, just outside the mammillary line. In determining the boundaries of the heart, it is necessary to make allowance for malformation of the chest and curvature of the spine, if present. Normally the area of relative heart dulness is much greater than in older children and in the adult (Figs. 7 and 1 and 2). Its extent is shown in Fig. 7.

This comparatively large extent of superficial dulness is due, not only to the relatively large size of the heart, but also to the fact that the layer of lung tissue covering it is thin.

In determining the boundaries, the finger should strike at right angles to a tangent, at the point of percussion. If the finger is directed at an acute angle, a greater

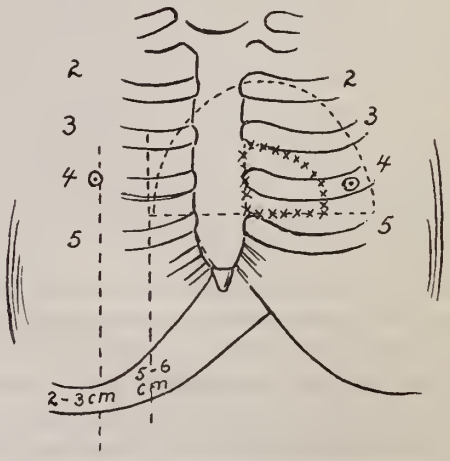

Fig. 7.

or lesser extent of lung tissue is included, and therefore a different result will be obtained (Fig. 1).

The absolute dulness is about the same as later.*

In auscultating, the stethoscope must not be pressed strongly against the flexible ribs, as it is possible to cause a slight roughness of the first sound in this way.

Almost all *murmurs* are organic and systolic. Functional and diastolic murmurs are extremely rare. Murmurs may often be distinctly heard posteriorly on the

*See Troitsky, *Festschrift* to Professor Jacobi, 1900.

right as well as on the left side. They are probably transmitted by the relatively large liver.

The Pulse.—The normal frequency of the pulse in the new-born and during the first months is from 120 to 140, and in the second year from 100 to 120. A marked increase may be due to slight causes. Occasionally, during the early months, it may be irregular without any apparent cause.

As compared to the adult, the increase of frequency of the pulse is greater for each degree of rise in temperature. This is said to be due to an increased irritability of the stimulating, with a diminished activity of the inhibitory, nervous mechanism of the heart.

The frequency, regularity, and tension of the pulse are to be noted, if possible, in sleep. A slow and irregular pulse is especially important from a diagnostic standpoint.

On account of the small size of the artery, the determination of the tension and the height of the pulse wave require much practice on the normal, in order to detect slight changes.

Examination of the Abdomen.—In the inspection of the abdomen of the new-born, special attention is to be paid to the condition of the *umbilicus,* as being the most common portal of infection. The presence of an umbilical hernia or fungus will also be noted. In atrophic babies the contour of coils of intestine is often visible. In intestinal obstruction peristalsis may be seen. It should be noted whether the abdomen is prominent (rhachitis, fluid, gas), or depressed.

Before *palpating* the abdomen, the hands should be warm. If it is thought that certain points are painful, the other parts should be palpated first. This should be done gently with extended fingers, parallel to the surface of the body. In palpating deeper parts, pressure is made during expiration (it is often better to place one hand over the other, and exert pressure with the upper against the lower), held in the same position, and still deeper pressure made at the next expiration.

Percussion (except for deep structures) is performed gently, for the reason already given. In infants the liver is relatively large (Fig. 7). The dulness begins anteriorly on the right side at the fifth rib and extends for from two to three centimetres below the free border of the ribs in the mamillary line, from five to six centimetres in the parasternal line. An additional reason for the apparently still larger size is the more horizontal position of the ribs, which leave more liver surface uncovered. Here, as in the case of the spleen, palpation is more reliable than percussion, owing to the possible proximity of intestinal coils.

The *splenic* dulness extends from the eighth intercostal space or ninth rib superiorly to the eleventh rib inferiorly, and to the axillary line anteriorly. When it cannot be palpated, it is not justifiable to say that it is enlarged. Palpation is best performed with the left hand posteriorly, pressing forward the lower ribs, the right hand at the free border of the ribs in the axillary line. In some healthy infants under six months of age the spleen is normally palpable. In very anæmic or rhachitic infants a palpable spleen is of no diagnostic value, unless it is certain that it was not previously enlarged.

Occasionally, the infant has an attack of singultus during the examination. If the spleen is enlarged, the sudden contraction of the diaphragm brings it down against the fingers.

Examination of the Spinal Column.—The child is to be held perfectly straight and undue prominence of the vertebræ at any point, painful spots, and curvatures noted. The rhachitic curvature (kyphosis or kyphoscoliosis) will disappear when the spinal column is examined in the usual way, the patient lying on the abdomen, the upper part of the chest fixed, and the body raised from the table by elevation at the ankles.

Examination of the Extremities.—Special attention should be paid to the epiphyses, to the possible presence of congenital luxations or paralyses, and to the appearance of the palms of the hands and the soles of the feet.

The Mouth and Throat.—These should be examined in every case. It is only necessary to mention the importance of such examination in the preeruptive stage of the exanthemata. The examination should include not only the pharynx, tonsils, and uvula, but also the entire mucous membrane lining the mouth. The infant is best held with its back against the chest of the mother, who holds the hands. The lateral motion of the head is prevented by the examiner's left hand. In order to avoid the danger of having the secretion of the patient's mouth coughed into the face, a glass screen is sometimes used. At night, the "Welsbach" white light, if it can be had, is to be preferred. For the purpose of throwing the light into the throat, the small oral reflector with a handle is most convenient.

In private practice, unless the tongue depressor can be immediately sterilized, it is better to use the handle of a small spoon, which can be immediately placed in boiling water. Small, smooth wooden slips are also convenient, and can be burned. Sometimes it will be necessary to close the nostrils with the fingers, in order to make the child open its mouth.

The inspection of the mouth may show the presence of congenital malformations or of those due to previous disease. Among the structures frequently seen are the so-called epithelial pearls in the median line of the hard palate; Bednar's aphthæ, also, on the hard palate, laterally; and the sublingual ulcer from the friction of the tongue against the sharp lower incisors, especially in pertussis.

In the infant, the *tongue* is even less "the mirror of the stomach" than it is in the adult. It may be perfectly clean in gastric disturbances, or coated where there are none. A peculiar appearance, frequently observed, is the

so-called geographical tongue. It is benign and has nothing to do with syphilis.

In examining the throat it will be well to have the patient gag, as the contraction of the pharyngeal muscles causes a rotation forward of the pillars of the fauces and tonsils, often bringing into view diphtheritic patches not otherwise seen. In some cases (retropharyngeal abscess, adenoid vegetations) it will be necessary to introduce the finger. As the space is very small, obstruction to the breathing is easy. It should be done quickly; for adenoid vegetations preferably with the little finger. It is seldom necessary to use a protecting ring.

The Teeth.—The order in which the teeth appear is shown in the accompanying diagram (Fig. 8). Slight variations are not uncommon. In rhachitis the teeth appear later and at irregular intervals.

The examination of the larynx in infants is rarely necessary. Perhaps it would be desirable in those cases in which diphtheritic laryngitis is suspected, but no mem-

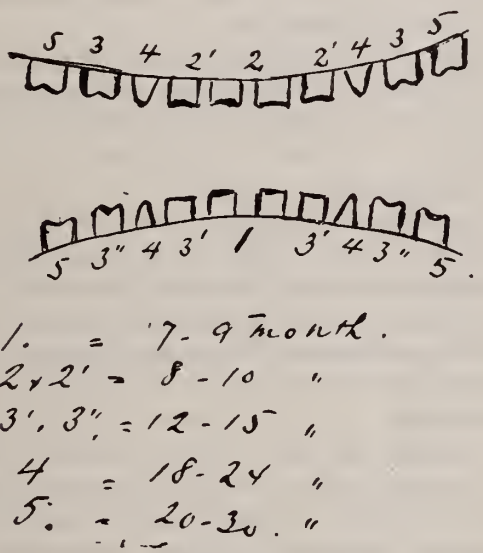

Fig. 8.

brane is seen in the throat. A satisfactory examination is exceedingly difficult, and had better be left to the specialist. There is, however, another method of examination, which will partly, at least, replace it. As it is not generally known, a few words of explanation will not be out of place.

Autoscopy was first made practicable by Kirstein in 1898. Recently Dr. Thorner* has written an article on the subject.

The examination of the larynx is difficult on account of the anatomical condition of the parts (Fig. 10). The position and form of the epiglottis, the hyoid bone overlapping the upper margin of the thyreoid cartilage, and the arytæno-epiglottic folds, render the entrance to the larynx small. Besides this, the axis of the larynx at the level of the cricord cartilage is tilted slightly backward toward the vertebral column. The object of the examination is to bring the axis of the laryngotracheal tube in line with the buccal cavity. For this purpose, a special tongue depressor has been devised (Fig. 9).

I have had one made of somewhat smaller dimensions. The patient is held as for the ordinary throat examina-

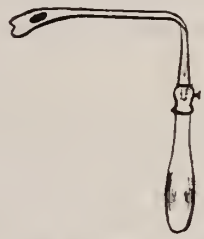

Fig. 9.—About one fourth natural size.

Fig. 10.

tion, except that the infant must be held in the lap, whereas the examiner stands. No mirror is used. Light from a reflector may be thrown into the mouth. The instrument is then introduced to the base of the tongue, and pressure made downward and forward. This, together with the traction on the median glosso-epiglottic ligament, raises the epiglottis. Looking downward, the lower pharynx, the epiglottis, and the vestibule of the larynx are seen; seldom more than this. Ingals has added two flanges to the instrument to prevent closure of the mouth.

In doubtful cases, a *bacteriological examination* will be made to determine the presence of the Klebs-Löffler bacillus, streptococci, or staphylococci.

Examination of the Stomach.—In infants this viscus is relatively small and the fundus is not well developed. It is usually stated that the position is more vertical. However, the transillumination does not show that the difference is very great. (Fig. 11.)

The *chemical examination of the stomach contents* will rarely give any definite information. Infants vomit so easily that, knowing about how much nourishment (milk) has been taken, and the length of time that it has been in the stomach, an approximate idea can be obtained as to the muscular activity (motility); and an inspection of the vomited matter will show the state of the gastric digestion. In cases in which obstruction is suspected, also in rare cases of dilatation or change in position, it may be necessary to introduce the stomach-tube. For this purpose, a soft rubber catheter is used. The introduction is easier because there is little or no resistance. It is a disagreeable sensation, but the infant can only express its displeasure by crying. The tube is held like a pen in the right hand, and is guided to the posterior pharyngeal wall with the index finger of the left, then pushed backward and downward. It is well to have the distance from the lips to the cardiac end of the stomach marked upon the tube, so that you know when the end enters it. The gastrodiaphane, by the transillumination of the stomach, offers another means for ascertaining its size and position, and the situation of the pylorus. Its in-

*New York Medical Journal, March 10, 1900.

troduction requires special skill and it will rarely be needed by the practitioner.

Recently, Dr. Koplik has perfected a form of this instrument specially adapted for infants, the construction and method of introduction of which will be found described in the *New York Medical Journal,* May 6, 1899. The illustration (Fig. 11) is taken from that article and shows the normal position and size of the stomach. The inspection of the anal region may show the presence of

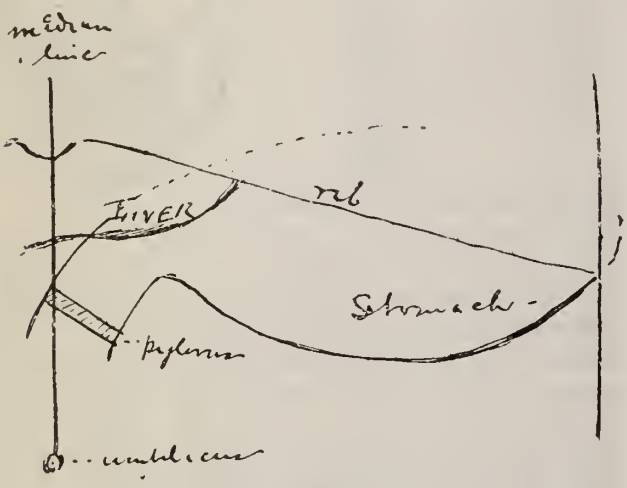

FIG. 11.

syphilitic lesions, prolapse or fissure of the rectum, or intestinal worms. For the rectal examinations (polypi, intussusception) the index finger, covered with vaseline, is used. In those few cases in which it is wished to inspect the mucous membrane, or to examine higher up than the finger can reach, the largest-sized endoscopic tube (shortened) may be used as a rectal speculum, or even the smaller Kelly tubes.

Inspection of the genitals will show the possible presence of congenital peculiarities, epispadias and hypospadias, undescended testicle, hydrocele, congenital phimosis. A partial agglutination between the prepuce and glans is present in almost every male infant. In female infants, also, an agglutination or thin band is sometimes seen between the labia minora. The *inguinal glands* may now be examined.

Examination of the Ear.—In connection with the inspection of the external portion of the ear, the parotid and mastoid regions may be examined. In all cases in which fever is present (more especially, however, after measles or scarlatina), for which the examination of the other organs of the body shows no cause, the middle ear should be inspected. Pain may be absent, or, if present difficult to ascertain with certainty.

Owing to the structure of the auditory meatus, and the more horizontal position of the tympanic membrane, the examination is more difficult. The patient is held in the lap and the head steadied. The ear is drawn backward, outward, and downward (instead of upward as in the adult). The smallest-sized ear speculum is then introduced, and looking upward, the superior wall is followed to its inner extremity.

Examination of the Eyes.—The eyes should first be inspected without touching them, and congenital peculiarities, if present, noted (ptosis, a difference in the size of the pupils, eccentric position of the pupils, also strabismus, nystagmus). The pupillary reflexes should be tested. At the age of six weeks, the eyes of most infants can be fixed by a bright object. With it the action of the muscles of the eye can be tested. If the head is steadied, the lids may be everted and examined. If it is necessary to use a speculum to keep the lids apart and a second person cannot be had to steady the head, the infant may be placed in the lap of the mother who holds the hands; and the examiner clamps the head of his patient between his knees, over which a towel has previously been spread. If the eyeball rolls upward, it is necessary to wait a moment for it to descend.

Fortunately, but few cases (increased cranial pressure, tumors, tuberculous meningitis, chorioid tubercles, amaurotic idiocy) require an examination of the fundus. Unless the examiner is skilled in ophthalmoscopy, this is best left to the specialist.

Some healthy infants habitually sleep with their eyes partially open. As an almost constant symptom it is present in the last stages of severe intestinal and cerebral diseases. The cornea becomes dimmed and covered with shreds of mucus.

Inspection of the nose may show the depressed bridge of syphilis, or the movement of the wings in dyspnœa. The orifices are small and easily obstructed. The permeability may be tested with a fine probe. If the infant can take the breast without marked dyspnœa, there can be no great obstruction in the nose or in the rest of the respiratory tract.

Examination of the Urine.—The urine of the newborn during the first few days may contain a small quantity of albumin. At this time, uric-acid infarcts are common. They will give pain on urination and an excess of uric-acid salts in the urine. A small amount of albumin may be present after the external application of cold to the surface, and after convulsions; and a small quantity of sugar in cases of dyspepsia. The amount of urine voided is relatively large, of pale color, and low specific gravity, 1,002 to 1,007. When an examination of the urine is to be made, there is no use in wasting time with sponges, rubber bags, and squeezing out the diaper. The simplest and best method is the introduction of a perfectly clean rubber catheter.

Examination of the Fæces.—The frequency of gastrointestinal disorders in infants renders an examination of the fæces of great importance. Normally, on a milk diet, the fæces are yellow, soft, slightly acid, and without pronounced odor. Some healthy infants have regularly as many as four movements daily of good consistence. In an abnormal stool, besides the number daily, it should be noted whether they are voided with or without pain. Macroscopically, the color, consistence, odor, the presence of mucus, blood, undigested particles, fat (normally

about ten per cent.) and, microscopically, the presence of undigested starch, the eggs of worms, bacteria, epithelial cells, are to be noted. The wet diaper from a watery stool should not be thought to be due to urine. When a specimen of the fæces is desired for microscopical examination, a soft rubber catheter is introduced, and by rotating it some fæcal matter may be collected in the eye.

Examination of the Blood.—The amount of blood in the infant is relatively small, 1 to 19.5 of the weight of the body, as against 1 to 13 in the adult. It contains less fibrin, less hæmoglobin (except in the new-born) and more white blood cells.

The examination of the blood is the same as in the adult. It may be mentioned, however, that in very anæmic babies the determination of the number of white blood cells may be more difficult on account of the larger size of the capillary tube. An examination of the fresh and stained specimens will give an idea of the number of corpuscles.

In a few cases one may wish to examine the sputum. For this purpose a soft rubber catheter is introduced into the mouth, and the posterior pharyngeal wall touched. This will usually bring on an attack of coughing, and a small quantity of sputum may be caught in the eye of the catheter.

It is certainly true that infants take to some physicians more than to others. I believe that those who feel kindly toward them will be most successful. A little playfulness is sometimes necessary. Perhaps some physicians may consider such trifling beneath their dignity, but it often very greatly facilitates the examination. Time and patient observation are needed to learn their peculiarities; but when these are known, the little patients become exceedingly interesting, and, in their helplessness and entire dependence on others, inexpressibly touching.

In conclusion, I wish to thank Dr. Koplik for much valuable instruction and for the advantage derived from the examination of a very large number of cases at the Good Samaritan Dispensary.

27 West One Hundred and Fifteenth Street.

A CASE OF PAROXYSMAL HÆMOGLOBINURIA.

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ATTENDING PHYSICIAN TO THE DEMILT DISPENSARY.

This disease is of such unusual occurrence that it has seemed worth while to report in detail the following case, which occurred in the practice of Dr. William B. Clark, and upon which he kindly allowed me to make the following observations:

Family History.—The patient was a clerk, forty years old, married, a native of the United States. His father was German, his mother Scotch. His father died a violent death during an attack of melancholia. He has four brothers and two sisters alive and well, except that one brother has a syphilitic disease of the cranial bones.

Personal History.—The patient lived in South America as a child, but had none of the tropical diseases himself, although several members of his family had yellow fever. Except for the mumps, he was perfectly well until 1882, when he contracted gonorrhœa and had a small, discharging sore on the penis, probably chancroidal in nature, which lasted only a short time. He did not have specific treatment, and no secondary symptoms appeared.

In November, 1892, while living in Dakota, he drove several miles on a cold day, got chilled, and passed urine which was deeply colored with blood. The attack of hæmoglobinuria lasted a few hours and then passed away without any other marked symptom. These attacks recurred at intervals of a few weeks, following exposure and cold. In December, 1895, he came East, emaciated, jaundiced and feeling run down, the attacks occurring every few days, and finally exhibiting a tertian periodicity. He was seen by a physician who made the diagnosis of malarial anæmia, and was treated with bone marrow, cod-liver oil, cream, and careful diet, but no quinine. His kidneys, heart and lungs were pronounced sound. As a result of this tonic treatment his general health improved and he gained in weight, but the attacks of hæmoglobinuria occurred as frequently as before. In 1896 he went West again and remained until September, 1900, when he again returned East for treatment, the attacks occurring as often as ever, sometimes daily. In summer he is, as a rule, free from the attacks, but they are occasionally produced by worry or mental shock. The chief predisposing factor seems to be exposure to cold. A *typical attack* begins about 10 A. M. with a chilly feeling, often becoming a rigor; cold extremities and cyanosis of fingers, nose and ears; increase in jaundiced hue, and nausea. He then passes urine of port-wine color, somewhat more frequently than normally and in greater amount. The chill lasts from one half to three hours, and is succeeded by a feverish sensation. At times an urticarial eruption appears on the dorsum of the hands or on the right cheek; or he may have tender painful areas over the bridge of nose, around the right orbit or in the left groin. Normal urine is passed again, sometimes in twenty minutes, often not for several hours, depending on how quickly he becomes thoroughly warm.

Between the attacks he feels perfectly well, except for mild symptoms of anæmia. His skin is sallow. He has been troubled with flatulent indigestion which has yielded to treatment. Occasionally he has an eczematous eruption on right leg. His fingers are somewhat clubbed. His lungs are normal. The apex of the heart is normally placed, but there is a loud double murmur over the base. His pulse averages 86, temperature normal. The *urine* is clear, light or dark yellow, of acid reaction, sp. gr. 1020 to 1030, no albumin, no sugar, no hæmoglobin, and shows microscopically only a very few leucocytes and some pavement epithelium. The *blood* has been examined frequently, both during and between the attacks, but no plasmodia or unusual deposits of pigment observed. The hæmoglobin is 80 per cent., the red cells 4,200,000, and there is no leucocytosis. During the attack the plasma contains hæmoglobin in solution, and the red cells do not form rouleaux as readily as normally. Some of the red cells are very pale—"*Schattenformen.*"

The observations in Table I were made during an attack of hæmoglobinuria which occurred December 14, 1900:

TABLE I.

Time.	Temperature.	Pulse.	Amount.	Color.	Sediment.	Reaction.	Specific gravity.	Albumin.	Microscopical appearances.	Symptoms.	Blood.
Dec. 14. 10:30 A.M.	95 3/5	100	6 oz.	Dark red	Clear when passed. Heavy, chocolate color on standing.	Sl. acid.	1028	50 per cent.	Many coarse granular casts. Granular detritus. No blood cells	Began 10:30 A.M. with chilly feeling, shivering, nausea, cyanosis of fingers and ears.	Present.
11:05 "	95 4/5	88	4 1/2 "	Port wine, pink froth	"	Neutral.	1030	30 "	" "	Chill continues	"
11:40 "	98 3/5	88	1 1/4 "	Dark red	"	Sl. alk.	1022	25 "	Loaded with casts	Less chilly. Less nausea	"
12:30 P.M.	101 3/5	88	2 "	Port wine	"	Alk.	1018	30 "	" "	Comfortable. Slight headache	"
1:35 "	100 3/5	88	3 "	"	"	"	1014	30 "	" "	Pain on pressure over nose and right orbit	"
2:40 "	99 4/5	88	4 "	"	"	"	1012	20 "	Fewer casts and detritus	Cyanosis of ears continues	"
3:40 "	99 1/5	88	0								
5:30 "	98 2/5	88	5 1/2 "	Brown red	"	Neutral.	1022	20 per cent.	Fewer casts and detritus	Cyanosis disappearing	"
8:00 "	98 2/5	87	5 "	Yellow brown	"	Acid.	1026	10 "	Few casts. Epith.		
10:00 "	98	93	4 "	Gold yellow	Sl. mucus	"	1022	v. ft. tr.	An occasional granular cast	Feeling perfectly well	Trace.
Dec. 15. 10:30 A.M.	..	..	4 "	Port wine	Heavy chocolate.	"	1032	30 per cent.	Many granular casts	Chilly. Cyanosis, etc.	Present.

TABLE II.

Dec. 19. 7:00 A.M.	97 3/5	80	11 oz.	Yellow	Clear	Acid.	1020	0	Negative	On waking. Feeling perfectly well. After short walk. Chilly feeling with nausea, and cyanosis of extremities	0
9:45 "	97	83	5 "	Red brown	Mod. chocolate	"	1026	10 per cent.	Many coarse granular casts		Present.
10:30 "	99	87	2 "	Port wine	"	"	1032	50 "	" "	In bed. Chilly feelings still present.	"
12:30 P.M.	98 4/5	89	2 "	Brown yellow	Sl. mucus	"	1024	5 "	Few coarse granular casts	Comfortable	Trace.
2:10 "	99	95	3 "	Yellow	"	"	1026	0	Occasional hyaline or granular cast. Epithelium	Feeling well again	0

This attack was of unusual severity and duration, the patient passing normal urine generally four hours after the onset. The remainder of the attack of December 15th was not observed.

The attack, a synoptical observation of which is shown in Table II, occurred on December 19th, and the patient was put to bed and made warm as soon as possible, thus shortening the duration considerably.

The presence of hæmoglobin in the urine samples (Table II) was determined by the following tests: 1. Spectroscopic examination, which gave the typical absorption bands of methæmoglobin. 2. Heller's test, boiling the urine with KOH and thus precipitating the phosphates, which were colored red by the hæmoglobin. 3. Guaiacum test with ozonized turpentine. 4. Guaiacum test with ozonized ether.

The coagulum produced by boiling, unlike the usual albuminous precipitate produced by such reaction, instead of being white and flocculent and sinking to the bottom of the test tube, was a brownish, curdy mass, which rose to the summit of the fluid.

Remarks.

This disease has been variously named by different authors. Dr. George Harley (2) first described it as intermittent hæmaturia and Dr. Pavy as paroxysmal hæmaturia. When, however, pathological research showed the absence of the cellular elements of the blood in the urine, the name was changed to intermittent hæmatinuria, and later to its present name, paroxysmal hæmoglobinuria, in order to distinguish it from similar conditions of the urine in which the elements of the blood, as such, are found. The earliest case was reported by Charles Stewart in 1794. It was that of a man fifty-one years of age, who had attacks of hæmaturia lasting three days each for a period of eight months, accompanied by constant pain in the loins and marked emaciation, being thus unlike the disease as known at present. Other cases, giving a previous malarial history, and more nearly resembling the typical case before mentioned, were reported from time to time. The majority of cases seem to have occurred in England, Germany and France contributing only a few cases to the history of the disease.

Ætiology.—The disease attacks men in the majority of cases, and the most common age is from twenty to forty years, although it has occurred for the first time as early as two years and as late as fifty-two years. Heredity does not seem to play any part in its ætiology. Neither does occupation, although the majority of cases are said to occur among the lower classes. A previous malarial history has been obtained by some authors in a third of their cases (1), while others allege a specific origin for the disease; for instance, Copeman (2) says: "In all my own cases syphilis, either primary or congenital, has been present." Still others mention rheumatism, gout or the oxalic-acid diathesis as predisposing factors. Whatever the underlying condition may be, the exciting cause of the attacks seems to be always exposure of some part of the surface of the body to cold. It is rare in summer, the onset beginning with the approach of cold

weather in the fall or winter, and for this reason it has been given the name of winter hæmaturia (3).

The symptoms are, as a rule, clearly defined and unmistakable. The patient, after exposure to cold, becomes chilly, yawns, and has nausea which may go on to retching or vomiting. The feet, hands, and ears become cyanotic and cold, and bloody urine is voided. These symptoms come on generally in the forenoon and gradually disappear as the patient becomes warmed—a fever, and sometimes sweating, ending the paroxysm. The temperature, which at the onset was 95°-96° F., may rise even as high as 103° or 104° F., depending on the severity of the attack. The average is about 100°-101° F. The urine, which on rising was perfectly normal, becomes during the algid portion of the attack of a port wine or blackish color, contains hæmoglobin in large amount, is of acid reaction generally, and of high specific gravity. In some cases the specific gravity has been low (4) and (5). When examined microscopically, there are found hyaline and granular casts and much granular detritus composed of broken-down red cells, but no red cells as such, thus differing from hæmaturia, in which the elements of the blood pass unchanged into the urine. The rapidity with which this condition passes away under the influence of warmth and stimulation is really startling, for the urine resumes its normal color and quality sometimes in from half an hour to two hours. The attacks occur with varying frequency, depending on exposure. They have been known to occur as often as three times a day in severe cases; or they may occur daily, as in the case before referred to, or one to three times a week. Intervals of weeks or months may pass, however, during which the patient, if warmly and properly clothed, is free from attacks.

The pathology of the disease is obscure, no autopsy on a case being recorded. Sir William W. Gull (6), in 1866, concluded that the disease was due to the inability of the kidneys to break up the hæmatin of the blood into urine pigment. Dr. Pavy (7), in 1867, ascribed a nervous origin to the disease—"an unnatural susceptibility of the kidneys to temporary congestion from exposure to cold." Others have considered it a part of a rheumatic or gouty diathesis. The close relation between paroxysmal hæmoglobinuria and Raynaud's disease was emphasized by Barlow (8) in 1883. He reported a case of Raynaud's disease in which there was accompanying hæmoglobinuria during the attacks, and other authors have noticed the same facts. There seems to be a close connection also between this disease and paroxysmal albuminuria—in fact, Dr. Copeman (9) calls paroxysmal albuminuria the "petit mal of paroxysmal hæmoglobinuria." Thus Wickham Legg (1) reports a case of a man who was chilled by falling into a stream and developed hæmaturia, which passed off, leaving a temporary albuminuria, which lasted six weeks and was followed by recovery. Dr. Lee Dickinson (10) reports three cases of transient hæmoglobinuria from unusual exertion, the corpuscles being destroyed by the excess of CO_2, produced by the muscular activity.

The researches of Ehrlich (11), Bristowe, Copeman (9), and others, would seem to point to an injurious effect of cold on the discoplasma of the red cells, with consequent liberation of the hæmoglobin, as the true pathological factor in this disease. They passed an elastic band around the base of a patient's finger and immersed it in ice water for one quarter of an hour and then examined the blood from this finger. The corpuscles were of irregular shape and size. Some were colorless, there was no rouleaux formation, and the plasma was tinged pink. The blood from other parts of the body was practically normal. Attacks of hæmoglobinuria were artificially induced by cold baths, etc., and blood counts, made before and immediately after the first symptoms appeared, showed a marked diminution both in the number of red cells and their contents of hæmoglobin. This primary change in the blood, therefore, is the accepted pathological factor at present.

In this connection it is interesting to note two cases reported by Klemperer (12). One, which was perhaps due to ptomaine poisoning, came on suddenly like an infectious disease, with rigor, fever, swelling of the liver and spleen, icterus and hæmoglobinuria, lasting three days, followed by complete cure. The other occurred during convalescence from typhoid fever, lasted three months, and was only slightly benefited by graduated cool baths.

Prognosis.—No deaths from this disease are recorded. There seems to be no danger to life from the immediate attacks. There is a dearth of literature, however, on the latter end of such cases. Death is due to some complication. On the other hand, no case has been cured by drugs.

Treatment.—A great variety of drugs has been used. When syphilis has existed, good results have been obtained by the iodides in large doses. A distinct history of previous malaria calls for the exhibition of quinine. Iron, arsenic, and tonics of all sorts, have been used with temporary benefit. Warm clothing, especially on the hands and feet, with avoidance of exposure to cold, has diminished the frequency of the attacks. Graduated cool baths have also been tried. All have failed, however, to effect an ultimate cure; and a change to a climate where the temperature is moderate and equable seems to be the best treatment which we can offer for this singular disease.

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50 EAST THIRTY-FIRST STREET.

GENERAL ANÆSTHESIA: THE PRELIMINARY AND AFTER-TREATMENT, WITH REMARKS ON CHLOROFORM AND ETHER.*

BY E. PAYNE PALMER, M. D.,

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I HAVE taken such a heading for my subject this evening because I think it is one of which too much cannot be said or written, as the average physician pays too little attention to its importance and dangers. It is a subject which should be taught separately and thoroughly in medical colleges, but I am sorry to say that there are but few that give it the proper attention, and, as a result, when the graduates leave school they know little or nothing of this all-important subject. We find that most of the anæsthetists of our large hospitals are selected from the junior internes, and installed upon their roll of duty without any practical knowledge or special instruction in this branch of medicine. As a consequence their knowledge must be obtained in a haphazard manner, and in some cases their experience is very disastrous.

Therefore the junior interne who is to act as anæsthetist should have special instructions from the surgeon in charge, in case his knowledge in this work is deficient. I believe that the anæsthetist should be as much of a specialist as the practitioner of any other branch of work in medicine. There is certainly no other branch of medicine that calls for more immediate skill and attention, keener observation, and greater judgment. Anyone can administer an anæsthetic, but it is comparatively rare to see a patient properly anæsthetized.

I do not lay claim to any new ideas or originality; I will only present to you, in a concise form, well-known facts which have been in practice for some time, and have been shown to be necessary for the safety and comfort of the patient. No person who has not a wholesome fear of anæsthetics can be trusted to administer them. Every anæsthetist must realize that in giving an anæsthetic there is always an element of danger, and that he alone is responsible for the life of the patient. He should, therefore, spare no pains in the most minute attention to details, and should look for and be prepared to treat any troublesome or dangerous symptoms that may arise. He has the right to demand from the surgeon compliance with all procedures that tend to lessen the risk of accident. His exclusive attention belongs to the patient; there is no time for anything else. It is no uncommon occurrence to see the anæsthetist craning his neck to watch the operation, and some so far forget their duty as to lose sight of their patient's condition.

It is a source of great comfort to the surgeon to have an anæsthetist in whom he can place implicit confidence.

Preliminary Treatment.—The anæsthetist rarely sees the patient until the time set for the operation, at which time he should inquire about the preparation of the patient, as the proper previous treatment has a very important bearing on the successful issue of the case. Melish affirms that most of the pronounced dangerous effects of ether, and, to a less extent, chloroform, upon the kidneys, are due to poor preparation of the patient, faulty administration, bad after-treatment, or all of these combined.

If the patient is under your care, and time is allowed, the bowels should be thoroughly flushed out by first giving small doses of calomel and following it with a saline, the day before the operation. On the morning of the day set for the operation, the patient should have a high rectal enema, and if the operation is to be performed some hours later, another enema should be given about an hour before the administration of the anæsthetic is begun. That day the patient should not be allowed any solid food, and no food for at least three hours before the anæsthetization is begun. The bladder also should be evacuated immediately before the anæsthetic is given. In emergency cases and those requiring immediate operation, in which no preparation has been made, gastric lavage should be practised, using plenty of warm water, and the bowels should be flushed out by means of a high rectal enema. A good procedure, recommended by Rosenberg, of Berlin, is that of spraying the nasal mucous membrane with a five- or ten-per-cent. warm solution of cocaine about five minutes before administering the anæsthetic. Especially is this useful where a catarrhal or irritable condition of the nasal and pharyngeal mucous membrane exist; also in hypertrophy of the turbinates, as it checks the secretion of mucus and allays the irritability of the mucous membrane.

By our following closely these rules, vomiting can usually be prevented to a great degree both during and after the administration of the anæsthetic.

When the patient is nervous and hysterical and unduly afraid of the anæsthetic, one fourth of a grain of morphine and one two-hundredth of a grain of atropine may be given about thirty minutes before beginning the anæsthetic to quiet the patient. No one should make a practice of giving morphine before anæsthetizing, because unless there is some special indication for it, there can be no benefit derived, and in some cases it may do harm. Explain the nature and action of the anæsthetic to the patient, tell him what is to be expected, and above all assure him that there is no danger; and by so doing you may prevent struggling.

Examination of the Patient.—In all cases examine the patient yourself; do not rely upon the examination of

*Read before the Arizona Academy of Medicine at Phœnix, Ariz., December 22, 1900.

another person, it matters not who he is. Make a thorough and systematic examination of the respiratory and circulatory systems, note the condition of the nasal passage, whether or not there is any obstruction. In mouth-breathers a wedge should be placed between the teeth to allow free breathing. Note the frequency, regularity and depth of the respirations. Take both the radial and facial or temporal pulse and note their force and frequency and whether there is any irregularity. It is a good plan to accustom yourself to taking the pulse of the facial and temporal arteries, as they are convenient when anæsthetizing. Examine the mouth and pharynx for false teeth, hypertrophied tonsils, and any other foreign objects that may be present. In the *New York Medical Journal* for December 1, 1900, I reported a case of a child in which there was cessation of respiration during chloroform anæsthesia due to chewing-gum in the larynx. Examine both eyes and observe the condition of the pupils; an artificial eye may deceive you. If time is allowed, the urine should always be examined. Inquire as to whether the patient has taken an anæsthetic previously. If so, he may be able to give you some information that may have important bearing on its administration.

Preparation of the Anæsthetist.—The anæsthetist should wear a sterilized gown and prepare himself as for an operation. Be provided with and have within easy reach the following articles, so that in case of accidents or unfavorable symptoms, you will be able to meet them without delay: The best known quality of chloroform and ether; an inhaler for both; a drop bottle for chloroform; a curved needle threaded with a stout silk ligature; a mouth gag or wedge; a sponge holder; gauze sponges; two hypodermic syringes, one containing a solution of strychnine and the other digitalin; also an empty syringe and tablets of strychnine, atropine and nitroglycerin, and brandy or whiskey.

Selection of the Anæsthetic.—The anæsthetist should individualize each case, and after examining the patient and inquiring about the nature of the operation, select the anæsthetic that can be administered with the greatest amount of safety to the patient and the best advantage to the operator. We find that many prefer chloroform and use it almost exclusively, while others prefer ether to the exclusion of chloroform. I have had more experience with chloroform, and naturally prefer it in cases where either of the two would answer equally well.

Remarks on Chloroform.—When chloroform is given the patient must always be in the recumbent posture and remain so throughout the entire operation. I have found that of the two anæsthetics, chloroform is the more agreeable to the patient, produces its effect more rapidly, causes less irritation of the respiratory mucous membrane, less mucus is secreted and there is less subsequent vomiting and depression, the patient does not struggle so severely, and there is not the possibility of the dangerous and troublesome sequelæ, such as nephritis, bronchitis, pneumonia, etc.

Chloroform is indicated—

In extensive bronchitis, bronchorrhœa, pneumonia, or any extensive inflammatory condition of the pulmonary tract, because of its causing less irritation of the mucous membrane and less mucus to be secreted.

In acute and chronic nephritis, because it is less irritating to the kidneys.

In aneurysm, atheroma, endocarditis, and high tension pulse, because it causes a perceptible fall in the blood pressure.

In operations on the brain, because it causes cerebral anæmia, while ether causes congestion and venous oozing.

In operations in the abdominal and pelvic cavities, because it causes a more complete relaxation of the abdominal muscles.

In those addicted to the use of alcohol and narcotics, because they usually take ether badly.

Chloroform in the hands of the inexperienced anæsthetist is the most dangerous, unless administered with great care and uniformity, because of its depressing effect upon the heart and the lowering of blood pressure. It produces death by depression and paralysis of the vasomotor centres or by paralysis of the heart muscles. Its effect upon the respiratory system is secondary and due to anæmia of the respiratory centre in the medulla oblongata. The dangers from chloroform are chiefly immediate, while the dangers from ether are usually remote and due to sequelæ, and are therefore not usually assigned to the real cause.

The first signals of danger when under chloroform anæsthesia are complete relaxation of the pupils, a sudden ashy gray pallor of the face, and a sudden or rapid failure of the pulse. At the same time the respirations become feeble and intermittent.

If, when under chloroform anæsthesia, the pulse becomes rapid, weak, and irregular, with a sudden blanching of the face or lips, or the respirations become shallow, feeble and interrupted, the mask should be removed. If the symptoms disappear, but again appear when chloroform is continued, ether should be substituted. Some patients seem to do better when chloroform is first administered until anæsthesia is obtained, and then a change is made to ether and its use is continued throughout the operation. Especially is this so in alcoholic subjects and in those addicted to the use of drugs, as some of them require an enormous amount of ether to produce anæsthesia, but do well under its influence after anæsthesia has been obtained.

Remarks on Ether.—Ether can be given in the sitting posture, when deemed necessary, without any necessarily bad results. After anæsthesia has been obtained in a horizontal posture, the patient should be gradually brought to the position desired, and the anæsthetic continued.

Ether is indicated—

In emphysema with dilatation of the right side of the heart, fatty degeneration of the heart muscles and dilatation of the heart without compensatory hypertrophy.

In extreme prostration and anæmia.

In shock, collapse and hæmorrhage.

When given under the latter conditions, heat should be applied to keep up the body temperature, as under ether narcosis there is a fall of from one third of a degree to one degree Fahrenheit.

Very stout subjects should be given ether, as fatty infiltration of the heart has been found after prolonged chloroform anæsthesia.

One great advantage that ether has over chloroform, and one that is highly appreciated at times, is that it can be given by the unskilled anæsthetist with greater safety, and at the same time allows anæsthesia to be more profound. It does not require as much skill and care in its administration, because of its stimulating effect on the heart and blood pressure. Under ether narcosis the respirations are to be watched closely, as it kills by depression and paralysis of the respiratory centre, while its effect on the circulatory system is secondary.

Collapse under etherization rarely occurs without warning. The symptoms are: Shallow, gasping respirations; the pulse becomes small, rapid, and irregular; cyanosis may or may not be present, and the pupils dilate. If, when administering ether, you find that it causes a persistent cough with an excessive amount of mucus secreted, or an undue amount of retching and vomiting, which does not cease when the proper means are employed, substitute chloroform. Because of the inflammability of ether, when operating at night, the light, if an open flame, should not be above the operating table.

Administration of the Anæsthetic.—Before beginning the administration of the anæsthetic the lips and nostrils should be thoroughly anointed with vaseline to prevent blistering. The administration should be begun while the patient is in bed in a room other than that in which the operation is to be performed. The room should be devoid of noises, and talking or whispering must be prohibited, as it is apt to excite the patient and interfere with the progress of anæsthetization. The anæsthetist should always induce anæsthesia slowly and gradually, with as little discomfort to the patient as possible. Gradually bring the inhaler closer to the face, so that the patient may become tolerant. When coughing or holding of breath occurs, it is a signal that the vapor is being given in too highly concentrated a form, and is producing an irritation of the mucous membrane of the upper respiratory tract. Therefore remove the inhaler from the face until the signs of irritation have ceased, and afterward proceed more cautiously. Sighing is a danger signal, showing that the patient is getting too much of the anæsthetic; so, whenever noticed, the inhaler should be removed from the face for a few seconds to admit fresh air.

Never allow the operator to proceed until complete anæsthesia has been reached. Deaths have occurred when the operation was begun before anæsthesia was complete; this is apparently due to sudden inhibition of the heart, produced reflexly by peripheral irritation of a sensory nerve. After surgical anæsthesia has been obtained, just so much of the anæsthetic must be given as is necessary to keep the patient in that stage and allow no risk of danger. The patient should never be allowed to emerge from the effects of the anæsthetic, and then flooded with vapor in order to bring him rapidly under its influence again. This is a most dangerous procedure and must never be adopted. If it were possible to classify properly the causes of death under anæsthesia, it would frequently be assigned to the crowding on of the anæsthetic in order to produce anæsthesia rapidly. The head should be extended, and turned to one side at frequent intervals to allow the mucus to escape from the mouth, after which the pharynx should be cleansed of mucus, by sponging it with a soft sponge, carried on a sponge holder.

Be sure that air is entering the lungs; do not be deceived by the movements of the chest walls; they may continue to move and yet no air enter the lungs. Watch the tongue and see that it does not obstruct breathing. At the beginning of the administration of the anæsthetic, the pulse may be quite rapid, but it will gradually slow until surgical anæsthesia is reached, when it will approach the normal. A soft, slow pulse will allow of free administration, but a full and bounding pulse demands care and watchfulness.

When the patient has become completely anæsthetized, the pupils should be moderately contracted and remain so, the respirations deep and regular, the pulse full, regular, and slow, though it may be rapid without indicating danger unless it becomes weak or irregular, and there should be a general muscular relaxation.

From the beginning the pupils, pulse, respirations, and color and condition of the face and lips, must be carefully and continuously watched. Do not depend upon any single reflex or condition for a danger signal. Always be on the alert.

A contracted immovable pupil shows that you have complete surgical anæsthesia, and a dilated immovable pupil indicates danger, while a dilated movable pupil indicates partial anæsthesia. Sudden wide dilatation of the pupil is a very bad indication, and calls for immediate resuscitative measures. When the pupils dilate suddenly, the pulse increases in rapidity, the respirations become rapid and jerking, and the patient attempts to swallow, the anæsthetic should be administered more freely, as it shows that vomiting is about to occur. When you see that vomiting is inevitable remove the inhaler, lower the head and turn it to one side, away from the field of operation, to permit the vomited matter and mucus to flow from the mouth, and draw the lower jaw forward by pressing behind the angles. As soon as the patient is quiet, cleanse the mouth and pharynx and again administer the anæsthetic.

An increase in the frequency of breathing usually shows that the patient is coming from under the influence of the anæsthetic. It may occur under surgical anæs-

thesia, and be due to deep reflex from manipulation of some of the abdominal or pelvic contents, or from dilatation and manipulation of the sphincter ani.

Resuscitation and Stimulation.—The anæsthetist should be able to state the exact condition of his patient at any time, and by careful attention and watchfulness detect the slightest unfavorable symptom. As soon as an unfavorable symptom appears, the operator should be informed of it, and the operation suspended immediately. No time should be lost in employing resuscitative measures. Those most frequently used are inversion of the patient, artificial respiration, rhythmical traction of the tongue, and hypodermic injections of strychnine, atropine, digitalin, and whiskey. Always be cool and collected; never allow yourself to become at all excited, but know how and when to act.

Under surgical anæsthesia, the muscles of the tongue become relaxed and the tongue may fall backward and obstruct the breathing. To correct this trouble, extend the head backward as far as possible, and carry the lower jaw forward by pressing behind the angles.

When the respirations begin to show signs of weakening, as manifested by slow, shallow, and interrupted breathing, the inhaler must be removed from the face. If the symptoms do not improve at once, inject hypodermically from a thirtieth to a twentieth of a grain of strychnine sulphate, and repeat when necessary. Then invert the patient or lower the head of the table and begin artificial respiration uniformly and regularly at the rate of about twenty to the minute. I prefer Kelly's or Sylvester's method of performing artificial respiration. Rhythmical traction of the tongue at the same rate should be practised, as it stimulates respiration. The tongue should be grasped with a towel, or a stout silk ligature passed through the tongue from side to side, and traction performed by this means. Never use a tongue forceps, unless you wish to have a lacerated tongue and complaint made of the soreness caused by it. The diaphragm can be made to contract suddenly, allowing air to enter the lungs, by grasping the abdominal wall with both hands and raising it up. Atropine sulphate, given hypodermically in a dose of a hundredth of a grain, is a valuable respiratory and vasomotor stimulant, and should be given when deemed necessary.

If the pulse decreases or increases in frequency and gradually weakens, and the lips and face blanch slightly, give from a thirtieth to a twentieth of a grain of strychnine sulphate hypodermically, or a hundredth of a grain of digitalin, or the two combined. If the desired effect is obtained, continue the anæsthetic, and watch your patient with increasing care.

When the pupils dilate suddenly, the pulse becomes rapid, weak, and irregular, and the face blanches suddenly, remove the inhaler and begin resuscitative measures immediately and energetically, for in all probability the patient is in a very bad condition. Therefore, use every measure at hand that is apt to be beneficial. Give strychnine and digitalin hypodermically, invert the patient, perform artificial respiration or rhythmic traction of the tongue, and introduce into the circulation about a quart of normal saline solution at a temperature of about 115° F. Under these conditions strychnine can be given in large doses, and frequently repeated. Continue your resuscitative measures until you are certain there is no longer any possible danger, or until you are sure that life is extinct. In some cases artificial respiration has to be continued several hours.

After-treatment.—When the operation is completed, the patient should be returned to a warm bed, in a well-ventilated room, and carefully and continuously watched until consciousness has been regained and all immediate danger from the anæsthetic has passed.

If the patient fails to recover as he should after a sufficient time, hot-water bottles should be used to stimulate circulation and keep up the body temperature. Also give strychnine and digitalin hypodermically, and in some cases use whiskey. Stimulating, warm high rectal injections may prove beneficial.

After operations resulting in the loss of a quantity of blood, where there is surgical shock and great weakness, about a quart of normal salt solution at a temperature of about 115° F. should be infused into the circulation. A good practice to follow after prolonged operations, is to give a high colon injection of about four quarts of warm normal saline solution. Especially is this valuable when operating under septic conditions, and in those cases of damaged kidneys where anæsthesia is absolutely necessary, and after which the kidneys may fail to perform their function properly or at all, resulting in suppression of urine. You will find that when the high colon injection of warm normal saline solution is given, thirst is not so intense, shock is lessened, the patient regains consciousness and strength more rapidly, and the kidneys act sooner and more freely, thereby ridding the system of the anæsthetic sooner than otherwise.

Vomiting is one of the most frequent and troublesome sequelæ of anæsthesia. To prevent this, so soon as the patient is returned to bed, he should be forced to inhale the fumes of vinegar for one or two hours, or as long as is necessary. This acts admirably in most cases. During the first twelve hours, nothing should be allowed in the stomach. If thirst is excessive, the high colon injection of several quarts of warm normal salt solution should be given. After that time, small pieces of chipped ice can be given at frequent intervals for some time, until the stomach is shown to be tolerant, before nourishment is allowed to enter it. Lewin recommends gastric lavage with a sodium bicarbonate solution, if vomiting is persistent.

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108 N. Center Street.

GASTRIC ULCER; REPORT OF TWO CASES.

By E. S. GOODHUE, M. D.,

KOLOA, KAUAI, H. I.

CASE I.—Mrs. S., aged twenty-four years; married two years; pregnant six months.

History.—Anæmic and chlorotic since puberty, with amenorrhœa, dysmenorrhœa and metrorrhagia at different times. Neurasthenic and hysterical, with obstinate constipation. At each menstrual period has had nausea and occasional vomiting. September 14, 1893, she had a miscarriage after doing a washing. Remained in bed nearly two months, convalescence being greatly retarded by the patient's inability to retain food on her stomach. There was gastralgia, but symptoms were not pronounced enough for diagnosis of anything but dyspepsia.

July 25, 1894, the patient being down-hearted and hysterical, I recommended that she take a trip to her home in Kentucky. She went, and began to gain at once, remaining "never better in her life" up to the day she left for California, November 21st. Then she began to have nausea and vomited "black stuff like coffee grounds." A physician who was on the train prescribed a sinapism and ice pellets. This did not relieve the condition much, and when the patient reached home, at 3.20 P. M., November 25th, I found her in the following condition: Very anæmic—the ears and lips almost bloodless—the tongue red, with streaks of reddish brown in centre; the gums and teeth covered with a thick sordes scarcely removable. Temperature 102° F.; pulse 120; respiration 25. No movement of bowels since the 10th inst. Patient complained of pain in the epigastric region, running to the back and limbs, worse shortly after meals, and bringing on faintness. Tenderness just above the umbilicus, greatest on deep pressure. Vomitus consisted of clots and some bright arterial blood. She had not eaten any food "to amount to anything" since the 21st.

I placed the patient on her back in bed. She occasionally turned from this position to her right side, but could not lie on her left side, as it increased the pain and vomiting.

A mustard plaster was applied to the epigastric region, and small pieces of ice were given at short intervals, with one eighth of a grain of sulphate of morphine hypodermically as required. At 4 and 8 P. M. twenty grains of bismuth subnitrate were administered. The bowels moved at 9 P. M. after an enema. The patient slept but little during the night, vomiting every half hour or so, and dozed between 3.15 and 3.50 A. M.

November 26th, 6 A. M., the bowels moved with blood-stained fæces—melæna. At 7.30 A. M. I gave small doses of carbolic acid and tincture of chloride of iron. This relieved vomiting for an hour. As a repetition of this dose did no good, I gave no more. Nourishment by rectal alimentation, giving every five or six hours from three to four ounces of defibrinized blood containing one grain of chloral to the ounce, and occasionally a tablespoonful of iced peptonized milk. During the day the patient dozed off into a restless sleep, being roused every twenty or thirty minutes by vomiting, although I tried to arrest this excessive action by nitrate of silver, bismuth, iodine, and creosote. At 7 P. M. an enema of peptonized milk and beef peptonoid was given. The patient vomited the stomach contents, consisting of blood, bile, and stomach juices. Reaction strongly acid. She complained greatly of "burning pain," which was relieved by a hypodermic injection of morphine. She passed a somewhat better night, sleeping from 7 to 8.30 P. M. just after vomiting six ounces of coagulated blood.

November 27th, 2 A. M., began the administration of one half a grain of powdered opium every three hours, alternately with one drachm of milk of magnesia. At 5 A. M. she vomited three ounces uncolored stomach contents. She slept soundly from 6 till 7.30 A. M. and awoke hungry. No milk had been given all night, but an enema of peptonized milk and beef peptonoid, four ounces, had been administered. After 12 noon, when patient was awake, two teaspoonfuls of crystallized Carlsbad salts were given, which the patient drank eagerly and retained on her stomach. 1 P. M., bright vomitus, neutral reaction. Urine normal. 1.15 P. M., administered a tablespoonful of olive oil, which I repeated every three hours. She slept from 2 to 3 P. M., quietly. At 3 P. M. she vomited a yellowish fluid unmixed with blood. At 7 P. M. the bowels moved freely, having a tarry appearance and containing globules of oil. On account of the patient's calls for food, I gave her teaspoonful doses of peptonized milk, which she threw up in flocculi. Pain was constant, boring and burning in character. 7.30 P. M., temperature normal; pulse 65; respiration 20. Decubitus—changing from back to right side or prone, as lying on the left side brought on hæmatemesis and pain. She vomited only twice during the night, and slept three hours.

November 28th, condition much the same. Vomited twice during the day. Rectal alimentation. Olive oil continued. November 29th, improving. Same treatment; olive oil, with Carlsbad water and milk of magnesia. November 30th, 8 A. M., the patient slept five hours. Temperature, pulse and respiration normal. Bowels moved freely, with normal fæces. Gave beef broth and thin oatmeal gruel. From this time on the symptoms were easily controlled, and patient gradually improved.

The nurse and I adopted as our motto: "Rest for the stomach," which we tried to bear in mind for the next six weeks, which were uneventful. Vegetables, starchy foods, tea, stimulants, etc., were prohibited, while alkaline drinks, olive oil, peptonized milk, beef broth, and gruels, were given with tonics, chiefly iron in the form of the peptonate. There was another thing to bear in mind. The patient was pregnant, and needed all the strength and tone she could gain both for her own sake and for that of her child. So we encouraged cheerfulness, moderate exercise, and all the out-of-door life we could secure for the patient at this season. In this way, she was brought to child-bed in a fair physical condition. During her labor, in which I attended her, she had one attack of hæmatemesis, but this was the last. There were other complications, which, however, constitute "another story."

CASE II.—May 17, 1895. Miss C., aged thirty-two years, nurse, unmarried.

History.—Anæmic and neurotic. Has had amenorrhœa ever since she began to menstruate at the age of fourteen. For four or five years she has had digestive troubles, epigastric pain after eating, flatulence, and, in the last year especially, eructations. No nausea or vomiting. Has always "dieted," living a vegetarian life. Is of constipated habit. She often felt as if she had a "lump of lead" in her stomach. No history of long or severe illness. While attending a case on May 17th she was taken suddenly with agonizing pain in the epigastric and right hypochondriac regions, running to the shoulder.

Thirst excessive. At 4.30 P. M. Dr. J., the family physician, came to see the patient, and left an anodyne. At 7 P. M. the bowels moved slightly, but there was no relief from pain. May 18th, in the morning, the physician called and took the patient to her own home in his buggy. Gastralgia was severe, but paroxysmal in character. The patient complained of a hard, burning pain in the right shoulder, and of occasional sharp pain over region of liver. No movement of bowels. The doctor examined the patient, and left some medicine for neuralgia, with orders for a milk diet.

May 19th, the doctor came at 11 A. M. and found the patient suffering from severe pain in the epigastric region, the umbilicus, in the right shoulder, and slight pain in the head. He gave some neuralgia powders and sulphate of magnesium. At 5 P. M. the patient and parents requested the physician to call me in consultation.

At 6 P. M. Dr. J. called at my office and asked me to see the patient; he did not consider the case sufficiently serious for consultation. He told me that the patient was nervous and hysterical; that she imagined her extremities were growing cold, and so on. He believed that it was nothing but neuralgia, and he did not want to put the family to any useless expense. He suggested a possibility of intestinal obstruction, but he hardly thought so, as there was no fever, vomiting, or other alarming symptoms. If the patient asked why he had not come, I might tell her that he did not think it was necessary.

Considering the neurotic condition of the patient, the history of trivial gastric disturbances, the sudden shifting pains, and the alarm of the patient, Dr. J.'s diagnosis is not surprising. As Cruveilhier's "dorsal pain" and the epigastric distress came in paroxysmal alternations, it would be easy to diagnosticate neuralgia, especially in this case, where the usual text-book points of diagnosis from cardialgia were absent. There was no particular increase of pain after eating, no relief of pain by epigastric pressure, no history of diagnostic symptoms such as hæmatemesis, vomiting, gnawing pain, or localized tenderness. I reached the house at 7 P. M. and found the patient cyanotic, temperature 97° F., pulse 130, respiration 30. There was little pain, but great uneasiness in the right hypochondriac region. Abdomen very tympanitic, with a decided bulging in the right hypochondriac region, including the umbilicus. Respiratory movements restricted on right side. The area of hepatic dulness was marked in an upward direction, and limited to the enlargement. The patient had noticed the swelling herself, and feared peritonitis. She had vomited in the morning about two ounces of brownish, grumous blood. I made a diagnosis of abscess of the liver with localized peritonitis. Although the patient wished me to stay, I saw that she was sinking fast, and hastened to report to Dr. J., advising him to go to the patient's bedside at once.

May 20, 9 A. M., the patient was in partial collapse; the abdomen greatly distended. She vomited every few minutes until 12 noon. Death occurred at 3 P. M. from shock.

Autopsy.—On the anterior wall of the pyloric portion of the stomach a perforation of about the size of a quarter of a dollar; a sinuous, terraced, round ulcer, the floor being formed by the left lobe of the liver, where there were partial adhesions and abundant pus, showing the recent formation of the abscess. There was a localized area of inflammation which had given rise to the symptoms of peritonitis. I firmly believe that the patient could have been saved by a timely operation.

Therapeutical Notes.

The Absorption of Iron from the Jejunum.—Cloetta, of Zürich (*Archiv für experimentelle Pathologie und Pharmakologie,* xliv, 5, 6; *Berliner klinische Wochenschrift,* December 3d), disputes Quincke and Hochhaus's dictum that iron is absorbed only from the duodenum. He administered it to mice that had been deprived of ferruginous food for two weeks. On killing them, he found the reaction of iron over a considerable portion of the epithelium of the upper part of the jejunum.

The Treatment of Nasal Hæmorrhage, Especially after Removal of Adenoids.—The *St. Paul Medical Journal* for November, citing the *Bulletin de laryngologie, d'otologie, et de rhinologie,* gives the following on the authority of Dr. P. Chevallier:

As regards treatment, all those measures calculated to control hæmorrhage in general are of service. Injections of gelatinized serum are highly recommended. This is prepared as follows:

℞ Chloride of sodium. . . . . 105 grains;
Distilled water. . . . . 1 quart.

M. To this solution is added gelatin in the proportion of from 5 to 10 parts to the hundred. The whole is then twice sterilized at 100° C., and is then ready for use. It is solid when cold, and is warmed in a water bath when it is to be used.

Another remedy is the solution of peroxide of hydrogen, which is to be painted over the bleeding surface by means of a cotton tampon held in a curved forceps.

An astringent powder which is recommended is composed as follows:

℞ Boric acid, } of each. . . . . 75 grains;
Powdered sugar, }
Antipyrine. . . . . from 7½ to 15 "
Tannin. . . . . 15 "
M.

If the hæmorrhage continues, in spite of all remedies, we must first satisfy ourselves that no tags and shreds of membrane are left hanging, for they often give rise to bleeding. The only way to ascertain this, as a general rule, is by palpation. And, finally, resort must be had to anterior and posterior plugging. The posterior plugs should be large enough to fill the vault and exercise compression on the denuded surface.

The Use of Garlic in Pulmonary Tuberculosis.—Dr. Giulio Cavazzani (*Policlinico,* 1900, p. 724) reports a series of experiments conducted in the city hospital of Venice with reference to the action of garlic in consumption. Garlic is cut into small pieces and dried for a short time. It is given in this form to the patients in quantities of from four to six grammes in twenty-four hours, in fractional doses and in various ways, in order to combat the distaste that most patients manifest for the drug. Over two hundred patients were thus treated, and in addition to the garlic the patients were given the ordinary hygienic and symptomatic treatment. An improvement is said to have taken place in all stages of tuberculosis, especially in the early cases. The sputum becomes mucous in character, the number of bacilli diminishes, until it completely disappears, the cough is lessened, the local physical signs disappear, as do the night sweats and the hæmoptyses, and there is a marked improvement in the appetite and the general condition.

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THE HOSPITAL AND THE COMMUNITY.

THERE is good evidence that hospitals are not now held in quite such low esteem by the poor as they were a few years ago. Perhaps the advent of the trained nurse has had much to do with the change. Still more might be accomplished in the direction of hallowing the hospitals in the hearts of the people, we think, if the governing boards, instead of contenting themselves with a dismally formal annual business meeting and a dry printed report, would bring the community into close contact with the institutions now and then. This is done by St. Luke's Hospital, of South Bethlehem, Pennsylvania, which annually, on St. Luke's day, holds a festival, so to speak, one of the main features of which is an address by some medical man; possibly it is done by a few other hospitals. We are led to make this remark by a perusal of a very interesting address delivered by Dr. William Osler, of Baltimore, some weeks ago, on the occasion of the semi-centenary of the Troy Hospital, published in the January number of the *Albany Medical Annals.*

Dr. Osler properly deprecates the bestowal of denominational names on hospitals. He admits, as we all admit, that in hospitals so named much indiscriminate charity is practised, but he thinks that a natural preference must be given in them to sufferers who are "of the household faith." As to wealthy contributors to hospitals' funds, they should take a closer interest in the affairs of those institutions, Dr. Osler intimates, than is manifested by mere gifts of money, and in this he is undoubtedly correct. Those who feel commiseration for the inmates of hospitals, but are unable to give money for their relief, may at least send flowers or read or sing to the sufferers, and those who are able to contribute to the funds might perform these little acts of sympathy in addition. However, it is not everybody who can read or sing to the sick acceptably or show good taste in floral gifts; so perhaps we should not expect more from the ordinary man of wealth than the commodity for which he has the greatest respect.

Much has been said in recent years about the abuse of medical charity. Dr. Osler deprecates lavish and indiscriminate charity, but he adds:

"The question arises, Who is a deserving person? We are all agreed upon the poor man, but how about the relatively poor, the clerk or mechanic with a large family? Many conditions arise in which he is a worthy recipient of hospital aid. A daughter with typhoid fever, or a boy with hip-joint disease, is much better off in the wards of a hospital than at home, and it is a good deal better for the profession that the father of the family should pay the hospital two or three dollars a week for the care of his child than that he should take food from the mouths of his little ones to pay a doctor's bill, which at the best could not be in any degree adequate to the services rendered. Take the cases, too, which need special services—the obscure skin diseases, obstinate affections of the nervous system, cases requiring delicate operations; a majority of these have already paid a general practitioner a fair fee before applying to hospital. Instead of saying that our charities are abused by such people, I maintain that they are not used enough, and are not sufficiently taken advantage of by the general practitioners. The golden rule in the practice of medicine makes the interest of the patient the first consideration, and so soon as the physician is puzzled, or finds the case to be obscure or not progressing well, instead of straining a family in straitened circumstances—distraining, I would call it—by a consultant's fee, he should send the patient to a hospital. If the patient can pay something for the accommodation, well and good, if not, well and good; to help such is the truest form of charity. I am not speaking, remember, of the absolutely poor, but of the relatively poor and the improvident, upon whom sickness comes as a terrible trial. In relieving these people of their obligations to the profession by placing them in more skilful hands or where the nursing is better the physician only does his duty, though it may be at a pecuniary loss."

It takes courage to set forth such views, and it requires extraordinary conscientiousness in the struggling practitioner to conform to them. It must be admitted, nevertheless, that they are well founded. The pity is that some means cannot be devised of maintaining one's income while one carries out this altruistic course.

CANADIAN MEDICINE.

THERE have recently come to our attention two noteworthy Canadian contributions to the chain of historical sketches that is now being forged to formulate and hand down to posterity an adequate conception of what was accomplished in medicine during the nineteenth century. One of them is the presidential address delivered before the American Public Health Association at its Indianapolis meeting by the eminent Toronto sanitarian, Dr. Peter H. Bryce, reprinted from the *Canadian Journal of Medicine and Surgery*, dealing with the progress of sanitation during the century. It is a masterly and most interesting narrative. It is evident that Dr. Bryce did not set out to magnify Canadian sanitary work—indeed, he expressly says that, so far as he is aware, in no country does there exist to-day a more complete sanitary organization, one in which the legislative, administrative, and scientific functions are better coordinated or more efficiently carried out, than in Mexico—but it appears also from his address that our Canadian brethren were early imbued with the necessity of systematic work for the preservation of the public health, and that their efforts to promote and perfect such work have been constant, energetic, and well directed.

The other contribution is a Retrospect of Medicine during the Nineteenth Century, the leading editorial in the January number of the same journal, signed with the initials of the editor, Dr. Cassidy. The article is well illustrated with cuts from Dr. Henry Smith Williams's *Story of Nineteenth-Century Science* (Harper & Brothers), including a scene in the Necker Hospital, Paris, showing Laennec employing the stethoscope, together with portraits of William T. G. Morton, Crawford W. Long, Theodor Schwann, Louis Pasteur, Rudolf Virchow, and Lord Lister. Dr. Cassidy passes in critical review not only the leading medical events of the century, but also—and without this the mere recital would be almost meaningless—the doctrines and theories that have passed and those that have come. "In concluding this sketch," says Dr. Cassidy, "a regret will intrude that Canada has not carved a name among the medical discoverers of the nineteenth century, though we must congratulate our confrères on the fact that they keep well to the front in scientific knowledge, which they cull with avidity both at home and abroad."

Canadian medicine has indeed much to be proud of. It is not given to every country to produce in each century some eminent discoverer or a man of transcendent genius; that is not necessary to entitle a people to the credit of doing its part in keeping in motion the machinery that leads to great discoveries. Canada has certainly done her share in promoting the conditions from which discoveries take their origin. Her medical schools, her hospitals, her laws governing the practice of medicine, her cultivation of sanitary science, and her steadfast devotion to progress in medicine, as shown by her excellent periodicals and by the good work of her societies, are unsurpassed. Profitable would it be to us of the United States, a country fifteen times as populous as Canada, if more of us visited our provincial neighbor in quest of professional communion rather than with aims symbolized by rod and gun. It is of the greatest mutual advantage that most of our national special societies admit Canadian physicians to membership, and we hope that the American Medical Association will soon open its doors to our Canadian brethren; the boon would not be altogether to them, for the movement would react to our own good.

THE PROPOSED NATIONAL PSYCHOPHYSICAL LABORATORY.

WE understand that Congress has under consideration the establishment of a psychophysical laboratory in the Department of the Interior. The purpose of the laboratory is the prosecution of exact studies of the criminal, pauper, and defective classes of our population, such studies as Mr. Arthur MacDonald has carried on in Washington for some time past. Mr. MacDonald's work has received from all quarters of the world such recognition of the value of his labors as must be very gratifying to him. As he would undoubtedly be put in charge of the laboratory, its establishment would insure a continuance and extension of precise researches into subjects that closely concern mankind in general. Our population, by reason of its complex composition, has been thought to be particularly promising of tangible if not decisive results in furnishing material for aiding to reduce to a science the observations that have heretofore been made as to the relations between the bodily and mental make-up of human beings and their course of life, whether creditable, obstructive, or distinctly criminal.

To establish a huge mass of facts and to detect their connection with other facts are tasks that lie at the very foundation of every science. No more complicated science, none fraught with greater difficulties, we may conceive, exists, either *in esse* or *in posse*, than that of the relations between a man's original physical and mental attributes, his constitution, as it is commonly called, and his proneness to a particular form of departure from

either bodily, mental, or spiritual health. If we are ever to meet with noticeable success in overcoming innate tendencies to morbid or perverted states of body, mind, or moral sense, we must begin with just such observations, and that, too, on a large scale, as would be the outcome of a well-conducted bureau such as the proposed psychophysical laboratory in Washington seems intended to become. It appears that the expense is estimated as coming within a very moderate sum, and we know of no reason why the government should not appropriate that amount or even much more to achieve results that are most promising.

THE HEALTH OF HAVANA.

In a report to the adjutant-general of the Department of Cuba dated January 5th, Major and Surgeon W. C. Gorgas, of the army, chief sanitary officer, quite pardonably calls attention to the improved sanitary condition of the city during the American occupation, and especially to the small number of deaths, 485, in the month of December, 1900, the smallest for that month since the year 1890. Yellow fever, he adds, is diminishing satisfactorily, and the little of it that there is, is seen almost entirely among the Spanish immigrants. Immigration still continues large; in December 4,206 immigrants arrived.

THE *AMERICAN DRUGGIST.*

The first number of the *American Druggist and Pharmaceutical Record* for the new century comes to us in a new dress of type, with a vastly improved typographical arrangement, the matter being printed in two instead of three columns to the page as heretofore. Several new departments also appear in this number which are likely to add to the interest and value of the publication to its readers. One of these which will prove of great value to physicians and teachers who are at all interested in pharmacy is a review of current pharmaceutical literature, entitled Cream of Current Literature, after the manner of the conspectus of our contemporaries' original articles which we publish under the heading of Pith of Current Literature. The *American Druggist's* improvement reminds us of the general advance in the periodical literature of pharmacy that has been noticeable for several years past.

THE ACTION OF THE SUPRARENAL CAPSULE ON THE HEART.

Dr. Samuel Floersheim, whose article entitled The Use of the Suprarenal Capsule in Diseases of the Heart appeared in our issue for October 6th, writes to us that he is preparing another paper on the subject, and would be glad to receive from our readers reports of their observations as follows: 1. The condition of the heart and pulse. 2. The effect on the heart and pulse within ten minutes after the suprarenal powder, three grains, is chewed and swallowed without water.

A MEDICAL JOURNAL'S SEMI-CENTENARY.

We felicitate our Vienna contemporary, the *Wiener medicinische Wochenschrift,* on the completion of the first half-century of its career and on its method of celebrating the event. Its entire issue for December 29th is devoted to an address to its readers and friends, to a brief history of its career, to reduced reproductions of the pages of its first number, and to a collection of aphorisms with their authors' signatures. The aphorisms have a cover of their own; its first page is taken up with a handsome allegorical design, and on its last page are portraits of Dr. Wittelshöfer, the first editor, and Dr. Adler, the present editor.

A NEW JOURNAL IN NEW YORK.

We have received the first number, dated January, 1901, of the *New York State Journal of Medicine,* a monthly of twenty-four large double-columned pages of reading matter. It is published by the New York State Medical Association, and is to supersede the association's annual volume of *Transactions.* We do not see the editor's name mentioned. The new journal is of handsome appearance, and the contents of the first number, including four original articles, are of an interesting character.

PENNY LUNCH ROOMS.

Our attention has been called to the fact, in reference to a minor editorial in our issue for January 5th, that the St. Andrew's coffee stands in New York and Brooklyn to some extent cover similar lines to those commended by us as existing in Chicago. A stall, however, is not a comfortable room where the poor man can obtain some sense of warmth, light, and comfort, to contrast with the gloom of the struggle for life of those whose lot is cast in dark places. Doubtless a wider knowledge of the efforts of the St. Andrew's stands would result in their support to an extent adequate to enabling the institution to make more extensive efforts than hitherto. The suggestion that we have made as to the sale of tickets is, we find, in operation with these stands; the charitable-minded of limited means, therefore, can, by supporting them, not only give a reasonable exercise to the highest faculty of humanity from an individual point of view, but by so doing help the society to attain the extension so much to be desired.

THE PHYSICIAN IN GENERAL LITERATURE.

The numerous friends of Dr. Lydston, of Chicago, have a fresh opportunity of enjoying the product of his skill as a writer in the shape of a volume recently issued.* It treats of his observations and experiences in a journey across the Isthmus of Panama. The illustrations, for the most part decidedly unconventional, are very interesting, but one of them is so ghastly that it may shock many a reader, as it shows the dangling bodies of four men hanged by a vigilance committee in Lower California.

**Panama and the Sierras; A Doctor's Wander Days.* By G. Frank Lydston, M. D. Illustrated from the author's original photographs. Chicago: The Riverton Press, 1900.

News Items.

Society Meetings for the Coming Week:

MONDAY, *January 21st:* New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, *January 22d:* New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynæcology); Medical Society of the State of New York; Medical Society of the County of Putnam, N. Y. (quarterly); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, *January 23d:* New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society.

THURSDAY, *January 24th:* New York Academy of Medicine (Section in Obstetrics and Gynæcology); New York Orthopædic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia.

FRIDAY, *January 25th:* New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, *January 26th:* New York Medical and Surgical Society (private).

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from December 29, 1900, to January 12, 1901:

GREENLEAF, CHARLES R., Colonel and Assistant Surgeon-General, will proceed to Hong Kong, China, for the purpose of inspecting certain vessels at that point, offered for sale, with a view to the purchase of a suitable one for a hospital ship. During the temporary absence of Colonel Greenleaf, Major Louis M. Maus, Surgeon, United States Army, will take charge of the office of the chief surgeon of the division.

REYNOLDS, FREDERICK P., Major and Surgeon, United States Volunteers, is granted leave of absence for two months on account of sickness.

SIMPSON, MAXWELL S., Captain and Assistant Surgeon, Squadron Philippine Cavalry, will proceed from Manila to San Francisco, with a view to discharge.

TESSON, LOUIS S., Major and Surgeon, United States Army, will proceed to Portland, Oregon, and make a thorough sanitary inspection of the transport *Thyra*, now in that port.

WEBBER, HENRY A., First Lieutenant and Assistant Surgeon, will proceed to the Philippine Islands on the transport *Wright*, and is detailed for duty as acting assistant surgeon on that transport.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the two weeks ending January 12, 1901:

ANDERSON, F., Surgeon. Ordered to await orders when recruiting duty is completed.

DENNIS, J. B., Assistant Surgeon. Ordered to the Naval Academy.

DIEHL, O., Surgeon. Detached from the *Lancaster* and ordered home to await orders.

LOWNDES, G. H. T., Surgeon. Detached from the Naval Academy and ordered to the *Lancaster*.

WARD, B. R., Passed Assistant Surgeon, Detached from the Naval Hospital, Mare Island, California, and ordered to the Boston Navy Yard.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending January 10, 1901:

ANDERSON, J. F., Assistant Surgeon. Having been assigned to duty in the Immigration Service at Liverpool, England, he is relieved from duty in United States Consulate at that port.

DECKER, C. E., Assistant Surgeon. Granted seven days' extension of sick leave from January 4th.

NYDEGGER, J. A., Passed Assistant Surgeon. To proceed to Chicago and report to the medical officer in command for duty and assignment to quarters.

STIMPSON, W. G., Passed Assistant Surgeon. To proceed to Cripple Creek, Colorado, for special temporary duty.

WALKLEY, W. S., Acting Assistant Surgeon. Granted leave of absence for three days.

WASDIN, EUGENE, Surgeon. Granted leave of absence for fifteen days from January 14th.

WERTENBAKER, C. P., Passed Assistant Surgeon. To proceed to Fontainebleau, Mississippi, for special temporary duty.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague, were reported to the surgeon-general during the week ending January 11, 1901:

Small-pox—United States.

Girard, Alabama	Dec. 31	Reported present.	
Phœnix, Alabama	Dec. 31	Reported present.	
Washington, District of Columbia	Dec. 29-Jan. 5	6 cases.	
Jacksonville, Florida	Dec. 29-Jan. 5	1 case.	
West Tampa, Florida	Dec. 29-Jan. 5	2 cases.	
Columbus, Georgia	Dec. 31	Reported present.	
Wichita, Kansas	Dec. 29-Jan. 5	12 cases.	
Lexington, Kentucky	Dec. 29-Jan. 7	2 cases.	
Shreveport, Louisiana	Jan. 2	2 cases.	
Baltimore, Maryland	Dec. 29-Jan. 5	1 case.	
Minneapolis, Minnesota	Dec. 22-29	3 cases.	
Omaha, Nebraska	Dec. 22-29	6 cases.	
Manchester, New Hampshire	Dec. 29-Jan. 5	18 cases.	
New York, New York	Dec. 29-Jan. 5	13 cases.	
Caswell County, North Carolina	Dec. 1-31	77 cases.	
Ashtabula, Ohio	Dec. 29-Jan. 5	1 case.	
Cincinnati, Ohio	Jan. 4	1 case.	
Cleveland, Ohio	Dec. 29-Jan. 5	39 cases.	1 death.
Portsmouth, Ohio	Jan. 5	3 cases.	
Allegheny City, Pennsylvania	Jan. 7	1 case.	
Pittsburgh, Pennsylvania	Dec. 29-Jan. 5	11 cases.	
Greenville, South Carolina	Dec. 29	1 case.	
Memphis, Tennessee	Dec. 29-Jan. 5	2 cases.	
Salt Lake City, Utah	Dec. 29-Jan. 5	34 cases.	
Tacoma, Washington	Dec. 29	1 case.	

Small-pox—Foreign.

Prague, Austria	Dec. 8-15	22 cases.	
Nanaimo, British Columbia	Dec. 15-21	5 cases.	
Vancouver, British Columbia	Dec. 1-31	2 cases.	
London, England	Dec. 15-22	1 case.	
West Hartlepool, England	Dec. 9-15	1 case.	
Paris, France	Dec. 15-22		8 deaths.
Bombay, India	Nov. 21-Dec. 4		1 death.
Calcutta, India	Nov. 24-Dec. 1		7 deaths.
Madras, India	Nov. 23-30		1 death.
Moscow, Russia	Dec. 29-Jan. 5	6 cases.	1 death.
Odessa, Russia	Dec. 8-15	41 cases.	10 deaths.
Glasgow, Scotland	Dec. 15-22	72 cases.	1 death.
Montevideo, Uruguay	Dec. 1	1 case.	

Yellow Fever.

Cartagena, Colombia	Dec. 17		1 death.
Cienfuegos, Cuba	Jan. 8		1 death.
Matanzas, Cuba	Jan. 3	1 case.	
Vera Cruz, Mexico	Dec. 22-29		5 deaths.

Cholera.

Bombay, India	Dec. 4		10 deaths.
Calcutta, India	Dec. 1		33 deaths.
Madras, India	Nov. 30		3 deaths.
Singapore, Straits Settlements	Nov. 17-24		64 deaths.

Plague.

Hong Kong, China	Nov. 25		1 death.
Bombay, India	Dec. 4		70 deaths.
Calcutta, India	Dec. 1		23 deaths.
Osaka, Japan	Dec. 4-13	3 cases.	
Wakayama Ken, Japan	Dec. 4-13	5 cases.	
Yuasa, Japan	Dec. 4-13	Plague reported.	

The Woman's Hospital in the State of New York.—We learn that Dr. P. F. Chambers has been appointed an attending surgeon, to succeed Dr. Thomas Addis Emmet, who has resigned.

The First Russian Congress of Surgeons was held in Moscow on December 27, 1900. The president was Professor Diakonoff.

Dr. Angel Bellinzaghi, whose yellow fever serum is now being tested in the American Hospital in the City of Mexico, is visiting Washington.

The Vital Statistics of Baltimore for the past year show a slight increase in both the birth rate and the death rate in that city over that for the previous years.

The Manhattan Dermatological Society has been organized, with Dr. William S. Gottheil as president, Dr. Ludwig Weiss as vice-president and Dr. Jacob Sobel as secretary.

Philadelphia Medical Club.—Dr. Edward L. Duer has been elected president of the Philadelphia Medical Club to succeed Dr. J. M. Anders, who has resigned the presidency.

An Association of Military Surgeons has been formed among the surgeons of the National Guard of the State of Minnesota, with a view to the improvement of the service.

The Ohio Board of Medical Registration and Examination has elected officers as follows: President, Dr. N. R. Coleman, Columbus; vice-president, Dr. H. E. Beebe, Sidney; secretary, Dr. Frank Winders, Columbus; treasurer, Dr. David Williams, Columbus.

To Prosecute Illegal Practitioners of Medicine.—It is reported that the New York County Medical Society has obtained evidence against a number of unlicensed practitioners, and is about to begin an active campaign against illegal practitioners generally.

The Death Rate in Savannah.—The annual report of the health officer of Savannah, Ga., shows the death rate of that city to have decreased steadily during the past two decades, the rate having been 44.96 per thousand in 1880; 31.37 in 1890, and only 25.90 per thousand in 1900.

The Quarantine Regulations at San Francisco as laid down by Dr. Kinyoun, the Marine-Hospital Service officer in charge at that port, are so stringent as to have evoked a vigorous protest on the part of the local merchants. At least the local newspapers have published numerous sensational articles on the subject.

The Site of the Hospital for Consumptives.—A bill has been introduced in the New York Legislature directing that the new State hospital for consumptives, which the commissioners decided to locate at Raybrook, shall instead be located at Dannemora on State lands, and that the buildings shall be erected by convict labor under the direction of the state superintendent of prisons.

A State Epileptic Colony for Illinois is to come into being, and Northcliff, near Elsah, Jersey county, has been conditionally accepted by the State Board of Charities as its future situation. Governor Tanner is reported to have stated on December 5th that there were more than 5,000 epileptics inmates of the various eleemosynary institutions of the State, and they would be transferred to the new institution as soon as it could be completed.

Fined for Illegally Practising Medicine.—Cornelius Edison, of No. 288 Lincoln Avenue, Brooklyn, was recently sentenced in the Court of Special Sessions to pay a fine of $250 or to spend three months in jail, for practising medicine without a license. He pleaded guilty. The complainants were David Myerle, secretary of the Kings County Medical Society, and Hugh L. Clark, of No. 276 Lincoln Avenue. Edison had treated a member of Clarke's family.

The Grippe.—There is apparently no subsidence of the grippe epidemic, either in New York City or elsewhere. The victims are numbered by the hundreds in every walk of life, and in all the large cities the hospitals are crowded. The record of deaths is comparatively large. In Manhattan borough there have been fifty deaths within the past week, while Brooklyn borough has a record almost as large. Other large cities send in similar reports, some of the most sensational being from Buffalo, Pittsburg, and Chicago, and from Rochester, Washington, D. C., where President McKinley and Admiral Dewey are just recovering from attacks.

Small-pox.—Several more deaths are reported in this city from small-pox, while the epidemic is still prevalent in Milwaukee, Madison, and other Wisconsin cities. Cleveland, Ohio, and several Missouri cities are also suffering, and the legislature of the latter State has voted an appropriation of $10,000 to the State Board of Health to enable the board to investigate and quarantine small-pox cases.——A Brooklyn magistrate has refused to grant a warrant to arrest Dr. Montague R. Leverson, the physician who had stated that he attended thirty small-pox cases, and reported none.

Medical Legislation at Albany.—Among the measures relating to medicine which have already been introduced in the legislature of the State of New York, now in session, are the following: The charter novum bill, a bill by Mr. Bell aimed at the illegal practices of faith-curists and others, a bill by Mr. Cotton exempting from taxation the property of medical societies in New York City and Buffalo, and a bill protecting practitioners from blackmail and from unjust suits for malpractice.

The Havana Medical Congress.—Plans for the entertainment of the delegates to the third Pan-American Medical Congress, to be held in Havana, Cuba, from February 4th to 6th, inclusive, are being made by a reception committee, of which Dr. A. Glennan, health officer of the port of Havana, is chairman. Governor-General Wood will give a reception to the delegates, probably on the day before the opening of the congress, and he has thrown open to those who cannot afford to stay at the hotels the furnished quarters built for the officials of the Military Hospital. After the scientific sessions on the second day, the evening will be given over to the entertainment of the delegates and their families by the City Council of Havana. It is expected that there will be about 1,500 delegates present, of whom 500 will be Cuban physicians, 300 or 400 Americans, 200 Mexicans and others from the Argentine Republic, Uruguay, Brazil, Venezuela, Colombia, Peru, Chili and other Central and South American countries. The entertainment committee has arranged to give a large ball for the delegates at the Tacon Theatre, an excursion to a sugar plantation, a luncheon at a plantation, an excursion to Matanzas to see the Caves of Bellamar, in the Yumori Valley, a parade of the police and firemen and various other entertainments.

The Court Asked to Compel a Board to Register a Physician.—An alternative writ of mandamus has been granted by Judge Siebecker in the circuit court in the case of the State of Wisconsin *ex rel.* Dr. W. M. Caswell, of Hillsboro, Vernon county, to compel the State board of medical examiners to receive his registration as a practising physician. In his application Dr. Caswell asserts he has been a physician in regular practice for twelve years, and that he made application to the board for registration in the regular way, but his application was refused. The writ is made returnable before Judge Siebecker January 14th.

St. Louis Medical Society of Missouri.—At the last regular meeting, on Saturday evening, the 12th inst., the following papers were read: Excision of the Intact Gasserian Ganglion, with a Report of Two Cases of Trifacial Neuralgia Successfully Treated by this Means, by Dr. Willard Bartlett; A Report of the Microscopic Findings in the above Cases, with a Literature Résum on the Neuropathology of the Subject, by Dr. Sidney I. Schwab; and the Successful Treatment of Trifacial Neuralgia with and without the Knife, by Dr. C. H. Hughes.

Foreign University News.—The busts of Albrecht v. Graefe and Karl Schweigger were recently unveiled with appropriate ceremonies in the newly erected lecture hall of the ophthalmic clinic at the University of Berlin.——The following have been appointed to the post of *privat-docent* in the University of Berlin: Dermatology, Dr. Karl Gruhns, assistant in the charity clinic for skin diseases; internal medicine and laryngology, Dr. Felix Klemperer, formerly of the University of Strasburg; anatomy, Dr. George Wetzel, assistant in the biological and anatomical institute of the university.——Dr. Von Hippel, director of the ophthalmic clinic at the University of Halle, has been transferred to Göttingen, and Dr. Schmidt Rimpler, of Göttingen, has succeeded him at Halle.——Miss Toni Fellmer has been nominated assistant in the pharmacological institute at Bonn.

The New York Academy of Medicine.—At the last stated meeting, on Thursday, January 17th, the order for the evening was as follows: Presentation of a portrait of Dr. Austin Flint, Sr., by Dr. E. G. Janeway; On the Value of the X-Ray in Medicine, by Dr. F. H. Williams, of Boston; The Value of the X-Ray in Surgery, by Dr. Robert Abbe; The Value of the X-Ray in the Detection and Exclusion of Renal and Ureteral Calculi, by Dr. Charles L. Leonard, of Philadelphia; and The Technique and Correct Interpretation of Radiographs, by Mr. E. W. Caldwell.

At the next meeting of the Section in Ophthalmology, on Monday evening, the 21st inst., the following cases will be reported: A Case of Sudden Total One-Sided Blindness without Ophthalmoscopic Signs, by Dr. T. R. Pooley; and A Case of Abscess of the Brain, Frontal Lobe, with Orbital Cellulitis, by Dr. J. E. Weeks. Dr. Beaman Dougless will read a paper entitled Emphysema of the Upper Lid.

At the next meeting of the Section in Laryngology and Rhinology, on Wednesday evening, the 23d inst., the following papers will be read: Nasal Suppuration, by Dr. Z. L. Leonard; and A Remarkable Case of Glossopharyngolabial Paralysis, by Dr. Wolff Freudenthal. Cases will be presented and new instruments will be exhibited.

The National Jewish Hospital.—The medical and surgical staff for the new year of the National Jewish Hospital for Consumptives, Denver, Col., have been appointed: Medical advisory board—Dr. John Elsner, Dr. Saling Simon and Dr. Robert Levy. Medicine—Dr. C. B. Van Zant, Dr. H. B. Whitney, Dr. S. Simon, Dr. S. T. Jarecki, Dr. William N. Beggs, Dr. A. Zederbaum, Dr. M. Kleiner, Dr. John Elsner and Dr. H. W. McLauthlin. Surgery—Dr. Leonard Freeman, Dr. Clayton Parkhill, Dr. John Boyce and Dr. William B. Craig. Gynæcology—Dr. H. G. Wetherell, Dr. Thomas H. Hawkins, Dr. C. K. Flemming. Obstetrics—Dr. Minnie C. T. Love and Dr. T. Mitchell Burns. Rhinology and laryngology—Dr. Robert Levy, Dr. Henry H. Howland and Dr. Lenora Benton Hamly. Ophthalmology and otology—Dr. D. H. Coover, Dr. W. C. Bane and Dr. Melville Black. Neurology—Dr. B. Oettinger and Dr. W. J. Rothwell. Bacteriology and pathology—Dr. Philip Hillkowitz. Dermatology—Dr. James M. Blain. Dentistry—George J. Hartung.

Hospital Staff Changes.—Dr. McCluney Radcliffe has been elected surgeon of the Wills' Eye Hospital, Philadelphia, *vice* Dr. John W. Croskey, resigned. The resignation is dated December 31st, last. Dr. Croskey is alleged to have taken into his private practice patients who went to the hospital for treatment. When charges were made against him he prepared an answer containing affidavits from several patients showing that they applied to him of their own will. Dr. Croskey had been connected with the Wills' Hospital for twelve years as assistant, and since April 13, 1897, as attending surgeon, succeeding the late Dr. Peter D. Keyser. Dr. Radcliffe has been assistant surgeon to Dr. George C. Harlan, at the Wills' Hospital, for seventeen years.——Dr. Austin Flint, Jr., and Dr. Edward E. Ayres have resigned from the Mothers and Babies' Hospital, New York.——Dr. Arthur P. Powelson has tendered his resignation as assistant physician of the State hospital for the insane at Middletown, N. Y., to take effect February 15th. He has accepted the position of resident physician at the Homœopathic General Hospital in Rochester.

Hospital Buildings and Endowments.—The site for the New York State Tuberculosis Hospital has been located at Raybrook, Franklin County, N. Y., about four miles east of Saranac Lake. The legislature will be asked to appropriate $100,000 for the erection of the first pavilions for the hospital. Plans for the institution are being prepared by State architect Heins.——The sum of $16,000 has been subscribed by a number of wealthy residents of Plainfield, N. J., toward the fund of $30,000 which is required to establish the Muhlenberg Hospital in that city.——A fund is being raised by residents of Bath Beach, N. Y., for the establishment of an emergency hospital. That district of Brooklyn is practically without ambulance service, as it requires almost two hours to receive assistance from the nearest hospitals.——Bids for the construction of a barracks, hospital and crematory at Marcus Hook, Philadelphia, have been called for by the State Quarantine Board of Pennsylvania. The new buildings are to be used for the isolation of persons afflicted with contagious diseases, and accommodation for more than 600 patients will be provided.——The Central State Hospital at Petersburg, Va., which has been in course of erection, was opened to the public early this month. The building accommodates 160 patients.——A bill has been introduced in Congress permitting the directors of Providence Hospital, Washington, to increase the accommodations at that institution.——The Trades' Council, representing nearly all of the trade or-

ganizations of Bridgeton, N. J., proposes that each mechanic, clerk, and employee of every kind affiliated with the organization, donate half a day's pay to the Bridgeton Hospital. It is expected that $10,000 will be realized.——The Pennsylvania Legislature has been asked for an appropriation of $60,000 for improvements in the Allegheny General Hospital.——The new Gouverneur Hospital, New York City, was formally opened on January 5th. The new building has accommodations for 115 patients.——The sum of $40,000 has been collected and $9,000 additional has been subscribed toward the erection of a new Jewish hospital building at Jefferson and Cherry streets, New York City. Beth Israel Hospital Association has the matter in hand, and proposes to expend $75,000 for the ground and $115,250 for the structure to be erected on it.——The Lowell General Hospital has received a legacy of $5,000 from the late Julia A. Simpson. A new building is to be erected, the site having already been secured.——The Presbyterian Hospital and St. Luke's Hospital, New York City, have each received a legacy of $59,140 from the estate of the late James D. Sarven, and the Tarrytown hospital has received $5,000 from the same source.

Bellevue Hospital Investigation.—The special committees of the Bellevue Hospital Medical Board appointed to aid John W. Keller, Commissioner of Charities, in his investigation of the affairs of the hospital, met recently. It was the understanding previous to the meeting that the committee was to take up the case of Dr. Moore, who had been in charge of the insane pavilion and had been suspended by Mr. Keller, but after the meeting, which lasted nearly three hours, it was said that the case of Dr. Moore had not been discussed. Members of the committee at the meeting were: Dr. Alexander Lambert, Dr. A. A. Smith, Dr. William M. Polk and Dr. George B. Fowler. The Grand Jury is also continuing its investigation into the abuses at Bellevue Hospital. The inquisition will seek for evidence that will fix the responsibility for injuries inflicted upon inmates of the insane pavilion. It was shown by the records of the Ward's Island Asylum that of 700 insane patients received from Bellevue during 1900, 260 were received with scars or wounds. Commissioner Keller holds that this record is not conclusive proof of cruelty at the insane pavilion. John P. Faure, one of the commissioners of charities under Mayor Strong's administration, came to the rescue of Dr. Allen Fitch, examiner in lunacy at the insane pavilion of Bellevue Hospital, who is under charges of having exacted excessive fees for the examination of patients in the insane pavilion who were to be committed to private sanitariums. Mr. Faure called upon Commissioner of Charities Keller and told him that it was by his authority that Dr. Fitch and the other examiner had charged $50 for examinations under the rule which provided that they should charge not more than $25. Commissioner Keller has arranged with the State Commission in Lunacy to have the alien and non-resident patients in the insane pavilion taken to Ward's Island and held there in the State Hospital until they can be sent to their homes. The trial of the three nurses, Davis, Dean and Marshall, who are under indictment for manslaughter in the first degree for having caused the death of Louis H. Hilliard in the insane pavilion, begins on January 21st. Dr. John W. Moore resumed duty at the hospital on Wednesday, but no information regarding the charges under which he was suspended has been made public. The committee of the medical board submitted its report on the results of the investigation to the board on Wednesday, which approved the report and transmitted it to the commissioner. The report embraces recommendations for a set of regulations to govern the institution which will definitely fix the responsibility in each case so that in case of any abuse the proper person can be held to individual responsibility.

Births, Marriages and Deaths.

Married.

Dennis—Ware.—In Fort Monroe, Virginia, on Monday, January 7th, Dr. Benjamin Dennis, United States Army, and Miss Adelaide Ware.

Haines—Brown.—In New York, on Wednesday, January 9th, Dr. William Hoggan Haines, of Pittsburgh, and Miss Harriet Estelle Brown.

Keenan—Campbell.—In Brooklyn, on Wednesday, January 9th, Dr. Henry C. Keenan and Miss Helen J. Campbell.

Knapp—Spengeman.—In Hackensack, N. J., on Thursday, January 3d, Dr. Louis P. Knapp and Miss E. Spengeman.

Lynch—Haulenbeek.—In New York, on Tuesday, January 1st, Dr. Jerome Morley Lynch, of London, England, and Miss Harriet Louise Haulenbeek.

Rich—Yellott.—In Towson, Maryland, on Tuesday, January 1st, Dr. Frank Rogers Rich, of Georgetown, District of Columbia, and Miss Frances Louise Yellott.

Smith—Elliott.—In Towson, Maryland, on Tuesday, January 8th, Dr. Robert Percy Smith, of Sunnybrook, Baltimore County, and Miss Martha B. Elliott.

Stewart—Fletcher.—In Mount Clemens, Michigan, on Thursday, January 3d, Dr. Duffield Stewart, of Detroit, and Mrs. Katharine Fletcher.

Thomas—Chadwick.—In Boston, on Saturday, January 5th, Mr. Douglas H. Thomas, Jr., and Miss Bessie Lyman Chadwick, daughter of Dr. James R. Chadwick.

Died.

Bohannan.—In Louisville, Kentucky, on Thursday, January 7th, Dr. Thomas Bohannan, in the eighty-fifth year of his age.

Borden.—In Stamford, Connecticut, on Wednesday, January 9th, Dr. Charles B. Borden, in the fiftieth year of his age.

Carr.—In Rochester, on Tuesday, January 8th, Dr. Allen B. Carr, in the forty-eighth year of his age.

Claude.—In Annapolis, Maryland, on Thursday, January 10th, Dr. Abram Claude, aged eighty-two years.

Connolly.—In Baltimore, on Wednesday, January 9th, Dr. Francis Grafton Connolly, in the eighty-first year of his age.

Dennis.—In Kansas City, Missouri, on Saturday, January 5th, Dr. Robert Dennis, United States Volunteers, in the twenty-fourth year of his age.

Dodge.—In Chicago, on Saturday, January 12th, Dr. William Campbell Dodge, in the fifty-eighth year of his age.

Garvin.—In New York, on Friday, January 11th, Dr. Joseph A. Garvin, aged twenty-nine years.

Harris.—In Washington, on Tuesday, January 8th, Dr. Charles Morris Bainbridge Harris, aged seventy-three years.

Johnston.—In Allegheny, Pennsylvania, on Tuesday, January 1st, Dr. Edward Boggs Johnston, in the thirtieth year of his age.

Kress.—In Johnstown, N. Y., on Tuesday, January 8th, Dr. E. H. Kress, aged twenty-seven years.

Lee.—In Brooklyn, on Tuesday, January 8th, Dr. Lucius J. W. Lee, in the sixty-fifth year of his age.

Pardee.—In New York, on Friday, January 11th, Dr. Edward L. Pardee, in the fifty-eighth year of his age.

Porter.—In Redlands, California, on Sunday, January 6th, Dr. Alexander Shaw Porter, United States Army, retired, formerly of Lonaconing, Maryland, aged thirty-three years.

Smith.—In Manila, Philippine Islands, on Tuesday, January 8th, Dr. Louis P. Smith, United States Army, in the thirtieth year of his age.

Truxillo.—In Assumption Parish, Louisiana, on Monday, January 7th, Dr. Robert A. Truxillo.

Wheeler.—In New York, on Thursday, January 10th, Dr. Thomas Brown Wheeler, of Montreal, aged sixty-five years.

Pith of Current Literature.

Philadelphia Medical Journal, January 12, 1901.

A Case of Urethrorectal Fistula Cured after a Third Operation. By Dr. Orville Horwitz.

Fallacies Concerning the Menopause. By Dr. George Erety Shoemaker.—For a period of twenty-five years in a woman's life, *i. e.,* from thirty-five to sixty years of age, it would seem that the "change of life" is popularly supposed to cover every pelvic or abdominal symptom. The author believes that the prevalent large fatality from cancer is due to this state of affairs, rather than to any other one cause. The menopause is not a disease and is not attended by disease. Owing to the prevalent idea that hæmorrhage is to be expected, excessive flowing is allowed to go on for a very long time without the patient's consulting a physician. Methodical questions on this point will reveal definitely whether the patient is bleeding too much. Another fallacy is that, with fibroid tumors of the uterus which are growing or causing disturbance, the patient will do well to wait for the menopause. With the present low mortality, the question of operative intervention stands on a different basis. The hope that the menopause will cure the disease is in itself fallacious, and the author fails to recall a case of uterine fibroid which gave trouble during menstrual life and subsided after the menopause.

Wound of the Trachea, with Suture and Union by First Intention. By Dr. E. S. Goodhue.

Leukæmia and Splenic Pseudoleukæmia. By Dr. Everett G. Brown.—The author presents two cases of the more common form of leukæmia, known as the splenomyelogenous variety, and a third case of the much rarer and very interesting form of disease known as splenic pseudoleukæmia, or splenic anæmia. In making a diagnosis of *true* leukæmia the blood examination tells everything, while in the *pseudo*-leukæmias it furnishes only negative evidence, for, as yet, we have found no distinctive quantitative or qualitative change in either the white or red cells.

Suggestions on the Treatment of Whooping-cough. By Dr. H. F. Thompson.

Re-expansion of the Uterus in Labor. By Dr. D. Benjamin.—The author has come to the conclusion that the parturient womb during any stage of labor and for a few hours thereafter can be expanded to about the same size as it had when labor began. If this is so, an appreciation of the importance and truth of the foregoing proposition enables us to open a very valuable field of practice, and to introduce a number of exceedingly valuable and important procedures or operations based on it.

The Disinfection of Infected Typhoid Urines. By Dr. Norman B. Gwyn.

Administrative Control of Tuberculosis. By Dr. Collins H. Johnston.—The author has written an interesting and instructive article on this subject. The most important sanitary problem of to-day is that of the prophylaxis of pulmonary tuberculosis. The public should be *educated* and not *alarmed;* and, for the purpose of doing this in a rational way, the State should insist upon the compulsory notification of every case of tuberculosis within its borders.

Medical News, January 12, 1901.

Splenic Anæmia—Anæmia with Enlargement of the Spleen. By Dr. Aloysius O. J. Kelly.—The occurrence of a symptom-complex, characterized especially by grave and progressive anæmia and enlargement of the spleen, but unassociated with leucocytosis or enlargement of the lymphatic glands, has been recognized for a long time. The author reports a very interesting case in point, singular, however, in that the hæmorrhage was very interesting and from an unusual source—the genitals. The dyspnœa was extreme, and the temperature was very high; usually from 103° F. to 104° F., rarely below 102° F. in the evenings. This disorder generally lasts from six months to two or three years. When there is a slow course, surgical treatment may be undertaken, in properly selected cases, with hope of a successful outcome.

Some Diagnostic Details. By Dr. William Edgar Darnall.—No physician can see too much; observe too carefully. No detail is too trivial. The expression of the face and the quick glance of the eye often speak volumes. The opium fiend, the morphinomaniac, and the alcoholic, betray their weaknesses in their expressions; while the careworn, anxious look of the mother, bearing the burden of domestic duty in spite of ovarian and uterine troubles, is familiar. The tone and expression of the voice are important. This tone language determines, in the infant, whether its cry is the cry of anger, of griping pain, or the fretting of general discomfort. The complexion should not go unnoticed. The breathing and position of the patient may be indicative, while the odor is prominent in many diseases. A correct appreciation of temperament may be a very valuable thing in treatment as well as in diagnosis. These details will well repay the close and careful observation given to their study.

On Gonorrhœal Cystitis in the Female. By Dr. F. Bierhoff.—If we use the non-irritant, non-astringent antiseptics, we can achieve the best result by beginning our treatment at the earliest possible moment. Besides the restriction of diet and the use of frequent hot sitz baths, we may begin the use of such remedies in the form of urethral and vesical irrigations, some of the solution being allowed to remain in the bladder each time. The author gives five cases.

Severe Acute Pleurisy, Followed by Phlebitis; Death from Embolism. By Dr. Charles Ross Jackson.—This case is interesting because of (1) the amount of fluid removed from the chest, and manifestly due to acute pleurisy, and (2) the development of a phlebitis after simple pleurisy—a rare occurrence. The patient was also suffering from a large intra-abdominal tumor. In the absence of autopsy, its relation to the phlebitis is purely conjectural, though it is probable that, by its size and pressure, it disturbed the circulation in the leg, and thereby aided in the formation of thrombus.

Case of Dextrocardia. By Dr. Homer M. Thomas.—From the history, and the present physical findings, the author believes that the case he reports is a case of acquired dextrocardia, due to fibroid phthisis and an antecedent attack of pleuropericarditis. Treatment is mainly directed toward the maintenance of the best possible physical condition and the relief of acute symptoms as they may arise.

Boston Medical and Surgical Journal, January 10, 1901.

A Short Account of the Recent International Medical Congress in Paris. By Dr. Henry Barton Jacobs.

The Radical Treatment of Lacrymal Diseases. By Dr. Walter B. Lancaster.—The great majority of cases of epiphora are amenable to the usual conservative treatment, which consists in the use of astringent and anti-

septic collyria, syringing and probing, and occasional treatment of the nasal cavities. As to whether the radical operation should consist in removal of the gland or of the sac or of both, the author favors removal of the sac alone, which removal takes away the source of irritation, and not only does away with the disease of the sac and its dangers, but diminishes materially the flow of tears.

An Operation for Cataract. By Dr. Edward L. Parks.

Remarks upon Spinal Cocainization Suggested by Cases Seen at Tuffier's Clinic in Paris, August, 1900. By Dr. Maurice H. Richardson.—The author witnessed two operations. From one patient were removed two large ovarian cysts; from the other was removed a renal tumor which had filled the left side of the abdomen. These operations were admirably borne, and yet the whole impression was distinctly unfavorable to this method of anæsthesia. The patients appeared in actual danger. The facial expression, the pallor, the pulse, were not unlike those of a patient in deep shock. Such an appearance would, perhaps, be expected after the removal of a renal tumor filling one half of the abdomen, however mild and successful the anæsthetic, but it should not be expected after the removal of uncomplicated ovarian cysts under ether anæsthesia. The author concludes that the advantages of spinal over general anæsthesia, however great they may be under certain circumstances, cannot be demonstrated except by years of observation and by thousands of experiments, and he is convinced that this method is not without serious dangers; time alone will show what and how great these dangers are. At present there is danger from the mere puncture, danger of cardiac depression, and danger of sepsis. And consciousness is a disadvantage instead of an advantage.

The Purulent Rhinitis of Children as a Source of Infection in Cervical Adenitis. By Dr. Carolus M. Cobb.—The author asserts that the plan of treatment usually followed in dealing with cervical adenitis is the merest empiricism, and he enters an earnest plea for the treatment of these cases on the same lines that govern the treatment of adenitis in other parts of the body. The source of infection in cervical adenitis is very probably in close proximity to the glands involved, that is, the mouth, throat, nose, or ear. The percentage of cases which are caused by general systemic infection is not so large as is generally supposed.

Journal of the American Medical Association, January 12, 1901.

The Diagnosis and Treatment of the Prebacillary Stage of Pulmonary Tuberculosis. By Dr. J. M. Anders.—The author refers to that variable period, often of long duration, which precedes the presence of tubercle bacilli in the sputum. The most characteristic grouping of physical signs during the first stage—sometimes present prior to the discovery of tubercle bacilli—may be thus summarized: "Lagging," or defective expansion, as noted on inspection and palpation, a localized increase in the tactile fremitus, enfeeblement of the normal vesicular murmur with (at a later period) prolongation and sharpening of the expiration. There is also a clicking râle, which, though less commonly present, is an almost conclusive indication. A preliminary course of gastric antiseptics and stomachics, coupled with an open-air existence little short of injurious exposure, sometimes stimulates the appetite, which is usually poor or even lost, and increases the digestive power. The patient should not be sent to the seaside during the warm season if cough is present. The author strongly favors a rigid system of feeding, even in the early stages, and he believes that the French method of forced feeding deserves a trial if there is absolute loathing of food. Medicinal agents should be employed in the early stages to increase the bodily resistance by improving the principal nutritive functions. Creosote, in doses that the stomach can tolerate, should be prescribed. Cod-liver oil and the hypophosphites are serviceable in a large proportion of early cases, and the same is true of arsenic, though perhaps in a lesser degree.

The Relative Importance of Valvular and Muscular Lesions in Diseases of the Heart. By Dr. Solomon Solis-Cohen.—As a general rule, the exact site and nature of the valvular lesion are of less importance therapeutically and prognostically than the state of the cardiac muscles. The most important exception to this rule is in the case of excessive mitral stenosis. In many cases in which no evidence of valvular lesion can be detected during life, and in some of which normal valves are demonstrable after death, there exist rational signs of cardiac incompetence which are due to diseases of the cardiac muscle.

A Clinical Study of Myocarditis. By Dr. Louis Faugères Bishop.

A Plea for a More Rational Prognosis in Cardiac Affections. By Dr. J. J. Morrissey.—Murmurs do not invariably mean endocarditis; the occupation, environment, and temperament of the patient are essential elements in the prognosis. When some hypertrophy with no complications is found in a young man, it is probably the result of active exercise, and to inform him that he has heart disease would be to excite, in many cases, needless apprehension. Never hesitate to ask a patient to return for further examination.

Treatment of Prostatic Hypertrophy. By Dr. Parker Syms.—After prostatic hypertrophy is established, nothing can afford permanent relief to the patient except some procedure which will remove the obstruction to the outflow of urine, and the author urges the importance of the early recognition of obstructing prostatic hypertrophy, and insists that these patients should be submitted to a radical operation before the cystitis, prolonged pain, infection, and fatigue have put them in a condition where they are unfit to undergo a surgical operation.

Treatment of Tuberculosis of the Knee Joint. By Dr. Wisner R. Townsend.—The author believes that attention to the general health, proper protection and rest to the joint, the intelligent prevention or correction of deformities, aided by proper surgical procedures, when indicated, will prove that tuberculosis of the knee joint is a disease in which surgeons may accomplish much, and the results will fully justify the expenditure of our best thought and time.

The Education of the Sense of Touch in Feeble-minded Children and its Connection with Manual and Industrial Training. By Fletcher Beach, M.B., F.R.C.P.

Euthanasia—A Medico-legal Study. By Louis J. Rosenberg, LL. B., and Dr. N. E. Aronstam.—After a lengthy consideration, the authors arrive at the conclusion that the practice of euthanasia would, in the long run, cause more harm than good. If the physician does his utmost to alleviate pain and to make the pangs of death as void of agony as possible, he will comply with the highest standard of ethics and will earn the gratitude of humanity.

Removal of a Piece of Steel from the Globe by Electromagnet. By Dr. Walter B. Johnson.

Medical Record, January 12, 1901.

Coffee as a Beverage, and its Frequent Deleterious Effects upon the Nervous System: Acute and Chronic Coffee Poisoning. By Dr. William M. Leszynsky.—In roasted coffee are found caffeine and caffeone, the latter consisting of the volatile substances developed in the process of roasting. While the caffeine exerts the larger part of the physiological action of coffee, the cerebral stimulation and activity produced are thought to be largely due to caffeone. The author believes that it is just as necessary to inquire into the patient's habits in regard to coffee, tea, and cocoa as it is to question him as to his use of alcoholic stimulants. Many over-sensitive people complain that a single cup of coffee at once induces in them a transitory sensation of well-being, increased rapidity of thought, etc., which are soon succeeded by a feeling of apprehension, general tremulousness, and indigestion. If a smaller dose were taken, commensurate with their susceptibility, the secondary objectionable symptoms would often fail to appear. The habitual daily indulgence in coffee, even in moderate quantity, by those who are over-sensitive to its action, invariably leads to persistent functional disorder of the nervous system, as well as to disturbance of digestion, which rapidly subsides when the use of coffee is discontinued. Suitable hydriatic treatment and careful attention to the diet and excretions should be systematically carried out. As a sedative to the nervous system, and also to replace the accustomed stimulation, the author prescribes the following:

℞	Sodium bromide	15 grains;
	Fowler's solution of arsenic	2 minims;
	Compound tincture of gentian	½ drachm;
	Fluid extract of kola	15 minims.
M.		

To be taken in water three times a day. After five or six weeks this is to be discontinued, and tonic pills containing arsenic, quinine, and strychnine, or some similar combination, should be taken daily for several months.

An Improved Method of Performing Suprapubic Cystotomy. By Dr. C. L. Gibson.—As performed by the author, this operation consists in snugly surrounding a tube of suitable calibre by an inverted cone of bladder wall. The ends of the sutures of the second row are left long, and are carried through the abdominal wall, which is closed snugly by sutures through the musculo-aponeurotic layer, only sufficient space being left for the exit of the tube.

Some Remarks on the Modern Surgical and Medical Treatment of Epilepsy. By Dr. L. Pierce Clark.—Idiopathic epileptics with typical *grand-mal* seizures should never be trephined. Those in whom the seizures are of the Jacksonian type should be trephined only when infantile cerebral palsies can be excluded and when the family and personal degeneracy is at a minimum. Traumatic epileptics may be trephined when the injury is definitely proved, stands in direct causal relation, and has existed not more than two years. As to the medical treatment, associated with diet, regular occupation, and personal hygiene, the bromides give the best results in idiopathic epilepsy. Singly or combined, they still remain our chief sedative for the epileptic state. To be effective in chronic and long-standing cases, the bromides should be given in large daily amounts, from 300 to 400 grains if necessary. Hot and cold baths, high enemata, alimentary antisepsis, and massage are absolutely essential to successful bromide medication. When the bromides are contraindicated or cannot be given in large doses, bromine is a worthy substitute. Salt starvation or semi-salt starvation is a great adjuvant to the bromide treatment.

Report of a Case of Primary Glioma of the Optic Nerve. By Dr. Redmond W. Payne.

The Choice of Suture for the Patella. By Dr. Edwin M. Cox.—The author gives three cases illustrative of his belief that the absorbable suture can be used successfully for holding the fragments of a broken patella, and he asserts that the absorbable suture has many advantages over the metallic. A matter of great importance is the application of the plaster-of-Paris splint during the first few weeks, so that moderate pressure shall be exerted above the patella.

Lancet, January 5, 1901.

Clinical Varieties of Bright's Disease. By Dr. J. R. Bradford.—In classifying Bright's disease clinically, we may recognize three forms, namely, the acute, the chronic, and the latent; understanding by the last, the condition in which, notwithstanding the existence of serious renal disease, symptoms of ill health are either absent or very trivial. In making this classification nephritis must be separated and also granular kidney. Although there is a great resemblance in the ætiology and in the morbid anatomy between acute nephritis and acute Bright's disease, yet there are considerable clinical differences. Dropsy is usually absent in acute nephritis, the symptoms being entirely urinary, and the process being developed early in the course of the primary causative affection (scarlet fever, etc.). The mere occurrence of the secretion of a concentrated urine loaded with albumin, and perhaps containing blood, is insufficient for the diagnosis of acute Bright's disease. The matter may be put in a different way by recognizing two varieties of acute Bright's disease; one with dropsy, and the other without.

At the present day the old view, that chronic Bright's disease was generally the sequel of the acute disorder, is no longer held with the tenacity that it formerly was, and it is generally recognized that a great many cases of chronic Bright's disease, if not the majority, are chronic and insidious from the outset. Clinically, two varieties of the chronic form may be recognized. One is a condition in which the patient suffers from dropsy and passes a scanty and highly albuminous urine loaded with casts. The other variety, which is also exceedingly common, is where the patient presents no signs of dropsy and where, notwithstanding the fact that the urine is highly albuminous, the quantity is not greatly diminished and in some cases is considerably increased. The patient complains either of anæmia and weakness, or of circulatory disturbances due to high tension. There may be great emaciation, and pigmentation of the skin is present in some cases. The first form is due to what is called "large, white kidney"; the second to "contracted white kidney." Most cases of "latent" Bright's disease come under the second head; no serious symptoms of ill health are presented until the onset of uræmia.

Uræmia in one or other of its forms may be met with in any destructive disease of the kidney, but the large proportion of cases are associated with the contracted white kidney. It is here not only remarkable for the suddenness of its onset and the violence of its symptoms, but also for its marked fatality. In acute Bright's disease, on the other hand, uræmia is not nearly so fatal. Chronic Bright's disease may not only be chronic from the outset, but also the two varieties of chronic Bright's

disease are not necessarily different stages in one and the same morbid process, but represent rather the different effects of perhaps the same morbid process.

A Series of Cases of Actinomycosis. By R. J. Godlee, F. R. C. S.—The author reports fifteen cases of actinomycosis illustrating most of the commoner and some of the rarer manifestations of the disease. Of these, ten were in men and five in women. The ages varied from nine to forty-five years. In four cases the lungs and pleura were principally affected; in six cases, the liver and pleura; in two cases, the cæcum or appendix; and the rectum, the jaw and the neck in one case each, respectively. Four of the fifteen patients recovered, though one died subsequently of pulmonary tuberculosis. Vigorous treatment with iodide of potassium was tried in several cases, but to no purpose. The author emphasizes the necessity of vigorous surgical treatment, wherever any chance of success is offered. The special points brought out are the following: (1) The probability that this uncommon disease may be mistaken for others of everyday occurrence; (2) the possibility that for long periods, and even after death, no signs of the ray fungus may be present in the discharges or discoverable in the tissues; (3) the characteristic appearances of the abscesses when opened; (4) the possibility of true embolic pyæmia resulting, the secondary abscesses containing the ray fungus; (5) the fact that if the liver or lungs are affected, lateral curvature of the spine is likely to occur, the concavity being toward the affected side.

The After-results in Forty Consecutive Cases of Vaginal Hysterectomy Performed for Cancer of the Uterus. By Dr. A. H. N. Lewers.—The conclusions that appear to follow from the consideration of the facts in this paper are: (1) That in a certain proportion of cases, patients suffering from cancer of the uterus may be relieved by operation for periods of many years—in some cases for so long a time, seven years and upward, that there seems some probability that the relief may be permanent; (2) that the proportion of cases in which this result can be expected must remain very small so long as patients generally only seek advice at a late stage of the disease; and (3) that consequently the great desideratum is early diagnosis.

Improvement in this direction depends to some extent on the better appreciation on the part of women themselves of the early symptoms of the disease, and especially of the significance of bleeding after the menopause, or the bleeding occurring at an earlier time of life between the menstrual periods. Early diagnosis, of course, also depends partly on the profession. Especially important is the general recognition of the gravity of the symptom just mentioned. It is equally important also to bear in mind that patients suffering from cancer of the uterus may, and generally do for a relatively long period, look quite well. They may be well nourished, or not infrequently even excessively fat; and, as regards the aspect of the case, they may appear to be in perfect health.

A Case of Deformity of the Skull Simulating Leontiasis Ossea, Associated with a Condition of Syringomyelia; No Physical Signs of Syringomyelia Present. By Dr. J. S. Collier.—The author reports a case of this affection occurring in a man aged thirty-eight years, which is of peculiar interest as it exemplifies (1) the presence of syringomyelia in the absence of all the usual signs of that condition, and (2) a close simulation, both in signs and symptoms, of leontiasis ossea by a thin deformed skull and meningeal ossification. The patient was very short in stature, and complained of paralysis of the right arm, of fits commencing in the right arm, and of gradually increasing deafness. When four years old he fell twenty feet from a window, striking upon his head. The head was much flattened vertically, and was very broad. It was as if the posterior two thirds of the vertex of the skull had been telescoped into the base by pressure from above, leaving a remarkable calvarial fold along the line of bending. The skull was opened over the arm centre, and the meninges found to be ossified in places. The patient died suddenly about three hours after the operation. At the autopsy a cavity was found in the medulla and spinal cord, attaining its maximum size at the fifth cervical segment. The usual signs of syringomyelia were absent, although the examination of sensibility was not sufficiently thorough to exclude absolutely the presence of some sensory change. Deformities of the skull appear to be rare in cases of syringomyelia, and in most of the recorded cases the deformity has approached to the acromegalous type.

Filariasis and its Consequences in Fiji. By M. I. Finucane, M. R. C. S.—The author describes the operation for elephantiasis of the scrotum as usually performed by him at Suva, Fiji, where filariasis is prevalent among natives and Europeans. The disease is seen in its most virulent form in low-lying, swampy districts. In some provinces it is impossible to find an adult person free from the disease. Cutaneous and deep lymphatic varix and orchitis, lymph scrotum, and elephantiasis, are all to be met with in varying stages of the disease. Chyluria is rare in Fiji. Abscess is the commonest form of the disease, with elephantiasis next in frequency. Quinine is given with good effect in acute filarial attacks and at the same time local remedies are employed.

A Case of Mollities Ossium with Spontaneous Fracture through the Great Trochanter of the Left Femur. By Dr. J. H. Ewart.—The special points of interest in the case here reported are: (1) The duration of the disease (fourteen years) with so little discomfort; (2) the small number of bones affected, viz., the left side of the pelvis, both femurs and the tibiæ; and (3) the age of the patient (sixty-five years), and the fact that callus was thrown out and union occurred in nine weeks.

A Case of Cobra-poisoning Treated with Calmette's Antivenine. By W. Hanna, M. B., and G. Lamb, M. B. —The authors report a case of cobra-poisoning successfully treated with Calmette's antivenomous serum. One of them was bitten while extracting poison from a full-sized cobra. Eighteen cubic centimetres of an old, deteriorated, antivenomous serum were at once injected, followed in three hours and a half by ten cubic centimetres of fresh serum. By that time general symptoms of cobra-poisoning had set in, but they passed away in three hours after the second dose of serum.

The following conclusions are drawn: (1) That great care is required in handling poisonous snakes; (2) that the puncture of a fang of a passive snake is not to be neglected, as a considerable quantity of venom may be forced out by reflex action; (3) that thorough sucking of the wound is of little avail, for the poison lies deep; (4) that it is advisable to keep a stock of fresh serum in all dispensaries.

Membranous Œsophagitis. Expulsion of a Complete Cast of the Œsophagus. By Dr. N. Raw.—The author reports a case of this rare and remarkable affection occurring in a man aged forty-six years. He had been a drinker of neat whiskey for several years, which invariably caused a burning sensation in his throat and down the line of his œsophagus. During the last six

months he had had increasing difficulty in swallowing solids, and on admission could only swallow fluids. But he could and did still drink his usual amount of neat whiskey. Six days after admission, after a violent fit of coughing, he vomited a complete cast of his œsophagus, eight inches and a half long. It was foul-smelling and of a dirty greenish appearance. Later, the operation of gastrostomy was performed, and the patient was fed *per rectum,* but he died from asthenia six days later. Microscopical examination showed that the cast was a complete slough of the inner layers of the œsophagus as far as the muscularis externa. This is suggestive of a submucous dissecting cellulitis leading to complete separation of the inner coats of the gullet.

British Medical Journal, January 5, 1901.

Leucocythæmia. By Dr. R. Saundby.—The author's article is based upon the study of six cases of leucocythæmia, admitted to the General Hospital, Birmingham. He reviews our knowledge of the morbid anatomy of the disease, and analyzes the symptoms, paying special attention to the condition of the blood. The treatment should be designed to place the patient under the most favorable hygienic conditions, in a healthy, bracing climate on a dry soil, with good air, good food, and favorable surroundings; and he should, if possible, be free from all sources of worry or mental emotion. The most valuable drug is arsenic, the administration of which should be begun with small doses and gradually increased. Splenectomy is hardly justified from our present pathological standpoint as a rational proceeding; out of twenty-four operations, only one resulted in recovery.

Acute Dilatation of the Heart in Diphtheria, Influenza, and Rheumatic Fever. By Dr. D. B. Lees.—In fatal cases of diphtheria the cardiac muscle is often much degenerated, and the conclusion is irresistible that it must be more or less degenerated in many of the cases that recover. Sudden death from cardiac syncope often occurs after diphtheria; the author cites seven such cases occurring in his own practice. The clinical indications of such degeneration which should be sought for are these: (1) Feebleness of the pulse wave; (2) feebleness and diffusion of the cardiac impulse; (3) extension of the cardiac dulness to the left; (4) feebleness of the first sound at the apex, with accentuation of the pulmonary second sound; (5) marked accentuation of the aortic second sound without increased tension of the pulse.

Alterations in the normal sounds of the heart may be vastly more important than a murmur. Percussion of the heart is often of the greatest value in determining the presence of dilatation. In diphtheria, if the dulness extends two finger-breadths to the left of the nipple line, there is urgent peril and the child must not be allowed to sit up in bed for any reason whatsoever. The increase in dulness is sometimes very rapid. An extension of one finger's breadth may occur within a few hours. This acute dilatation is usually accompanied by vomiting; this symptom is an important danger signal. When the shock of the acute dilatation has passed off, the patients may look and feel well; yet their lives are in urgent danger. The dilatation may occur at an early period of the disease or even after several weeks. So that a careful watch should be kept on the condition of a child's heart for at least two months after a severe attack of diphtheria. The virulence of diphtheria is more intense in children than in adults. In influenza the reverse obtains; rapid dilatation of the heart frequently occurs within a day or two after the onset of the disease, and it sometimes causes fatal syncope. It is certain that the dilatation caused by influenza may remain as a permanent dilatation, and may give rise to very serious symptoms. Thrombosis is also of frequent occurrence after influenza, probably due, in part at least, to the enfeeblement of the heart. Minor degrees of dilatation may cause merely a feeling of incapacity for exertion. Active exertion may do such a patient much harm, and any prolonged strain may be followed by an acute breakdown. In rheumatic fever, even in the most subacute attacks, acute cardiac dilatation seems to be invariably present. In later attacks also an acute dilatation is usually present, for it may be observed that the dulness of the left ventricle diminishes as the attack subsides. Yet such dilatation is far less dangerous in rheumatism than in diphtheria or influenza. This difference must be produced by a different effect of the several toxines upon the cardiac muscle. In rheumatism, as in diphtheria, a sudden vomiting is often the danger signal. The slightest suspicion of rheumatism in a child should lead to careful and repeated examination of the heart. Fresh rheumatism often kills by breaking down compensation. Since cardiac dilatation in influenza and diphtheria is due to the toxines of the specific microbes of those respective diseases, the occurrence so regularly of cardiac dilatation in rheumatism points strongly to its being also of microbic origin.

Epidemic Arsenical Poisoning among Beer Drinkers. By Dr. N. Raw, Dr. F. H. Barendt and Dr. W. B. Warrington.—The severe epidemic of arsenical poisoning in Liverpool is subsiding. The contamination of the beer commenced about June, and remained fairly constant until November, when a further increased contamination took place, causing more acute symptoms. The skin affections fall into two classes, those resulting from a sudden debauch, and those due to the daily and not immoderate use of the poisoned beer. The interpretation of the pigmentation is important, and there is no doubt that many cases have been diagnosticated wrongly as morbus Addisonii, attributed to phtheiriasis, absence of cleanliness, stress or strain of existence. The most characteristic skin disturbance is the pigmentation. The sensory disorders are brought obtrusively into notice. These are: (1) Numbness and tingling, coming on rapidly in both hands and feet; (2) pain on pressing the soles of the feet; (3) erythromelalgia; (4) absence of objective impairment of sensation; (5) in the early cases the knee jerk is often present and perhaps unusually brisk; (6) ataxia has not been noted.

Clinical and Pathological Notes on a Case of Human Actinomycosis. By H. E. L. Heedale, M. B.—The author reports a case of fatal actinomycosis occurring in a man aged twenty-three years. He complained of a large, inflammatory swelling around the neck. This abscess was opened, and the pus and scrapings of the abscess cavity wall examined for actinomyces granules, but none were found. Several weeks later, another abscess formed in front and the patient developed symptoms of pulmonary tuberculosis. Abscesses continued to form at intervals, and the patient finally died of advanced amyloid disease. Postmortem histological examination of the skin in the neighborhood of the abscesses showed the presence of threads and masses of actinomyces in the subcutaneous layer. The lungs showed a double infection with tuberculosis and actinomycosis. The author looks on actinomycosis as a streptothrix infection.

Note on the Dialysis of the Toxines through Collodion Walls. By Dr. M. A. Ruffer and Dr. M. Crendiropoulo.—The authors have studied the dialyses of the

toxines of the *Bacillus pyocyaneus* through collodion walls, and find that they dialyse, but not in their entirety. The time they take in dialysing is comparatively long, and their pathogenic properties vary according to the length of the dialysis. It is extremely probable that the immunizing substances are among the first to dialyse. Advantage might possibly be taken of this property in the manufacturing of vaccines.

A Case of Renal Colic Attended by the Passage of Casts of the Ureter (Ureteritis Membranacea). By Dr. J. A. H. White.—The author reports the case of a woman, aged sixty years, suffering from repeated attacks of renal colic where the urine passed during the paroxysms contained membranous casts of the ureters, semi-transparent, hollow, cylindrical bodies of clear mucus, held together by a few threads of fibrin. From their flimsiness it is unlikely that they could cause any obstruction to speak of. The author thinks they are due to the irritation produced by an encysted renal calculus.

A Case in which Movable Kidney Produced the Usual Symptoms of Hepatic Colic. By Dr. M. Lawrie. —The author reports the case of a woman, aged thirty-nine years, who for ten years had suffered from pain in the region of the gall-bladder and liver. The pain corresponded in every way to that accompanying biliary colic, and the attacks were always associated with fever. As the right kidney was freely movable, a nephrorrhaphy was performed, the kidney being stitched to the deep muscles of the back.

The operation was successful and was immediately followed by the disappearance of all the troublesome symptoms.

The Sex of Patients Suffering from Gastric Ulcer. By R. de S. Stawell, M. B.—In 7,700 postmortem examinations, of which full notes were preserved, the author found the presence of gastric ulcer recorded in 96; 55 men and 41 women. While during the corresponding period 30,500 men and 30,000 women were admitted to the hospital, yet many more male than female bodies were examined postmortem. During life the cases diagnosticated as gastric ulcer in men as compared with women during the same period, were as one to four. The great majority of perforations in women occurring between the ages of eighteen and twenty-eight years, while in men there is a much more even distribution over the decades of life, makes the diagnosis easier in the case of the former.

Presse médicale, December 15, 1900.

Affections of the Vascular Apparatus.—M. Hutinel concludes his interesting historical essay on the development of the pathology and diagnosis of the diseases of the blood-vessels.

Localization of Leprosy Bacilli in Various Organs. —M. Jeanselme, in concluding his elaborate paper, says that the bacteriological diagnosis of every case of leprosy should always be made in the interest of the community as well as of the patient. The nasal mucus may contain the bacilli in the early stages of the tubercular or maculo-anæsthetic forms of the disease. The saliva, the tears or other secretions may show them. The semen, the vaginal secretion, the fæces even, may be virulent evokers of the disease, but the urine is free from lepra bacilli. Prophylaxis then consists in rigid disinfection of the nose and skin of leprous persons, and the perfect occlusion of all ulcerations. All objects of common usage, such as the clothing, should also be rigorously cleansed.

December 19, 1900.

Acute Appendicitis.—M. Paul Reynier, in a polemic article, attacks the operative desire and statistics of M. Routier, and advocates without question an armed expectancy and treatment by ice. The recovery is very slow and prolonged over several months, the author admits, but he thinks it more certain in every case. [American surgeons will be interested in reading the details of this paper.]

Dermoid Polyps of the Pharynx. By M. V. Texier.

Progrès médical, December 15, 1900.

Larvated Epilepsy.—M. Ardin-Delteil goes into the history of larvated epilepsy. He defines it as a form of epilepsy differing from the ordinary disease by the manifestation of strange, curious, and various, nosological features. There may be psychical equivalents in the form of incoordinated movements, of coordinated movements or manifesting themselves as paralyses, vaso-motor and sensory equivalents may predominate in the skin, the viscera, or the circulatory apparatus. There may be vesical or rectal incontinence, seminal ejaculation, migraine or "epileptiform neuralgia," as equivalents for the true epileptic seizure. [The article goes into minute detail in the description of each variety].

Lyon médical, December 16, 1900.

Contagion from Vegetations on Cow's Nipples.—M. P. Aubert relates a case in which a woman who milked a cow with verrucosities on her nipples, developed vegetations simulating venereal warts in the anoperineal regions. Her husband became infected similarly from his wife, and the son had the same eruption upon his hands from milking the same cow. The author raises the question of the possibility of infection of the milk from this source.

Intestinal Ulceration in Arteriosclerosis (*concluded*).—M. F. Monisset says that intestinal ulceration in persons suffering from arteriosclerosis is usually located in the large intestine. He thinks these lesions are more frequent than is ordinarily supposed, and are due to the changes in the intestinal blood-vessels sufficient to evoke ulceration, plus an increased blood-pressure.

Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten, December 15, 1900.

Ubiquity of Water Vibrios Similar to those of Cholera.—Dr. J. H. F. Kohlbrugge describes a number of vibrios found in water, with cultural peculiarities similar to cholera vibrios. They gave evidence of being different varieties of the same organism. The differences between the cholera and other vibrios can be definitely settled only by means of Pfeiffer's serum reaction during an epidemic.

Bacteriology of Ozæna. By Dr. Walther Stein. (*Continued article*).

Bacillus Anthracis in the Peritonæum of the Guinea-pig.—Dr. J. W. van Leent concludes from his experiments that anthrax bacilli perish in the peritoneal cavity of guinea-pigs, even when introduced in enormous quantities and when the animal dies of the subcutaneous injection of the same germ. While the absorption of the bacilli is very dangerous to the animal, the absorption of the fluid from the peritonæum will be beneficial. Foreign bodies, or too much fluid in the cavity, may interfere with the bactericidal action of the peritonæum

Phagocytosis of the endothelial cells, especially of the omentum, plays an important bactericidal rôle.

Distoma Philodryadum West. By Dr. M. Lühe.

Bacteria as Favorable Cultural Agents. By Dr. Arnold Cantani, Jr.

A New Test-tube Stand for Cultures. By Professor Petri.

Berliner klinische Wochenschrift, December 17, 1900.

Amyloid Degeneration of the Kidneys (*continued article*). By Dr. M. Litten.

Fermentation and Digestive Tests of the Fæces. By Professor A. Schmidt.

Oxidation of Urinary Elements. By Dr. Alfred Jolles.

Pressure Irrigation in Acute and Chronic Gonorrhœa.—Dr. Robert Kutner describes an apparatus of his device for irrigating the urethra under pressure in cases of acute and chronic gonorrhœa. He says his results have been much more satisfactory since he has used this apparatus. The method is based upon the principle of dilating the urethra with a fluid medium to secure the destruction of the gonorrhœal bacilli.

Wiener klinische Wochenschrift, December 13, 1900.

Influence of the Röntgen Rays upon the Skin.—Dr. Robert Kienböck has written an elaborate essay upon this topic. He concludes that certain chemical changes result in the skin from the use of the rays. A "Röntgen-dermatitis" may ensue which may take on an acute or chronic course and varying degrees of severity. Alopecia, desquamation of the horny layer and the nails, hyperæmia and swelling of the skin, may be the only phenomena; or vesicular formation followed by exfoliation and serous or purulent exudation may appear. A dry "burn" may result from the use of the rays. Restoration of the affected skin begins at the periphery. Different parts of the body seem to be differently susceptible, and the total time of exposure plays an important rôle. Individuals differ in susceptibility, children and young people reacting more intensely than older persons.

Schleich's Local Anæsthesia.—Dr. Friedrich von Friedländer has had satisfactory results from the use of Schleich's mixtures for local anæsthesia, but he still thinks too large a quantity of cocaine is employed to render the mixtures absolutely safe for all persons. He believes that the field for local anæsthesia is being gradually extended and hopes for the day when, despite its unpleasant features, it will supersede general narcosis.

Aseptic Bougie for the Induction of Labor. By Dr. L. Knapp.

Wiener klinische Rundschau, December 23, 1900.

Questions of Light Therapy (*conclusion*). By Dr. H. Strebel.

Ætiology of Early Ulcerative Syphilides (*continued article*). By Dr. Jaroslav Bukovsky.

Therapeutic Significance of the Hot-air Douche.—Dr. Julian Marcuse prefers this to the hot-air bath, as it does not necessitate the patient's lying still for hours at a time, and permits the action of the hot air on any desired part of the body. The hot-air douche stimulates the skin and the subcutaneous lymph and blood vessels, and, combined with massage, forms a valuable therapeutic measure for gouty, rheumatic and neuralgic affections.

New Magnesium Suture. By Dr. Chlumsky.

Riforma medica, December 4, 5, 6, and 7, 1900.

Echinococcus Cysts of the Kidneys. A Clinical Lecture. By Professor G. Rummo.

The Infantile State and Mitral Stenosis (Infantilismo Mitralico). By Dr. Luigi Ferrannini.—The author calls attention to the fact that in many young persons with mitral stenosis there is a marked deficiency in physical and mental development, and an anachronism between the age and the general condition of body and mind. Thus, young women of twenty or over will look and act like girls of twelve, and young men of the same age will appear like boys at puberty. The signs of puberty are generally delayed in these subjects, and in women with mitral stenosis the menstrual function appears late, while the sexual instinct does not appear in men with this lesion until the age of twenty or twenty-two years. The author has had occasion to observe the anthropologic characteristics of a number of patients with heart disease and has come to the conclusion that there is a dystrophic condition in many cases of mitral stenosis, which causes the patients to remain in the infantile stage of development for many years past the period of puberty. He reports a number of interesting cases to illustrate his contention. In summing up, he says that these patients simply present a discord between their age and their physical and mental make-up. After reviewing the literature of infantilism, he states that, in his opinion, there is in these cases a distinct connection between the infantile state and mitral stenosis. Embryologic researches, especially those published by the Hertwigs, have proved that the vascular and osseous systems are derived from the same embryonal tissue, the mesenchyme. The author has shown in previous studies that congenital mitral stenosis depends upon malformation of the leaflets of the valve. The skeleton and the endocardium are developed from the same embryonal layer and it is possible that a connection exists between mitral and skeletal deficiency of development. The author gives the same argument in support of the connection between psychic deficiency and mitral stenosis. The central nervous system and the endocardium are developed from the same layer in some animals. We must also remember that the genital and nervous systems are developed from the same germinating ovum as the mitral valve, and that there is a possibility of a connection between the deficiency or abnormity of one and the others. He closes by saying that in these cases Nature seems to have fashioned a being proportionate to the work which the heart is able to perform.

December 10, 1900.

Concerning Experimental Tuberculosis of the Suprarenal Capsule. By Dr. Bindo de Vecchi.—The author studies the development of the lesions of Addison's disease experimentally by producing artificial tuberculosis in a series of animals. (*To be continued.*)

December 11, 12, and 13, 1900.

Clinical Researches Concerning Laughter, Weeping and Yawning in Hemiplegics. By Dr. Giovanni Boeri.—The author's conclusions are as follows: 1. The cerebral hemispheres do not take part equally in those acts which are performed simultaneously by both sides of the body. This is seen especially in ordinary respiration, as

well as in accelerated or forced breathing and in such reflexes as coughing, weeping, laughing, and yawning. As a result of cerebral lesions, there is usually a more or less pronounced difference between the motility of the hemiplegic side in the affected half of the body during the aforesaid acts. 2. This difference between the two sides depends both on the defect on the paralyzed side, and upon an excess of motility (as regards the reflexes mentioned), which may happen to be on the affeeted side. Thus it is possible that the movements of respiration, etc., are more marked on the paralyzed side. Hence in coma the fact that one side of the chest is expanded less than the other, does not show which hemisphere is affected.

Gazzetta degli Ospedali e delle Cliniche, November 25, 1900.

Concerning Pseudo-tuberculosis Bacilli in the Sputum of Pulmonary Gangrene. By Dr. Ezio Benvenuti.—The author calls attention to the occurrence of a bacillus in the expectoration of pulmonary gangrene which resembles, both in structure and in staining qualities with the Ziehl-Nielssen method, the germ of tuberculosis. He reports briefly the history of a case in which pseudo-tuberculosis bacilli were found. The autopsy showed no tuberculous lesions, but a focus of pulmonary gangrene. Inoculation of animals with some of the exudate found in the gangrenous focus gave completely negative results, so far as tuberculosis was concerned. A bacillus resembling the germ of tuberculosis in almost all respects, except that it was more resistant to acids and alkalies, was found by Müller in *Phleum pratense*, and in the fæces of cows, goats, and other animals. A similar bacillus was found by Fraenkel and Rabinovitch in a case of pulmonary gangrene. Similar bacilli are also found in butter.

Hæmorrhages in Malaria. By Dr. Lorenzo Bidoli.—The author reports a case of malaria which is noteworthy on account of the irregularity of the paroxysms and on account of the occurrence of hæmorrhages. The case is one of the atypical forms of tropical malaria, of the malignant æstivo-autumnal variety, which tends sometimes to recur at irregular intervals separated by prolonged periods of apyrexia. The hæmorrhages from the stomach and intestines, such as were observed in this case, are not frequent occurrences in malaria, and when they occur they may be regarded as signs of profound systemic infection. The patient whose case is here cited recovered under the vigorous use of quinine and appropriate regimen.

Concerning a Case of Hepatoptosis and Uterine Fibroids. Successful Fixation of the Liver and Hysterectomy. By Dr. Davide Giordano.—The patient was a woman, aged forty-two years, whose father had died of cancer of the rectum. Two years before admission she was seized with epigastric pain, which was so violent that she was confined to bed for two hours. After that she was unable to do her work so well as before, and complained of pains in the epigastrium, and in the region of the transverse and ascending colon. These pains would recur after meals, and continued to reappear at intervals until two months before admission, when vomiting was added to the symptoms. Menorrhagia and metrorrhagia were also present. On examination, a smooth, hard, movable tumor was found in the abdomen, extending from the level of the right iliac spine to a spot two finger-breadths above the umbilicus. This tumor could be pushed under the ribs when the patient was in the recumbent position, and came down to its original position when she stood up. The diagnosis was prolapsed liver. The upper line of dulness was at the eighth rib and the liver dulness was continuous with the tumor. On the anterior wall of the uterus a well-marked, hard nodule, of the size of a hen's egg, was felt on bimanual palpation. The incision was twelve centimetres long and followed the edge of the ribs on the right side. The liver and biliary apparatus were found normal in appearance, but the suspensory ligament was markedly stretched. The umbilical portion of this ligament was cut through, as it impeded reposition of the prolapsed liver. A strong strand of catgut was passed through the xiphoid cartilage on the same side and through the suspensory ligament, where it joined the edge of the liver. The ends of the catgut were secured in a clamp and the suspensory ligament was attached by means of this suture to the rib cartilages along the edge of the thorax. The surface between the sutures was cauterized with crystals of phenol on a probe, and the sutures were drawn and tied. In addition, a suture was passed through the liver at a point over the gall-bladder and tied to the last rib. By this means the liver was supported and the prolapse reduced. Abdominal hysterectomy was performed after closing the first wound. The whole operation lasted thirty-five minutes. The patient made a good recovery and regained her health rapidly.

The Single Circular Incision as a Radical Treatment for Varices and Varicose Ulcers in the Lower Extremities. By Dr. Carlo Mariani.

Functional Apathetic Dementia. By Dr. R. Alberici.

Concerning the Therapeutic Value of the Kola Nut. By Dr. Adolfo Pinaro.

Vratch, November 25, 1900.

Report of the Cases of Typhoid Fever Observed in the City Hospital of Nikolaeff. Feeding in Typhoid Fever. By Dr. E. S. Timen.—A series of statistics concerning the cases observed, and a discussion of the question of diet in typhoid fever. At first the diet of all his patients consisted of milk (about one litre daily), beef broth, and of Stoke's mixture in which the brandy was replaced by Marsala. In addition, the patients received a sufficient amount of sour drinks, tea and water. The author found that the majority of patients, who for the most part were laborers, did not drink more than two or three glasses of milk daily. They complained of a sour taste in the mouth and said that they never drank milk in health, and that the diet was repugnant to them. Many begged to be given other food, as they believed that they would starve in a short time if they were to continue on milk. In a number, milk diet was accompanied by accumulation of gases in the intestines, constipation, or diarrhœa which did not disappear on addition of lime water to the milk. Frequent administration of milk in small quantities may be excellent in private practice, but it is impossible in a hospital in which there is an insufficient number of trained attendants. The author, therefore, added to the diet soft-boiled eggs, crackers, and white bread without crust. If the patients did well under this diet, and if the appetite increased, he added chicken broth and half a chicken, or a meat cutlet. It seems that these additions did not depend on the temperature of the patients, as the author describes a scene where patients ate their meat with good appetite after rising from a prostrated attitude with feverish faces. In some cases the patients at first refused solid food, but the nurse was instructed to insist

on their eating what was offered, and the patients rapidly became accustomed to the change of diet. The only rule he followed was that if the patient's appetite was not aroused in a few days after admission, he was kept on milk, but those who had an appetite from the first, or who acquired one after a few days, received solid food as soon as possible. If a patient who had been on solids complained of abdominal tenderness, or showed distention of the intestines, an enema was given, a cold compress applied to the abdomen, and the diet changed to milk. Solids were resumed on the disappearance of the symptoms. The results of this method are given as follows: The total number of patients on solid food was thirty-two. Of these, fourteen got solids after a few days' milk diet, and eighteen about the third week of the disease, when the general condition was good and when the morning remissions were more marked. All these patients recovered. As regards appetite he concludes that in many patients the desire to eat remains, in some it may be provoked by varying the food according to our own notions, or according to the patient's wishes. In no case was there any unfavorable result as regarded the bowels. In most cases the evacuations became more formed, and no pain was complained of. In one case there was a distinct cessation of the diarrhœa on adoption of solid diet. There were small hæmorrhages in two cases. A relapse occurred in one case. The influence of solid food on temperature was not marked. It appeared as though the evening temperature was a little higher on the day of transition from liquids to solids, but the curve returned to its previous status on the following day.

The Treatment of Simple Fractures. By Dr. I. A. Piletzky.—The method of treatment advocated by this author consists in the application of what he terms an "open splint dressing." This dressing consists of a splint fashioned for each case by filling a gauze bag of such size and shape as to enclose two thirds of the circumference of the limb, and of such a length as to encompass the joints to be immobilized, with flax saturated with plaster of Paris mass. The bag with the contents is applied to the limb, leaving the site of the fracture open, and the mass is allowed to stiffen. A few strokes of the hand with plaster of Paris mass will serve to smooth the outside of the bag and to harden its surface. The advantage of the open method is that the fractured place can be massaged without removing the splint. Massage is begun from the first day. At first the limb is stroked from the periphery to the centre. Then it is rubbed, without avoiding the fractured place. If the skin is injured, the lesions are healed first, of course. After from eight to twelve days, according to the case, the splint is removed and passive motions of the joints adjoining the fracture, together with massage of the whole limb, are employed. After the second week, active motion is begun. As soon as the callus is well marked, the patient is allowed to sit up in bed, the extension, if there has been any, is removed, together with the splint, and later the patient is told to stand and attempt to walk with crutches and finally with a stick. Massage is performed twice daily for ten or fifteen minutes at a time. Early massage removes pain, absorbs hæmorrhages, and relieves contractions of muscles. The author reports eleven cases illustrating the success of this method.

Edinburgh Medical Journal, December, 1900.

The Indications for the Operations of Hysterectomy and Myohysterectomy in Myoma. By Dr. H. McN. Jones.—[This article is the sixth of a series entitled Points of Practical Interest in Surgical Gynæcology.] The author briefly surveys the present attitude of gynæcological surgeons with regard to the operations of supravaginal myohysterectomy and hysterectomy. After touching on the biological, morphological, and histological grounds connected with the tumor itself and its immediate surroundings, which may impel the performance of hysterectomy, he takes up the associated clinical complications. Hæmorrhage can no longer be regarded as the one great indication for interference with a myomatous tumor; in a large proportion of cases the bleeding is slight or entirely absent. Marked mental derangement associated with the presence of an abdominal tumor, is an indication for operation. In many such cases the dementia is entirely relieved by the removal of the tumor. Various degrees of peritonitis, associated with acute exacerbation in size of the tumor, may call for interference. In myoma complicating pregnancy, when the tumor is so situated that its removal offers the best chance of saving both mother and child, while noninterference endangers the lives of both, operation should be attempted. Otherwise, labor must be awaited and Cæsarean section, followed by hysterectomy, be performed. The adhesions, pelvic and extrapelvic, which form between the tumor and the omentum, intestine, bladder and rectum, also form serious complications. Too great importance has been attached to the results of the menopause on a myoma. There is no security that after the menopause a myoma will cease to grow or escape suppurative or necrobiotic degeneration. A table is given in which are classified the principal dangers to life which may arise from the presence of a myoma. As serious contraindications to an operation must be included grave degenerative changes in the kidney or the other abdominal viscera, or profound anæmia associated with organic cardiac conditions. A tumor in which there is no evidence of any serious degenerative change, which is not complicated by gross changes in the adnexa, which is causing no serious obstruction to the bowel or displacement of the bladder with incontinence or distress, where neither peritoneal nor ascitic complications are present, and the rapidity or the size of the growth has not to be considered, will certainly not demand interference.

The General Care of the Skin, Considered from the Point of View of Prophylaxis. By Dr. W. A. Jamieson.—The author discusses the management of the skin and its appendages during health. One essential element in the due care of the skin is not to remove prematurely, or to too great an extent, much of the outer epidermis. The author does not approve of the indiscriminate use of soap; moderate friction is far better, and the loofah forms the best flesh brush. He is a warm advocate of cold baths, where not contraindicated by age or weakness. Hot baths should not be indulged in frequently. Distilled or rain water is by far the best for toilet purposes; hard water acts deleteriously to the skin, yet artificial additions to water for the purpose of softening it, are apt to be harmful. The article closes with some general remarks on the toilet of the hair and nails.

Dental Caries as a Factor of Disease. By Dr. J. R. Leesown.—Hundreds and thousands of people are going about with rotten teeth, carrying with them so many small cesspools in their mouths, filled with fœtid abominations of stinking food *débris,* with its teeming population of micro-organisms, and the resulting toxines as concomitants, and daily swallowing these putrefactions, and absorbing the pus. Many cases of septic disease are due to dental caries, and to that alone. Its effects may

be manifested in multifarious ways. The author reports a case of persistent spasm of the right hand, of two years' duration, the diagnosis having been tetany or hysteria. Finally, two septic molar teeth were observed and removed, with the result that the spasm disappeared, not to return. Many of the so-called "scrofulous" scars of the neck have had their starting-point in carious teeth. The usual complaint by patients that fresh air will give them face-ache, is in most cases due to uncared-for carious teeth. Many laryngeal and pharyngeal troubles have their origin in the same cause. A man with a decayed molar hardly ever has a clean tongue. Insufficient mastication of food is another effect of dental caries. Teeth should be cleaned twice a day and always the last thing at night. A toothbrush should be considered as a conglomeration of toothpicks, and used accordingly. Children should never be allowed sweets or biscuits on going to bed. And the teeth should be inspected by a dentist from time to time as a matter of routine.

Observations Relating to the Symptoms and Effects of Oxygen Inhalation. By G. L. du Toit.—The author reviews the action of oxygen on the various systems of the body, on the temperature, on micro-organisms, and on unhealthy tissues. In cases of head-injury or favus, the gas is applied by a tightly fitting cap, connected with the oxygen bag. In abrasions of the face or lupus, the gas is to be applied by specially constructed masks, with a window of glass through which the patient can see. In wounds or ulcers of the thorax, the same kind of mask is to be used. In ozæna, the patient receives the gas through one nostril, the other being plugged with cotton-wool, and he breathes through the mouth, to avoid inhaling the gas. The masks used should not be airtight; ventilation is necessary. The earlier oxygen gas is administered in pneumonia, the better the prognosis for the ultimate cure of the patient. The author has used oxygen with special success in the treatment of wounds and ulcers, acute and chronic. It acts beneficially in alleviating pain and throbbing, it dissipates the heavy, sickly odor of the ulcer, and acts as a powerful stimulating agent without causing irritation of the tissues. The author cites a case of chronic syphilitic ulcer in which oxygen was used with the greatest benefit.

Notes on the Surgery of Joints. By A. Neve, F. R. C. S. Edin.—The author's article is based on a study of 540 joint operations performed at the Kashmir Mission Hospital during the past ten years. The relative infrequency of amputation is noticeable, there being only twenty-eight amputations performed, as compared with 201 conservative operations. The indications for amputation are: (1) great weakness due to suppuration or constitutional disease, where the risk from excision would be too great; (2) where the disease is too extensive for excision; (3) where more than one large joint of a limb is seriously diseased; (4) where the limb, if saved, would be, not only useless, but a hindrance; (5) in patients over fifty years of age, with septic arthritis.

Excision is indicated: (1) in ankylosis with bad position; (2) in traumatic purulent arthritis, where the bones are injured; (3) in tuberculosis of the articular surfaces in adults; (4) in septic sinuses, septic arthritis, and bone disease, where the patient is not too weakened.

Arthrectomy is appropriate for: (1) the same class of cases in an earlier stage; (2) growing children; (3) purulent synovitis resisting milder measures, and (4) chronic tuberculous disease resisting milder measures.

Whatever operation is performed, the surgeon should extirpate every atom of local disease.

The total mortality of the author's cases was 1.5 per cent.; that of the major cases only, 4 per cent.

Archives of Pædiatrics, December, 1900.

Fœtal and Infantile Typhoid. By Dr. John Lovett Morse.—The typhoid bacillus can traverse the abnormal, and possibly the normal, placenta from mother to fœtus. Other organisms may pass in the same way. Infection of the fœtus results. Because of the direct entrance of the bacilli into the circulation, intrauterine typhoid is from the first a general septicæmia. For this reason, and possibly also because the intestines are not performing their functions, the classical lesions are wanting in intrauterine typhoid. The fœtus usually dies *in utero* or at birth as the result of the typhoid infection. If born alive, death occurs in a few days without definite symptoms. It is possible that the fœtus may pass through the infection *in utero* and be born alive and well. There is, however, no proof that this happens. Infection does not always occur. The pregnant woman does not necessarily transmit the disease to her child.

As to the serum reaction: It occurs in infantile, as in adult, typhoid. There are no data as to whether or not it occurs in fœtal typhoid. The agglutinating power may or may not be present in the blood of infants born of women with typhoid. If present, it is transmitted from the mother to the child through the placenta. It is possible, however, that it may be formed in the child through toxines transmitted through the placenta. The agglutinating principle can pass through the normal placenta. Part of it, however, is arrested in the passage. Whether or not it is transmitted, seems to depend on the strength of the agglutinating power in the maternal blood, and the length of time during which the placenta is exposed to it. It may be transmitted to the nursling through the milk. It may appear in the infant's blood in less than twenty-four hours. It lasts but a few days after the cessation of nursing. It is always weaker in the milk than in the maternal blood and always weaker in the infant's blood than in the milk. This weakening of the agglutinating power is due to the obstruction to its passage in the mammary gland and in the nursling's digestive tract. The chief factor governing transmission is the intensity of the power in the maternal blood. A subordinate but important factor is some unknown condition in the digestive tract. If the power in the maternal blood is weak and the obstacles great, it may not be transmitted.

Pulmonary Tuberculosis in Infants and Children. By Dr. Frank Parsons Norbury.—Referring to the children of tuberculous parents, the author insists upon the importance of their receiving proper care from the date of birth. Artificial feeding should be used; the infant should not sleep in the room with its mother; kissing should be prohibited, and the child should live in the open air as much as possible. As to drugs: creosote and creosotal in milk, are of value. The simple phosphoric acid in a vehicle of elixir of pepsin, improves the appetite and assists digestion. Paregoric, heroine, one twenty-fifth of a grain, or codeine, one tenth of a grain, may be used for troublesome and persistent cough, combined with some suitable cough mixture. Fever is combated by baths or some of the coal-tar preparations administered with caution.

A Report of One Hundred and Eighty-seven Cases of Measles with Reference to Koplik's Spots and their Value in Diagnosis. By Dr. John J. Cotter.—The results of the author's observations may be briefly indicated by this table:

Koplik's spots, positive	169 cases.
Koplik's spots, negative	8 cases.
Koplik's spots, doubtful	10 cases.
Total	187 cases.

Poorly nourished children of the type known as marantic, those affected with rickets, or with the taint of hereditary or acquired syphilis, do not present the spots so clearly as their more vigorous companions, and sometimes the spots are absent, while catarrhal symptoms, fever, skin eruptions, etc., may be presented classically and give accurate data for absolute diagnosis. We have yet to know that any disease other than measles presents these spots, and their value in diagnosis should meet with the universal appreciation which their importance demands.

Poisoning by Vapo-cresolene. By Dr. S. S. Adams.—In two cases in the author's experience, most alarming symptoms were found to be due to the presence of a vapo-cresolene lamp. There seems to be no doubt as to the accuracy of the diagnosis, and the author reports these cases because vapo-cresolene is to be found in a great many houses in which there is a child with a cough.

Fatal Intestinal Hæmorrhage without Known Cause in an Infant of Five Months. By Dr. Maurice Ostheimer.

Letters to the Editor.

THE ANTITOXINE TREATMENT OF DIPHTHERIA.

NEWARK, DELAWARE, *January 3, 1901.*

To the Editor of the New York Medical Journal:

SIR: With the last note of Dr. Herman I considered the controversy closed. My confidence in the sound judgment of the general practitioner left no doubt as to the crushing defeat of the "antis" represented by the doctor. Moreover, time alone will show whether the "bell-wethers of bacteriology" or the antediluvian empirics "lead (the profession) into a mire of mistaken conjecture." The purpose of this correspondence is to acquaint the reader who has been patient enough to follow our controversy with some additional facts brought out by a recent contribution by Dr. Zansajlow (Russia) to the *Bolnitshnaja Gazeta Botkina,* Vol. xi, No. 47. During a period of eight years, 1891-1899, there occurred among the employees (and their families) of the Ekateriuin Railroad 1,114 cases of diphtheria. The patients were mostly treated at their homes, and the diagnosis was generally made from clinical symptoms alone. Only in a few doubtful cases recourse was had to a bacteriological examination. Prior to 1895, the 455 cases were treated by local antiseptics, stimulants, and tonics. After 1895 antitoxine was introduced, the antiseptic gargles and stimulants being in addition resorted to in the majority of cases. The total number of patients from 1895 to 1899 was 659. The mortality prior to 1895 ranged between 25 and 32 per cent. With the introduction of antitoxine the mortality at once began to decline, reaching as low as *2 per cent.* in 1899 (156 cases). "This decrease of mortality," the author asserts, "is not due, as some contend, to the inclusion of non-diphtheritic cases." That these remarkable results can only be credited to the use of antitoxine will not be doubted by any reasonable person, except Dr. Herman. Furthermore, the Russian writer states that no serious complications followed the use of antitoxine and the greatest benefits were obtained in cases in which the Klebs-Löffler bacillus predominated. The results were not so good in mixed infections or in cases in which the streptococcus alone was the offending agent.

A. ROBIN, M. D.

Book Notices.

A Manual of Medicine. Edited by W. H. ALLCHIN, M. D. Lond., F. R. C. P., F. R. S. E., Senior Physician on Clinical Medicine, Westminster Hospital, etc. Volume I. General Diseases. Diseases Excited by Atmospheric Influences. The Infections. Pp. x-442. New York and London: The Macmillan Company, 1900.

THE first volume of this new *Manual of Medicine* impresses us favorably; as much for what it omits as for what it includes. It is devoted to "diseases excited by atmospheric influences and the infections." Now, in recent years there has been no dearth of systems and text-books and manuals of medicine, which differ among themselves only microscopically. The volume before us differs from this type only in being delightfully smaller (it is a volume that gives one pleasure to hold and to read), in being far less verbose (it is really an excellent presentation of all that is required), and from many, alas, in being well written. That the future volumes will be of excellence equal to that of the first is to be hoped and expected.

Suggestions to Medical Writers. By GEORGE M. GOULD, M. D. Pp. 4 to 185. Philadelphia: The Philadelphia Medical Publishing Company, 1900.

MOST of the articles in this book are mainly reprinted from editorial notes that originally appeared in the *Philadelphia Medical Journal.* Briefly, the work is a plea for (1) a "reform of spelling" by the disuse of diphthongs, diæreses, umlauts, hyphens, accents, and the silent "e," and of silent syllables; (2) the "cur-tailing" of adjectives with the double adjectival endings "ic" and "ical," as, for instance, "pathologic" and "pathological"; and (3) the disuse, so far as practicable, and the anglicizing when impracticable, of all foreign terms, especially the Greek and Latin. The arguments employed are not new, and in our eyes not at all convincing. It is said, for instance, that modern English spelling has no consistency, that it is both physiologically and commercially expensive, and that such changes as are recommended are directly in line with the natural course of evolution.

As to consistency, it seems to us that the only way to attain it, even approximately, would be to carry out to their logical conclusion the suggestions of those same "fonetik fok," of whom the author says that "if there was the slightest danger of this wild communism being translated into fact, they should every one be gibbeted, body and soul." There is in our opinion exactly the same justification for "thru," "enuf," "askt," etc., as for "catalog," "feces," "chlorid," "iodin," and all the other recommended changes.

As to the question of physiological and commercial expense, the time and effort saved, both in business and in school wear and tear, the author expressly discounts that very consideration when, condemning the modern tendency to convert nouns into adjectives in such compound words as "head injury," heart disease," etc., he says, "Brevity and conciseness are excellent qualities in medical writing, and within certain limitations are to be commended, but *life is not yet so short that we cannot take time to say* 'wound of the foot,' 'cardiac murmur,' 'renal stone,' 'vesical disease,' etc., instead of the barbaric

bunching together of two nouns." (The italics are ours.) Further, when discussing the spelling of hæmorrhage, and so forth, the author asks those who object to "the mutilation of our beloved language," in the substitution of *e* for *æ*, whether they are prepared to go back and spell all the words beginning *pre*, e. g., prescription, etc., with a diphthong, præ, as they must do if they are to be consistent. On the same principle we would ask if Dr. Gould is prepared to banish "headache," "daylight," "rosetree," "railroad," *et hoc genus omne*, from his vocabulary. Finally, as to the everlasting talk of consciously proceeding on evolutionary lines, evolution practically means the survival of the fittest. It is only its ultimate survival which proves that it *is* the fittest. Evolution does not make systems to be worked out; it accomplishes facts. We can only judge what is best for the world as things are, and then only approximately; what is best now for the time to come we cannot know at all. The positive certainty of yesterday is the fallacy of to-day. How long is it since surgeons used every effort to aid the formation of "healthy pus," and cooped up tuberculous patients in stuffy confinement? Let those who think they know how to help evolution along the way it should go, by all means do so; but let them refrain, until time has proved them right, from trying to compel along the same path others who do not see as they see, remembering that, in spite of all the persistent efforts of centuries to eradicate from the Hebrew race that superfluous and possibly insanitary terminal, the Jew is still born with a full allowance of normal prepuce.

The Use of the Sphygmograph in Clinical Medicine. By GRAHAM STEELL, M. D. Edin., F. R. C. P. Lond., etc. Pp. 57. Manchester: Sherratt & Hughes; Philadelphia: P. Blakiston's Son & Company, 1900. [Price $1.00.]

THIS little work is a collection of sphygmograms accompanied by descriptive text. The first chapter concerns the normal pulse and is introductory, the second relates to the pulse in aortic disease and its sphygmographic illustration, the third to mitral stenosis, the fourth to mitral incompetence, and the fifth to irregularity and intermission. Dependence on the sphygmograph, or even belief in it, is far from general, but one must see that a book like this cannot fail to be of use.

Surgery: Its Theory and Practice. By WILLIAM JOHNSON WALSHAM, F. R. C. S. Eng.; M. B. and C. M. Aberd., Surgeon and Lecturer on Surgery, St. Bartholomew's Hospital, etc. With 483 Illustrations, including 16 Skiagram Plates. Seventh Edition. Pp. ix-953. Philadelphia: P. Blakiston's Son & Company, 1900.

THE seventh edition of this interesting manual on the theory and practice of surgery adds another useful volume to our library. Inasmuch as it covers such an extensive field, we must necessarily expect the work to suffer somewhat from the brevity of its articles and also from the slight consideration devoted to many important subjects deserving of much greater attention. Not only has the present edition been carefully revised, but a hundred pages of new matter have been added. Special attention has been devoted to general surgical pathology, and the portion of the work that treats of it has been almost entirely rewritten. Most of the obsolete matter that appeared in former editions has been omitted; there still remains much, however, which could in like manner have been disposed of to advantage.

The arrangement of the book follows the order established by its former editions, and we find sections on general pathology of surgical diseases, general pathology of injuries, injuries of special tissues, diseases of special tissues, injuries of regions, and diseases of regions, and an appendix on amputation, the latter much too condensed to be of great practical value.

As a handy reference manual for the use of students and practitioners the work will find its greatest field of usefulness, and to them it is heartily commended.

The Mental Affections of Children: Idiocy, Imbecility, and Insanity. By WILLIAM W. IRELAND, M. D. Edin., formerly Medical Superintendent of the Scottish Institution for the Education of Imbecile Children, etc. Second Edition. Pp. ix-450. Philadelphia: P. Blakiston's Son & Company, 1900.

THIS second edition of Dr. Ireland's work, under its present title, in reality the third edition, is but little altered from that of two years ago. The praise we gave it then in these columns we gladly repeat. The work brings together studies of able observers on the subjects treated, and, while it is chiefly intended for medical men, it will also be found useful to those who have the care and guardianship of idiots and imbeciles, or who take a philanthropic interest in provisions for their welfare.

Encyclopædia Medica. Under the General Editorship of CHALMERS WATSON, M. B., M. R. C. P. E. Volume I, Brachial Plexus to Digestion, pp. vi-562; Volume II, Diphtheria to Food, pp. vi-545; Volume III, Foot to Hernia, pp. vi-534. New York: Longmans, Green, & Company, 1900.

ONE cannot but be impressed by the wide scope of this system, for it includes practically all that is medical, surgical, or medically specialized and of to-day. We have been inclined to criticize its pretension to be encyclopædic, and have regarded it rather as a "system," but there can be no two opinions as to its inclusiveness and excellence. It is, indeed, a medical library in itself, but a compilation of authoritative treatises such as hitherto would have been collected only after much trouble and expense if at all. To criticize a work like this in detail is an absurdity; one might with almost equal appropriateness endeavor to critically review the *Encyclopædia Britannica*, but we can express our appreciation of the work and our admiration of its quality as well as of its quantity. If one wishes a work which contains about all that medically is of importance, arranged not by classes and subjects, but alphabetically, it is to be had in the *Encyclopædia Medica*.

A Practical Treatise on Fractures and Dislocations. By LEWIS A. STIMSON, B. A., M. D., LL. D. (Yalen.), Professor of Surgery in Cornell University Medical College, New York, etc. Third Edition, Revised and Enlarged. With Three Hundred and Thirty-six Illustrations and Thirty-two Plates in Monotint. Pp. xxii-19 to 842. New York and Philadelphia: Lea Brothers & Company, 1900.

THE rare and invaluable experience of the author in this special field of surgery, combined with an astute power of observation and deduction, has enabled him to present to the profession a work which has established itself as a safe and valuable guide to the diagnosis and treatment of both fractures and dislocations. That the work has been appreciated is evinced by the fact that a little over a year has elapsed since the appearance of the last edition. In the present one we recognize the same features which characterized its predecessor, with the ad-

dition of a number of valuable and important statements which the rapid strides in surgery have made mandatory. Of the more important, we may mention the better recognition of the ætiology and manifestations of traumatic hæmatomyelia, the importance of which has only lately been called to the attention of the surgeon. It is to be regretted that the author has not devoted more space to its diagnosis from pressure on the cord; for fuller information the writer refers us to the papers of Bailey and Bolton. We miss also the mention of the cocainization of the spinal cord in the open operation for the relief of pressure symptoms, although it would seem to us to be worthy of mention. As of almost equal interest might be mentioned the author's simple method of reducing certain dislocations by simple continued traction.

Some twenty new illustrations have been added or substituted for obsolete ones, and the number of plates and skiagrams has been materially increased. It has been our pleasure to speak most highly of former editions and we can only add that the present one is even more attractive and instructive than its predecessors.

Modern Surgery, General and Operative. By JOHN CHALMERS DACOSTA, M. D., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia, etc., etc., with Four Hundred and Ninety-three Illustrations. Third Edition, Revised and Enlarged. Philadelphia and London: W. B. Saunders & Company, 1900.

WE are happy to note the advent of the third edition of Dr. DaCosta's *Modern Surgery.* The welcome accorded the former editions has prompted the author to increase the present volume by two hundred pages to admit of sufficient space to include a quantity of new matter, made necessary by the rapid progress in surgical development. The original plan and scope of the work have not been materially changed in the present edition; as in the former, the greater part of the first half is devoted to general surgery. Each subject is approached in an able and careful manner, with a strict avoidance of all redundance of language and padding, leaving the student a clear and succinct idea of surgical diseases and injuries and concluding with the best means of meeting the difficulties. In the second half we find the greatest number of changes in the book by the addition of the newer surgical operative procedures, which brings the book quite up to date. We find also the addition of two new articles, one on the examination of the rectum, the other on the use of hot air in the treatment of diseased joints.

The work is characterized by a thorough condensation of all necessary surgical information, expressed in a terse and clear style, which will continue to make the work most attractive to the student and practitioner.

Miscellany.

Ancient Mexican Medicine.—The *New York Times* for January 6th publishes some foreign correspondence from the City of Mexico in which it is stated that the primitive Mexicans recognized and classified the principal diseases and their principal remedies, and each one had its system of treatment. They understood the virtues of cold water and of vapor baths, both being favorite remedies for a number of diseases.

They also practised blood-letting, and used as lances the sharp-pointed ends of the maguey plant, from which pulque is made. The setting of fractured limbs was done with skill, and surgeons even ventured with success upon trepanning, and when their surgeons made painful operations they gave narcotic and stupefying herbs to deaden the pain.

In all the markets at the present day Indian men and women are seated on the ground surrounded by strings and wreaths of herbs, while little piles are neatly arranged for sale. The elder ones do not hesitate to say, when asked to diagnosticate an ache, "That pain you complain of in the back of your neck and head is from your nervios ninos; you should take le cedron; here I have fine, fresh leaves for you." For every ill under the sun they have something to give relief.

It is often these same innocent-looking, manta-clad folk who baffle the government by bringing in the Marihuana, which sends its victims running amuck when they wake from the long, deathlike sleep it produces. Weak friends manage to secretly convey it to friends in the big prison of Belém, or wherever they be, and woe be to the luckless guards first to meet the crazy victim of the harmless-looking plant.

The system, recently inaugurated, of baking patients for various ailments is antedated in the hot lands of Mexico. Curious ovens are dug in hillsides, connected by little tunnels, with small furnaces, also dug in the earth. Fever patients, rheumatics, and kindred sufferers are placed in the ovens with only the head above ground, and subjected to all the heat they are equal to bearing. No thermometer tests the heat, and no scientific instruments register the heart beats. Occasionally the process is too thorough and lasting. The result is not good, but the idea is there.

In the State of Vera Cruz in isolated Indian villages when small-pox is epidemic, holes of proper length are dug in the ground; a bed is made in them of new barnyard droppings, with banana leaves spread over. The sick one is laid upon that and covered with more leaves. It is a terrible ordeal, but if the patient can be prevented from taking cold the result is often good, and the recovery rapid.

Tumors Complicating the Puerperal Period.—At a meeting of the New York Obstetrical Society, held on December 11th, the president, Dr. H. J. Boldt, in the chair, Dr. E. B. Cragin presented specimens from two cases of tumor complicating the puerperium and requiring operation. The first was an ovarian cyst, of which the pedicle had become twisted during the puerperium. The second was a large myoma, which began to show necrotic changes during the puerperium. The history of Case I was as follows: A primipara, nineteen years of age, at full term, was delivered at the Sloane Maternity Hospital, on October 20, 1900, of a male child weighing seven pounds and two ounces, after a short, dry labor. After delivery there was found high up on the right side of the abdomen an ovarian cyst with a long pedicle, which allowed the tumor to be moved to nearly all parts of the abdomen. Her puerperium was normal until the fourteenth day, when the temperature rose to 101.2° F., and for ten days fluctuated slightly above and below this point. For the succeeding six days the temperature gradually fell to 99° F., the pulse during the sixteen days ranging between 90 and 110. On the thirtieth day of the puerperium the patient was seized with an attack of vomiting and was unable to retain food during the whole day. The tumor at the same time became more tense and tender. There was slight change in either pulse or

temperature, but, the vomiting and tenderness of the tumor persisting, a diagnosis of twisted pedicle of the tumor was made, and the abdomen was opened on November 19th. An ovarian cyst of the size of a large cocoanut was found springing from the right side; it was purple in color, and its pedicle was twisted one turn and a half. The left ovary was the seat of a dermoid cyst of about the size of an egg. Both tumors were removed, and the abdominal wall was closed in layers. The union was primary and convalescence uneventful.

Case II was that of a woman, forty-four years of age, admitted into the Sloane Maternity Hospital on September 8th. Her last menstruation had occurred early in January. For two years she had noticed a large, hard tumor in the abdomen; her menstruation had always been regular, of the three-weeks type, lasting from three to four days. On examination, a large, hard tumor of the size of a fœtal head was found to the right of and a little in front of the fundus of the gravid uterus and intimately connected with it. During the next month the mass rotated so as to be more behind the fundus, but before labor it resumed its former position in front and to the right. At full term, on October 25th, after a prolonged labor, the child, weighing seven pounds and ten ounces, was easily extracted by the low forceps operation. Credé's method of expression failed, and the placenta and membranes were extracted manually, both being very adherent. The woman lost thirty-eight ounces of blood and her general condition was poor, her pulse 112, and her temperature 99.6° F. For twenty-four hours the temperature gradually rose, until it reached 104° F. Three days later it dropped to 101° F., at which point it remained for twenty-seven days. On the thirty-second day of the puerperium, as the patient seemed to have made very little if any improvement, abdominal hysterectomy was performed, and the specimen removed, which was now presented. Although the cavity of the uterus seemed normal, necrotic changes had begun in the substance of the tumor, which seemed to be a myoma. The uterus, with the tumor, weighed eight pounds and two ounces.

Dr. A. Palmer Dudley, in the discussion, asked Dr. Cragin why he had delayed so long after the confinement before operating, also, if he would advise others not so well equipped to watch a labor like that and risk the death of the child in order that he might get a normal labor. Dr. Dudley then reported the case of a patient who had been brought into the Harlem Hospital in an ambulance. The child was dead, and the mother was delivered by the house surgeon. She made an uneventful recovery. On the tenth day after delivery he had performed abdominal section and removed sixteen fibroids from the uterus, four of which were larger than an orange, the others ranging in size from that of a walnut to that of a pea. As he removed one of the larger fibroids, he made an incision into the uterine cavity and found that in the delivery the uterus had been cut by the forceps and that the temperature had been due to the injury to the uterine walls, and not to the fibroids. The recovery was uneventful. Dr. Dudley asked Dr. Cragin if, in a young woman, he would in a similar case to the one he presented, venture to do a myomectomy and drain through the cul-de-sac. In the case reported by Dr. Dudley, the patient had recovered and now had a healthy uterus with normal ovaries.

Dr. Cragin, in answer to the question why he had let the patient go so long in labor with the hope of a normal delivery, would say that he had realized that she was in the hospital, where a Cæsarean section could be done within an hour's time if it was deemed necessary, the patient being under close observation. Then, again, while the tumor at first was in front of the child, it was noticed that the fibroid was gradually getting behind the child, out of the way of the canal, and so it was thought best to trust to Nature. In answer to the question why he had waited so long before removing the uterus in the puerperium, he said that the patient had lost considerable blood (thirty-eight ounces) at the time of delivery, had albuminuria as well, and was in a generally poor condition, and that therefore he had not cared to subject her sooner to a radical operation. He had found some decidua retained in the uterus over that part of the cavity against the tumor, and realized that there was some sapræmia, and from that, and as she seemed to be holding her own, he had waited. But when, at the end of thirty days, she was no further along than at ten, he thought an operation was indicated. In reference to Dr. Dudley's question of myomectomy, he would say that in the present specimen one could see that the whole posterior wall of the uterus was involved in the tumor, and that therefore myomectomy would have been a hazardous undertaking.

Ruptured Tubal Gestation Sac.—At the same meeting Dr. Brettauer demonstrated a specimen of ruptured tubal gestation sac which he had removed from a patient with the following history: Age twenty-nine, married six years; one miscarriage two years before, in the second month. She had always menstruated irregularly, her last period having been three weeks overdue, when she came under his observation, on November 4th. About two weeks before she had noticed an occasional pain in the lower abdomen and morning nausea. On the morning of November 4th, during an attack of vomiting, she had severe pain in the abdomen. She was put to bed, and a physician summoned. He found her in an exsanguinated condition, practically pulseless. Active stimulation improved her condition to such an extent that an operation was practicable five hours later. The abdomen was opened and found to contain an immense amount of fluid and coagulated blood, more than he had seen in cases of rupture after pregnancy had progressed for three or four months. Owing to the collapse of the fœtal sac, which was formed by the uterine end of the tube, after the expulsion of the ovum, it had at first been difficult to see which side was the offending one, as both tubes were apparently normal; only on closer inspection, an opening was seen in the right tube, close to its uterine end, almost a quarter of an inch in diameter, with sharp edges. The ovum entire was found free in the abdominal cavity. The patient stood the operation better than was expected, but succumbed on the ninth day to a septic infection starting from a widespread necrosis of the abdominal fascia.

Dr. Brothers said that, in his opinion, syncope was a valuable aid in the diagnosis, but he recalled the case of a patient operated upon five days before, in which there was absence of both pain and syncope. At the operation there was considerable blood in the peritoneal cavity, and yet the patient had not had syncope.

A Metallic Obstetric Phantom.—At the same meeting Dr. Edgar presented a metal pelvis, with metal fœtal head attached, the head being connected with the pelvis by means of a "goose-neck" series of universal joints, allowing the head to pass into and through the pelvis in any of its diameters. The goose-neck was long enough to give ample scope to the movements of the head, and the contrivance was of the greatest value in obstetric teach-

ing. By means of it the student could be thoroughly taught the mechanism of labor in all presentations, and also the delivery and extraction of the after-coming head. Dr. Edgar also presented several varieties of obstetric bags in which the various bottles and jars were contained in a canvas case which could be easily cleansed. The gown, forceps, Kelly sling, and other articles were wrapped in separate packages, all distinctly labeled. The cost of one outfit was ten dollars, and that of the more elaborate case, with metal trays (described before by Dr. Edgar in detail), eighteen dollars.

Dr. Dickinson believed the outfit could be made much lighter by carrying the vaseline in tubes instead of glass jars, and he himself did not carry the metal pans except when laparotomy was to be performed.

Dr. Marx thought that the Kelly sling was superfluous, as a twisted sheet could be easily prepared at any time. He thought the large tray in the Edgar outfit of great value in resuscitating asphyxiated infants, and he used the smaller one for the forceps.

A Plea for the Recognition of Some of the Factors in the Mechanism of Labor.—Dr. Malcolm McLean, at the same meeting, read a paper with this title. He declared that the great immunity from evil results of radical operative interference was due to close observation of the laws of germ invasion. The evil resulting from the neglect of these laws obscured the brilliancy of our modern science of obstetrics. He believed that in many cases serious traumatic incidents had resulted from a well-defined ignorance of the principles governing the mechanism of labor. Not only did the patient (and perhaps the child) suffer, but the obstetrician was mentally biased as to the difficulty presented in just such cases. It appeared to the writer that injuries to the genital tract were about as frequent as in years gone by, and that a few new and not trifling ailments had been added to the list of unhappy sequelæ by some of the modern attacks on the mother's tissue. The loose-jointed pelvis and the mutilation following extirpation of the uterus, tubes, ovaries, or all together, were instances of these. In the mechanism of labor it must remembered that, first of all, there was marked softening and relaxation in all the structures to be involved in the passage of the child from the uterus into the world, to allow of the enormous distention to which the parts were to be subjected. As the changes normally occurred, it was important to avoid an artificial mechanism by too hasty interference when the mother's tissues were unprepared and rigid. As a rule, these changes required more time in the primipara than in the multipara. Again, the changes which took place in the shape of the presenting part must be carefully observed, as a very considerable disproportion between the fœtal head and the pelvis would be effaced by the moulding of the head as it was compressed within the walls of the pelvic canal. An arrested head with increasing scalp tumor must not, however, be mistaken for the moving and moulding head. The membranes should be preserved intact until the dilatation was complete. When this had occurred, and the membranes drew flat and stiff across the uterine mouth with every pain, instead of protruding, bag-like, to the point of rupture, we might be able to avoid unnecessary delay and assist with propriety by rupturing the sac. All excitement, mental or physical, which interfered with the rhythmic recurrence of the uterine contractions, put so much difficulty in the way. The impropriety of the use of ergot would be apparent if it was remembered that the only effect ergot could have was to cause tonic contraction to take the place of proper intermittent uterine contraction and relaxation, and voluntary effort on the part of the patient to bring into play the accessory forces of the abdominal muscles should be limited to the second stage. Earlier efforts would result only in fatigue, and the uterine muscle would be made more irritable. In labor with breech presentation the observance of this law was most valuable, and the writer had demonstrated this in the recording of thirty odd consecutive deliveries by the breech without the death of a child. In quite a number of instances the cord, during the last few months of pregnancy, became wound about the child's neck and also about the arms and shoulders in such a way that forward rotation was prevented, and a persistent occipitoposterior position might result. It was in such cases that manual rotation was so unsatisfactory. The occiput itself might be turned forward, but when the hand was removed one found the brow caught by the forceps. In such a case, if the instrument was removed, and the hand used to rotate the occiput around posteriorly to the opposite sacro-iliac joint, the position would be retained. This was due to the unwinding of the misplaced funis. The writer then emphasized the great importance of using the fœtal envelopes as a rubber glove in intrauterine manipulation. In this way, if germs were introduced, they would remain in the amniotic sac and come away with it, the uterine wall having been protected from contamination by the fœtal sac. In some cases of rupture of the uterus the fœtal sac was pushed through the rent, in front of the escaping fœtus. If the child was drawn back in the uterus, it might be extracted with the secundines, no liquor amnii having entered the peritoneal cavity. The writer had reported such a case to the society. In the expulsion of the placenta and membranes the accessory action of the abdominal muscles was valuable. In the opinion of the writer, it was not desirable to use intra-uterine douching after labor, for the reason that the sinuses were plugged with sterile clots, and these should not be disturbed in our endeavor to destroy germs which did not exist there. Chloroform was of value to control too violent advance of the presenting part through an unprepared vulva, but, except in instrumental delivery or some other major operation, it should be given only to the obstetric degree. In breech delivery chloroform should not be given after the breech had crossed the perinæum, for it was just here that we wished the action of the voluntary muscles. The long-continued use of chloroform tended to relax uterine contraction for hours, hence to induce post-partum hæmorrhage. In the mechanism of labor it must be remembered that the head in its passage through the pelvis decribed a spiral course, and where the high forceps operation was done, the tendency of the blades was to throw the head around in such a way that its largest diameter engaged in the conjugate, or shortest, diameter of the pelvis.

Traction under these circumstances might result in the gravest of injuries. The writer recalled one case in which four operators had striven in vain to extract a head in that position, with the result that both mother and child perished. An autopsy revealed the fact that the head would sink to the floor of the pelvis by its own weight when turned in a flexed condition into one of the oblique positions.

Dr. Cragin said that the more we studied the relations existing between the presenting part and the brim, and the more attention we gave to pelvic measurements, the better the results would be.

Dr. Dickinson emphasized the importance of making use of the amniotic sac as a glove in the removal of the

placenta. The cord should be used as a guide to the opening in the sac, and the membrane used as a mitten in peeling off the placenta. In the matter of rotation in occipitoposterior cases, he said that the trunk as well as the head should be turned forward.

Dr. Edgar spoke of the frequency of imperfect flexion and of the delay it caused in labor. If flexion could be increased by the pressure of the finger, labor would progress more rapidly. He preferred ether to chloroform in obstetric work. He could not agree to the statement that it was a safe practice to grasp the chest of the child and turn the fœtus round, then leave the case to Nature, for fear of having intra-uterine respiration. He would prefer version and extraction if the head did not engage immediately after the procedure of rotating the trunk, and in some cases the forceps was very valuable.

Dr. Dickinson said he wished to go on record as protesting against version in these difficult cases of occipitoposterior positions as compared with high manual rotation followed by the use of the forceps at once.

Dr. Simon Marx believed that the best procedure in persistent occipitoposterior positions above the brim was podalic version followed by extraction. He had not used an intra-uterine tube after labor in a number of years. He had seen excellent results after the administration of quinine in labor.

Illegal Practice in the County of New York.—The Medical Society of the County of New York is sending to physicians the following circular, dated December 15, 1900:

"The medical laws of the State of New York provide that, before one can practise medicine, a certificate of proficiency shall be obtained from the Regents of the University of the State, which is given only after a satisfactory examination. The purpose of this law is to protect the people from incompetent practitioners of medicine, and, in so far as the medical profession is concerned, this purpose is accomplished.

"There are, however, many irregular practitioners who practise in open defiance of this law, apparently without molestation. This is an incentive to irregular methods, and can only be to the disadvantage of the community at large.

"It is the purpose of the Medical Society of the County of New York to begin an active crusade against these unlicensed, and therefore illegal and incompetent, practitioners, and we ask the cooperation of the profession and the public generally.

"Any information concerning unlicensed practitioners will be gratefully received by the board of censors and the counsel of the society, and will be considered confidential when requested.

"Communications can be addressed to the members of the board of censors or to the counsel.

"Frank Van Fleet, M. D. (chairman), 63 East 79th Street.
Henry S. Stearns, M. D. (secretary), 45 West 58th Street.
Wendell C. Phillips, M. D.
Robert Lewis, Jr., M. D.
Louis A. Rodenstein, M. D.
Board of Censors of the Medical Society of the County of New York.

"Counsel, Hill, Sturcke, & Andrews, 52 William Street."

Jurisdiction over a Medical College in the Philippines.—The first question dealt with by the Taft Commission affecting the Church and the United States Government in the Philippines is whether the control of the San José Medical College is vested in the Government or in the Church. The college was established by bequest in the seventeenth century, and the Jesuit order was given the control of it. When the authority of the Jesuits in the Philippines ceased the Spanish Government assumed direction of the college, and later permitted the Dominican order to conduct San José College as part of the University of Santo Tomas. Following the American occupation, a representative of the people insisted that the college under the treaty of Paris came into the control of the United States, and ought not to be controlled by the Church. The Church authorities claimed the Church had full legal possession. General Otis closed the institution. If the commission decides that the control is vested in the Government, litigation is considered probable.

Since the foregoing was written, press dispatches from Manila, dated January 5th, state that the decision of the Philippine Commission in regard to the San José Medical College case unanimously refers the settlement of the questions involved to the courts, and provides trustees, who, with the assistance of the attorney-general of the Philippines, will inaugurate and prosecute the litigation. The sum of $5,000 is appropriated for the expenses of the suit.

Many listened to the reading of Judge Taft's opinion in English and Spanish.

A bill has been passed carrying out the terms of the decision. It appoints five physicians as trustees, including Dr. Tavera, who is the complainant throughout, and Colonel Greenleaf, the chief surgeon in the Philippines. The trustees are required to begin a suit within a month in the supreme court of the Philippines, to determine whether the ownership of the college is in the Church or the Government. The Dominican rector of St. Thomas University and Archbishop Chapelle are required to defend the suit and establish the claim of ownership upon the part of the Church. The act provides that the decision of the Philippine court is not to be so final as to make it impossible for Congress to provide an appeal to the United States supreme court.

The opinion says:

"A case involving the construction of the treaty of Paris and the effect upon public trusts of the transfer of sovereignty from a kingdom in which Church and State are united and inseparable to one in which Church and State are entirely separated is of such import that it ought to be submitted to the highest tribunal."

The commission recommends that General MacArthur rescind General Otis's order suspending the conduct of the medical college under the rector of St. Thomas University.

The Origin of Ovarian Cysts.—Mary Dixon Jones, M. D., F. R. M. S. (*American Journal of Obstetrics and Diseases of Women and Children*, xlii, 4), gives an interesting summary of the views generally held as to the origin of ovarian cysts. She combats them all, and declares that cysts are always of inflammatory origin. She draws the following general conclusions from her own investigations: 1. Cyst formations are the outcome of disease. 2. No ovarian cyst, small or large, exists without a previous oophoritis. 3. Other things being equal, the more intense the inflammation the more rapid is the growth of the cyst. 4. There can be no cyst without a reduction of the tissues to protoplasm. 5. This reduction to protoplasm is what we call inflammation. 6. Cysts are always the result of inflammation and are always accompanied by more or less pain, distress, and disturbance of the general health.

Original Communications.

GASTRO-ENTEROSTOMY BY THE ELASTIC LIGATURE.

BY THEODORE A. McGRAW, M. D.,

DETROIT, MICH.

IN 1889, '90, and '91 I was exceedingly interested in the study of the various methods of making intestinal anastomosis, and for a long time I worked with the object of making some instrument which would expedite the performance of the operation, secure the patient from all danger of intestinal sepsis, and, at the same time, make an immediate communication between the hollow viscera and permit the passage of food. My ingenuity was, however, not equal to the task which I had undertaken, but I, nevertheless, hit upon a method of making intestinal anastomosis which is unequaled in the rapidity of its execution, its efficiency, and its safety, although it does not accomplish its purpose until after the lapse of two or three days. This method is by the application of an elastic ligature, binding the two viscera together and ultimately cutting its way through. I made many experiments on dogs, and operated twice on the human subject, when I was diverted from the method of my own invention by that ingenious device which has made the name of Murphy famous all over the world. I became charmed with an invention which seemed to meet the very indications on which I had spent so much useless labor. I, besides, exaggerated in my own mind the disadvantages connected with the use of the ligature, in the time which must elapse after its application before the patient could take food by the mouth. I therefore abandoned its use for the time being, and during the last nine years have employed the button instead. There are, however, some disadvantages connected with Murphy's method which, every now and then, cause embarrassment if not disaster. I have three times failed to find the button, and twice it has been discovered postmortem in the stomach long after the operation. I am by no means sure that a metallic button bouncing about in a cancerous stomach has no injurious action on the ulcerated surface. In the experience of other men the button has at times failed to hold the viscera together and the intestinal contents have escaped into the peritoneal cavity, causing death. At other times its lumen has become occluded by particles of food or by fæces. It is, too, by no means always easy to insert and fasten in place, the more especially when the efferent gut has become contracted and small. For these reasons I have recently recurred to my old device, and after more, though limited, experience, have wondered at myself that I should ever have abandoned it.

When I experimented with the elastic ligature in making communications between hollow viscera I supposed that I was the first in this field of surgery. I found afterward that Dr. Gaston, of Atlanta, Ga., had published experiments, in 1884, with the elastic ligature as a means of uniting the gall-bladder to the duodenum. In 1888 Dr. Franz Bardenheuer had also made experiments on dogs with the same purpose, and published his conclusions in a paper entitled Experimentelle Beiträge zur Abdominal-Chirurgie (J. Dietz und Baum'sche Druckerei, 1888).

Neither of these surgeons, so far as I can learn, achieved any practical results from his labors. The method is not suitable for the production of anastomosis between the gall-bladder and intestine, as the thinness of the gall-bladder permits the ligature to cut its way through before the viscera have become sufficiently glued together. Dr. Bardenheuer's method was wrong in technique, and therefore of little value in practice. He sought to accomplish the purpose by uniting the intestines by three or four rubber ligatures which were joined together in loops like a chain, each loop containing about one centimetre and a half of tissue. This method was not only difficult and tedious, but also insufficient, and had the further disadvantage of making numerous holes in the viscera and thus multiplying whatever danger there might be from infection.

My experiments with the elastic ligature were made in 1890 and 1891, and my first operation on the human subject was performed on January 8, 1891. I was, that year, chairman of the Section of Surgery of the American Medical Association, and made the matter the subject of my address before that body at its meeting in May, 1891. The address was published in the *Journal of the American Medical Association* on May 16, 1891. I will quote from that address as much as refers to my method of operating and to my first operation on the human subject.

"In my experiments I tried three kinds of ligatures. One, a large, round rubber cord four millimetres in diameter, was speedily discarded. It was too large, was clumsy to tie; when tied it took up too much room and tore too big a hole through the intestinal wall. A second consisted of a flat rubber band three millimetres in width. This proved to be serviceable and can be advantageously used if the third variety cannot be obtained. The third kind, a rubber cord two millimetres in diameter, is that ordinarily used for the ligature of piles. It could not, for some reason, be obtained for my first experiments, but is to be preferred to all others on account of its smoothness, elasticity, and great tenacity. By shaving the end of the rubber thin it may be drawn through the eye of a so-called worsted needle (a needle with a long eye) smaller than itself. This is a decided advantage, for the reason that it is important to make as small a hole as possible through the intestinal wall, and also to have the ligature not only completely fill, but even to distend the hole so as to prevent any extravasation of fæculent fluid. Now, by stretching the rubber during its passage and rendering it thin and small, it may easily be drawn after the needle, and its subsequent contraction will then largely increase its size and cause it to more than fill the orifice. The ligature in the most cases was passed

through the gut in the direction of its long axis and at points most distant from the mesenteric attachment. Before passing it the bowels were stitched together by from three to six Lembert stitches, and afterward similar stitches above the ligature served not only to give additional protection, but also to bury the rubber in the intestinal folds. Usually an inch or more in length was included in the ligature. After the cord had been drawn through both coils of intestine it was tied as tightly as possible in a square knot. Although this knot will ordinarily hold without further fastening, yet, as I wished to cut the ends very short in order to cause as little peritoneal irritation as possible, I always secured the ends so as to make slipping impossible. At first I did this by running a fine needle threaded with silk through the ends and thus tying them together, but, as this procedure was awkward and consumed much time, I later on adopted a suggestion of my student, Mr. Hickey, and secured the knot by tying a silk thread, which was laid under it, first over the first turn of the knot and afterward over the completed knot. This consumed almost no time and fastened the rubber securely against the possibility of accident. In making the knot, the ligature should be drawn as tightly as possible without breaking.

"The first effect of the ligation was to draw the intestines together into folds, and I was not a little apprehensive at first, lest these folds, agglutinated together, might be fixed in a permanent corrugation. In this I was agreeably disappointed. Examination of the intestines, even after so short a time as twenty-four hours, and before the ligature had made any perceptible progress in cutting through, would find these folds in process of obliteration. In some way the intestine accommodated itself to its new conditions and became speedily smooth and shapely. In some respects the early disappearance of these corrugations has been quite a puzzle, as I should have expected them to remain until the intestine was released from the binding cord. I feared, too, lest the ligation and folding of the intestinal wall might cause irritation or even obstruction of the gut. When we consider, indeed, the severity of the symptoms produced by the pinching of even a small segment of a gut in strangulated hernia, we might reasonably expect the occurrence of similar phenomena, with the extreme pinching of two adjacent intestines held together by a tightly drawn rubber ligature. This, however, never happened. Obstruction occurred in one or two cases from a too acute bending of an intestine, but the ligation itself seemed in no case to produce distress—even in gastro-enterostomy, where the involvement of the stomach in the ligature might warrant fears of an uncontrollable gastric irritability, this did not occur. The man upon whom I operated by forming a gastro-intestinal enterostomy for the relief of a pyloric cancer, vomited only once after the operation, namely, on the third day.

"It is evident that the mere pinching or constriction of a portion of the intestinal wall is not in itself a cause of great irritation, provided the nutrition of the gut is not seriously interfered with. In fact, the symptoms which followed the operation seemed in no case to depend merely upon the injury done to the intestine. If the wound ran a perfectly aseptic course, the animals would show no distress whatever. If it became septic they would suffer accordingly. Every one who has operated on dogs knows the difficulty of making and keeping them aseptic, especially in confined quarters. From lack of proper facilities, I lost several animals from septic peritonitis. It was noteworthy that the origin of trouble was rarely to be found at the seat of ligature or connecting with the cavity of the intestine, for the ligature, in fatal cases, was almost always found buried in the intestinal fold and progressing its usual course, while the distant peritoneal surfaces were covered with lymph or pus. In no case was there found any escape of fæces or intestinal contents into the peritoneal cavity.

"The normal course of the ligature and inclosed tissues was about as follows:

"Animal killed after twenty-four hours showed no change in the condition of the intestines operated on, except a partial obliteration of the folds caused by a ligature and an adhesion of the adjacent peritoneal surfaces. No opening became as yet apparent at the seat of ligation. After forty-eight hours the intestines resumed their normal shape, all folds had disappeared, the adhesions had become firmer, and the rubber was seen to have slightly cut through the inclosed structures. At the end of seventy-two hours a free space usually appeared on each side of the ligature, through which water could be made to pass from one intestine into the other. The ligature still hung in the middle on uncut tissue. At the end of the fourth day the opening became complete, the ligature disappeared, and the anastomosis was accomplished. As the ligature cut through, the edges of the mucous membranes of each gut became glued together and united, and the result was a smoothed, healed edge all along the opening. The irritation caused by a rubber ligature in the peritonæum was just sufficient to cause adhesion of the surfaces with the intervention of hardly any appreciable amount of exudation. The length of the orifice formed was found to be equal to that of the tissue inclosed in the knot. Whether subsequent contraction with partial obliteration of the orifice, such as has happened after other methods of producing anastomosis, would follow in course of time, is as yet uncertain. Variations were occasionally found in the course described. I have seen the opening completed at the end of the third day, and have seen it incomplete at the end of the fifth, but in general, if the operation is done as I have described it, the result will be as I have stated.

"In my first series of experiments I operated on twenty-four dogs, and then, having become convinced of the perfect feasibility of the operation, I chose it in preference to other methods when called upon to establish an

anastomosis between the stomach and small intestine in a case of pyloric cancer.

"Subsequently, seven dogs were operated on for the purpose of studying the effects of the operation in relieving intestinal fistulæ and false anus, and eight others for the production of fistulæ between the gall-bladder and small intestine. The history of the only case in which this method of operation has been thus far employed on the human subject is as follows:

"Mr. Otto Cook, aged fifty-nine years, a Belgian by birth, a farmer by occupation, by the advice of his physician, Dr. John Monaghan, since deceased, entered St. Mary's Hospital on January 8, 1891, to place himself under my care for cancer of the pylorus. He had been perfectly well until three years ago, when he had begun to suffer from indigestion and occasional attacks of vomiting. The trouble gradually increased until he found himself during the last three months unable to retain any food whatsoever. He became gradually very weak, and at the time he entered the hospital very much emaciated. His breath was foul, and his food was vomited regularly a few hours after its ingestion. Examination revealed a tumor as large as a hen's egg, four centimetres above and four centimetres to the right of the navel. This tumor was immovable, and was evidently adherent to the adjacent structures.

"*January 9th.*—The stomach was washed out with warm water and a large quantity of very sour, dark, and offensive fluid, mixed with mucus, evacuated. After the hot water, a solution of boric acid and bicarbonate of sodium, eight grains of each to the ounce, was injected and again evacuated. The patient experienced immediate relief from the nausea, and the procedure was repeated daily until January 12th, the day of operation. As the diagnosis was not doubtful, the examination for hydrochloric acid was not made. The temperature during the time of his stay in the hospital previous to the operation ranged high, from 99.5° to 100.5° F. His pulse was steady at about 90 per minute. His bowels had been costive, but were made to act by enemata, and rectal injections of bovinine and brandy were given three times a day to supply the much-needed nutriment.

"There were present at the operation Dr. H. O. Walker, Dr. F. W. Robbins, Dr. Pilcher, Dr. Irving, Dr. Monaghan, Mr. P. M. Hickey, Mr. A. J. Warren, and others. An incision was begun four centimetres above the navel, in the median line, and extended transversely to the left for a distance of four inches. The pylorus was found to be, as expected, the seat of a large tumor, adherent to the liver and absolutely immovable. Excision was out of the question, and I proceeded to make an anastomosis with the small intestine. I tried first to find the jejunum by grasping it at its origin, but failed to do so, and then followed Lucke's advice and grasped the highest coil of small intestine. As will appear later, I had cause to regret this part of the operation. The omentum was very thin, atrophied, and destitute of fat, and was pushed to the left. A small opening through its right border enabled me to bring the stomach into contact with the intestine, which was then sewed fast to it by six Lembert sutures in a line about four centimetres in length. A long worsted needle, armed with a long rubber cord, was then passed into and out of the stomach, the included space being about three and a half centimetres in length. It was then carried in like manner through the intestine and the ligature tied tightly and firmly in a square knot. The ends of the ligature, which were cut short, were then secured by tying them together with a silk thread, which had been passed under them, and six Lembert sutures were inserted above. The stomach and intestine were thus fastened together by two rows of Lembert sutures and by the rubber ligature which was between them and hidden from view, while the walls of the viscera were held by the ligatures as in an ever-tightening vise. The operation of anastomosis was conducted in this case very deliberately, and consumed, after the exposure of the stomach, eleven minutes of time. The most of this was occupied in passing the fine needle armed with the silk thread through the rubber in order to secure its ends. This is quite a delicate matter, as the needle must be passed directly through the middle of the stretched rubber, in order not to cut and weaken it, as it would do if passed too near its edge. Since adopting the suggestion of Mr. Hickey and securing the knot by tying the silk thread firmly around it, I have been able to materially reduce the time required for the procedure, and can now do it on the dog in less than three minutes.

"The peritonæum, fascia and muscles, and skin were sutured separately, and the wound dressed with usual regard for asepsis. The patient reacted well and was given injections of bovinine and brandy every six hours.

"*January 13th.*—Injections continued. Temperature as before the operation, ranging from 99.5° to 100.5° F. Pulse was stronger than before the operation. Patient had a tendency to slight hacking cough, no nausea nor vomiting; nothing was given by the mouth.

"*January 14th.*—No pain, tenderness, nausea, nor tympanites. Injections of bovinine, brandy, and tincture of opium every four hours; mouth and tongue moistened with water, but no food nor drink. Morning temperature 100.5° F.; evening temperature 103.8° F. Ten grains of quinine in half an ounce of whiskey were given by the mouth and retained.

"*January 15th.*—Morning temperature 101° F.; evening temperature 100° F.; pulse 90 and good, but patient felt very weak. The mouth and throat were dry and the cough troublesome. No expectoration, negative results on auscultation and percussion, complained of acidity. Is given teaspoonful doses of wine and water every fifteen minutes. For the first and only time since the operation, the patient vomited a mucus mixed with wine and water; the stomach was washed out with the boric-acid solution.

"*January 16th.*—Morning temperature 100° F.; evening temperature 101° F. Patient retained milk, bovinine, and wine in small quantities. Bowels moved at noon. The stool was thin, dark-colored, and offensive. Ligature could not be found, wound was dressed for the first time and found to have healed by first intention. Bowels moved three times on the night of January 16th and January 17th. Nutrient enemata altogether discontinued; patient is weak and very homesick, and complains bitterly of his cough. Bismuth and saccharated pepsin, *aa* gr. v, were given every three hours. Morning temperature 99.5° F.; evening temperature 100° F.

"*January 17th.*—Patient seems brighter and stronger. Pulse 90, good. Morning temperature 99° F.; evening temperature 100° F. Milk, beef tea, and brandy are taken by the mouth and retained; no nausea nor distress. Cough is troublesome; bowels moved five times during the day; stitches were removed from wound, which was entirely healed. The pyloric lump seems to have decreased in size.

"*January 18th.*—Morning temperature 99° F.; evening temperature 100.5° F. The cough is very annoying,

but sounds are clear over both lungs. The cough is aggravated by drinking, but not by swallowing solids. He ate baked potatoes and soft-boiled egg for breakfast, also some milk toast, but is dejected and homesick. Bowels moved six times since previous evening. The passages were dark and offensive.

"*January 19th.*—Morning temperature 99° F.; evening temperature 100° F.; cough much worse, but no expectoration. Mouth and throat are very dry. The throat is red, but not swollen, and is covered with a white deposit, which, however, may be easily wiped off. Has difficulty in swallowing liquids, but can take solids with ease. Throat was gargled with boric-acid solution. Internally, tinctura ferri chloridi, in five-drop doses. Bowels have moved seven times since last evening.

"*January 20th.*—Morning and evening temperature 100° F. Patient is growing weaker and more homesick. Pulse 90, good; mouth is not quite so dry, and throat is somewhat better. The pyloric tumor has apparently disappeared. Diarrhœa continues. Twelve passages in the last twenty-four hours.

"*January 21st.*—No material change.

"*January 22d.*—Diarrhœa continues, and patient is growing weaker, but otherwise no marked change.

"*January 25th.*—The patient insisted on going to his home, twelve miles in the country, where he died on January 27th, fifteen days after the operation.

"On January 28th I drove out with an assistant, and succeeded in getting permission to examine the abdomen. It was found that the healing had taken place with absolute asepsis, the wound was firmly and completely united. There was no inflammatory exudate whatever in the abdominal cavity. The viscera all had their normal appearance except at the seat of disease. There was a pyloric tumor as large as a hen's egg firmly adherent to the under surfaces of the liver. In the mesentery underneath there were numerous enlarged lymphatic glands. The stomach and underlying intestines were adherent by what may be called primary adhesion; that is, their surfaces were attached without any apparent deposit of lymph. I had feared, on watching the case, that I might have made the anastomosis too near the ileocæcal valve, and in order to determine the exact position of the operation I was obliged to separate the stomach from the surrounding mass. I found that the seat of anastomosis in the small intestine was about 91 centimetres (three feet) from the colon. The intestine above that point was empty; below it, full of partly digested food. The cause of death was evidently inanition. In tracing out the intestine I unfortunately tore it partly apart from the stomach and thus spoiled the specimen. I found, however, that the anastomosis had been complete. In the stomach there were two holes through the mucous membrane and one through the muscular and serous coats. It was evident that in passing the needle into the stomach I had passed it too near the wall of that organ, and instead of clearing the mucous coat had pierced it, altogether, in four places, which made, on the completion of the anastomosis, two holes. This seemed to cause no difficulty in the passage of food, but it taught me to enter the needle, in the future, into and to pass it out of the stomach more perpendicularly to the surface. In this way all such complications may be avoided. The orifices in the intestine and serous and muscular coats of the stomach were three and a half centimetres (one and a half inch) long. That in the mucous coat of the stomach was, as I have said, divided in two by a small bridge of mucous membrane. It must be observed that neither in the stomach nor intestine nor peritoneal cavity was there the slightest appearance of inflammation. The edges of the opening between the cavities were healed and the mucous membrane of the small intestine was turned around the edge of the orifice and attached. The mucous membrane of the stomach, owing to the faulty course of the needle through it, was stretched over the orifice and communicated with it by means of the two openings.

"Although in transcribing this history I have not taken up space in relating unnecessary details of treatment, having given only the essential points, enough is nevertheless given to show conclusively that it is entirely practicable to produce intestinal anastomosis on the human subject by the elastic ligature. The failure of the operation was due, not to the method of making the anastomosis, which was highly successful, but to the misfortune of establishing it too low down in the ileum for the purpose of nutrition."

In the fall of 1891 I operated again, on a woman, a patient of Dr. Flintermann's. She had refused the operation until nearly moribund, and died a few hours after it was done. A post-mortem examination could not be obtained, and the case affords no data on which we may base an opinion as regards the value of the operation.

It was about this time that I became acquainted with the Murphy button and began to operate almost exclusively by its use. No further efforts to produce intestinal anastomosis by ligature took place, to my knowledge, until 1898, when a Russian surgeon by the name of Podres made some experiments to this end by connecting the viscera together with silk threads. Sokoloff, in Moscow, operated upon four persons by Podres's method. On two of the four the operations were successful. It was found on postmortem examination of the other two that there had taken place no anastomosis, the threads having failed to cut through. Later, Modlinski read a paper at the Twenty-eighth German Congress, in which he advocated the use of a rubber, instead of a silk, ligature, and Professor Trezebicky, in Cracow, put this advice into practical operation on one patient, but failed in producing an anastomosis. This experience was published in the *Centralblatt für Chirurgie* of May 20, 1899. It is rather odd that the technique in all these operations, including those of Bardenheuer, was very similar, and was faulty in the same direction.

Instead of grasping a large area of tissue in one bold ligature, the operator sought to accomplish the purpose by a number of short ligatures, each including only from one to two centimetres. I could not learn, from the meagre description I have been able to find of these efforts, what kind of ligature was used, whether small or large, round or flat, hard or soft. And yet these matters are very important if we would achieve success by this method. I have never yet been disappointed in forming an anastomosis by the elastic ligature in the dogs upon which I experimented, and in three men, who lived for a sufficient time after the operation, and I do not believe that there will ever be a failure of the ligature to do its work, if

made of the right material and of the right shape, and if it is properly applied.

I think that, if the ligature which I have described were tied tightly around the finger and left *in situ* a week, it would cut the finger off. In my first operation on the human subject I included in the ligature a length of about three centimetres. In my later operations, which I will presently report, I included in the ligature a length of five or six centimetres. This was done for two reasons: First, to make a larger opening, and thus preclude the danger of subsequent contraction, and, second, because I have become convinced that the more tissue is included in the ligature the quicker and more certainly does it cut through.

I have, since October 1, 1900, operated in three cases of cancer of the pylorus by gastro-enterostomy.

The first was that of Mr. D., a lumber merchant, who had suffered for several months with symptoms of increasing pyloric stenosis. Dr. Chapoton, his physician, had made frequent examinations of the contents of the stomach, and found an invariable absence of hydrochloric and presence of lactic acid. He consulted me first, at Dr. Chapoton's request, on July 11, 1900. He complained of frequent vomitings, dyspepsia, loss of appetite, and loss of weight. An ill-defined tumor could be felt in the abdomen to the right of the navel. The stomach was dilated. He could not at that time make up his mind to an operation, the more especially because when limited to a liquid diet he could be made pretty comfortable. He continued to transact business until he became convinced of the necessity of speedy relief. On October 1st he entered St. Mary's Hospital for an operation. At the request of his family, I explained his condition fully to him and gave him his choice between the radical and more dangerous operation of complete removal of the tumor and a gastro-enterostomy, with a possible survival of one or two years. He chose the less dangerous operation. This was done on October 2d; the usual preparations were made at 8.30 A. M., the stomach was thoroughly washed out with borated water. At 9.30 I made a transverse incision, beginning at a point in the median line, about three centimetres above the navel, and extending ten centimetres to the left. Examination of the pylorus discovered a firm tumor about as large as a hen's egg, movable and free. There were a few small glands enlarged underneath it. It was a good case for excision, and I should have performed the radical operation had I not promised the patient definitely to limit myself to the other. Bringing then the jejunum up in front of the colon, I made a posterior gastro-enterostomy with an elastic ligature. The posterior wall of the stomach was first joined to the jejunum for a distance of six centimetres by a row of interrupted silk sutures. The posterior wall of the stomach was then folded between the thumb and fingers of the left hand so that the ridge of the fold was at right angles to its long axis. A long, straight needle, armed with an elastic cord, was passed through the base of the fold, during which process the cord, for its more easy passage, was stretched and rendered taut. When the fold was released the cord perforated the posterior wall of the stomach in a line parallel to its long axis with a distance between the two orifices of five centimetres. The jejunum was then treated in the same manner. Now before knotting the cord, a silk thread was laid directly under the place where the knot would come. The elastic cord was then drawn together in one knot with such force as to compress the walls of the viscera into close folds, and the silk thread tied over it to fasten it. A second knot of the cord and a second binding of the thread fastened the ligature so firmly together that there could be no question of its slipping. A second row of Lembert sutures now completed the operation on the viscera.

The wound healed by first intention; on the evening of Tuesday, October 2d, the day of the operation, he vomited a greenish fluid tinged with blood. This was the only time that his stomach seemed disturbed during the whole course of his postoperative sickness. His temperature on the evening of October 2d was 99.8° F., and again, on October 6th, it rose to 100.2° F. At all other times it was normal. On the afternoon of Thursday, October 4th, he indulged himself with a smoke, and I permitted him to take water by the mouth. He was nourished by nutrient enemata solely during the first three days. At the close of the third day he began to take both by the mouth, and the last nutrient enema was given at the end of the fourth day. After that he was nourished solely by the mouth.

His convalescence was uninterrupted, and on October 18th, sixteen days after the operation, he left the hospital well and strong and with a good appetite and unfailing digestion. He is now, on December 3d, two months after the gastro-enterostomy, attending to his business and apparently well.

The second case was that of a hospital patient, a German, aged fifty-eight years. He had suffered with digestive troubles for the last three years. In the hospital he came under the care of Dr. Steinbrecher, who made repeated examinations of stomach contents. At all times he found an absence of hydrochloric acid and presence of lactic acid. His stomach was enormously dilated. He was transferred to the surgical ward, and I operated on him on October 24th. He took the anæsthetic badly, and after the operation never regained complete consciousness. He died in collapse three hours after the completion of the operation. A post-mortem revealed a clean abdominal cavity, an enormous stomach, a cancerous tumor of large size, which was adherent to the spine and involved the lower surface of the liver and the transverse colon. The serous surfaces at the point of ligature were slightly agglutinated, otherwise there was no change. The death of this man had no connection with the mode of operation, and would doubtless have occurred had the Murphy button or any other method been used.

The third is a very important one, as it enabled me to verify by a post-mortem examination the condition thirteen days after the operation.

A Canadian, aged thirty-one years, was brought to me on October 12, 1900, by Dr. Bryan, of Essex, Ontario, with evidence of pyloric stenosis. His family history was bad. One sister had died of some malignant disease of the bowels, and another was said to have cancer of the stomach at the present time. He had suffered with dyspeptic symptoms since early in June. Indigestion was soon followed by a daily vomiting, from which he could get only partial relief by the use of a stomach-pump. A tumor was to be felt to the right of the umbilicus, and the stomach was evidently enlarged. I urged an immediate operation. This he declined, and it was not until a month later that he came again with mind made up for an operation. He had by that time become greatly emaciated, and was so exhausted that he could hardly stand. He entered the hospital, and the contents of his stomach were carefully examined. There was an absence

of hydrochloric acid. I operated on November 14, 1900. The operation of gastro-enterostomy was made with the elastic ligature, as already described.

He was given afterward, every six hours, nutritive enemata, containing peptonized milk and clear beef soup. Nothing was given by the stomach until the evening of November 17th, when we began to feed him with clear beef soup. During these three days he had been gaining in strength, but had some fever, his temperature rising, on November 16th, as high as 101° F. As he had had some fever before admission, I was inclined to attribute this to starvation. On November 18th his temperature became normal. He was given broth, milk, and other semi-liquid nourishment until the evening of November 20th, and seemed to thrive. At 11 P. M. of November 20th he was seized with severe abdominal pain and became bloated. This was attributed to over-feeding, and the amount of nutriment was diminished.

The pain and disturbance, however, continued through November 21st, although he had had some free evacuations of the bowels. On November 22d, in the evening, he vomited for the first time after the operation, a thick, yellow fluid.

Food by the mouth was now discontinued and nutritive enemata were given every six hours as before. His pain now subsided and he became comfortable again. On November 24th he was given some gruel by the mouth, with no bad effect, and we began again to give him small quantities of milk.

He manifested no pain until November 26th, when the bloating and pain began again and he began to hiccough. I became now suspicious of the occurrence of a "vicious circle," but, as his pulse seemed to be gaining in volume and strength and I was not quite sure of my diagnosis, I deferred operative procedures. On the evening of November 27th he vomited once freely, but his pulse, 104 in the minute, was good, and I postponed interference until the following morning, to find then that he had suddenly collapsed and died at 4.40 A. M.

This was my first case of a "vicious circle" after gastro-enterostomy, and I did not interfere so promptly as I should have done had I not cherished the vain hope that the trouble might finally right itself. I made a hurried postmortem and found a clean and blameless peritonæum without a morbid adhesion except where the hard cancerous tumor was grown fast to the surrounding structures. There was a perfect anastomosis, but the duodenum and stomach were both distended with liquids.

I am convinced that in this case the sad result was caused by making the union too near the duodenum, for I found that the efferent limb of the jejunum exerted a decided traction on the stomach. Further examination showed a most perfect union at the seat of operation. There was a large orifice five centimetres in length. The mucous membrane of the stomach passed without a break into that of the gut. The serous membranes surrounding the orifice were adherent in a ring of about half a centimetre in width.

Of the five persons on whom I have operated by this method, two died in collapse a few hours after the operation, two of the three others lived, one fifteen and the other fourteen days after the operation, the one dying from starvation due to the anastomosis having been located too near the ileocæcal valve, and the other from the formation of the "vicious circle." The third feels in perfect health, unconscious of the disease which sooner or later will end his life.

I regret very much that I should have put the elastic ligature aside for the Murphy button. Its one disadvantage, the length of time occupied in the formation of the opening, was, as I have said, exaggerated in my mind by my experience with dogs, in which four or five days are occupied in completing the anastomosis. It is, as yet, uncertain how long the thinner human intestine will resist the cutting action of the ligature, but it is my belief that a sufficiently large opening of communication between the viscera would exist toward the close of the second day to permit the passage of water and clear soups. In the mean time nutriment may be conveyed to the patient by means of nutrient enemata.

If the disadvantage caused by its slow action is put aside, the method is superior to all others in simplicity, ease, and rapidity of execution, and safety. There is, with this method, no possibility of complications such as arise when the openings in the stomach and bowel are of different lengths.

Three minutes suffice to put in the Lembert sutures and accomplish the function. Time is given for the serous membranes to become agglutinated before there can be a possibility of infection from the escape of intestinal contents. When it accomplishes its purpose the small contracted rubber cord passes away unremarked in the fæces.

One peculiarity in its application I have noticed which I have not been able to explain. When first applied, the stomach and bowel are corrugated in folds. At the end of twenty-four or forty-eight hours, before the cord has begun, apparently, to cut through the bridge of tissue, the folds have disappeared. I have been surprised, too, at the almost total absence of colicky pain, which *a priori* might have been expected from the severe pinching to which the gut is subjected. The pain complained of by patients is that common to all laparotomies, viz., the soreness of the abdomen.

It would be absurd to be at all dogmatic from so limited an experience. If I venture to state strongly my own hopes, and I may even say convictions, on the subject, it is because I wish a fair trial for a method which has, as I believe, unusual merits. It is adapted for producing anastomosis between all hollow abdominal viscera, except the gall-bladder, although I have as yet applied it to gastro-enterostomy only. I wish to emphasize the necessity of a proper technique as regards:

1. The ligature. This should not be a rubber thread nor a flat band; these lack the necessary strength to cut their way with certainty through the thick walls of the stomach. The surgeon must use a hard, round, smooth, and strong rubber cord, at least two millimetres in diameter.

2. It must include in one loop all of the tissue which it

is desirable to sever. The formation of several small connected loops is an error. In general, the larger the amount of tissue included in the loop the quicker and more certainly will the ligature perform its work.

3. The cord must be drawn as firmly and tightly together as possible, and fastened by a silk thread, which is tied around them. I have myself tied the rubber first in a single knot, fastened the silk around it, and then repeated the process for the sake of greater security. This may not be necessary, as the knotting of the silk thread once would probably serve the purpose.

4. Before inserting the rubber ligature the viscera should be joined together by a row of Lembert sutures for a distance of six or seven centimetres, and when the ligature has been tied a similar row in the front should complete the function. If ever there should be an ill success with the ligature, it will, I believe, occur from its too rapid action. The failures to cut through observed by certain German surgeons have, as I have said, been due to some fault in the technique.

I wish again to urge upon American surgeons the trial of this method. I firmly believe that he who has learned once to use it will never abandon it for any other procedure.

Note.—The term "vicious circle" is applied by German surgeons to a condition, sometimes occurring after gastro-enterostomy, in which the food passes from the stomach into the afferent instead of the efferent limb of the intestine. It then fills the duodenum, soon to regurgitate and pass again into the stomach. The causes of this condition are not well understood. If not relieved, it causes the death of the patient.

CEREALS, EMULSIONS, AND PROTEIDS IN INFANT FEEDING.*

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In the *Jahrbuch für Kinderheilkunde* for September 5, 1900, appears a report of the proceedings of the Thirteenth International Medical Congress, held in Paris last August. The first subject discussed was entitled Die künstliche Ernährung des Säuglings. The opening address on this subject was made by one whom we all honor and respect, our adopted citizen, one who has been for half a century in the foremost ranks of intellectual medical progress in this country, one whose writings and personality are known and felt throughout the world, and whom we, as American physicians, are proud to acknowledge as our teacher and leader in the many questions connected with American medicine, and especially with all connected with pædiatrics.

Dr. Jacobi's views on infant feeding, enunciated some forty years ago, reiterated in Paris and at the last meeting of the New York Academy of Medicine, are well known to us American physicians; have been listened to with respect, have been studied with the interest ever connected with Dr. Jacobi's name, and have been weighed in the balance under the light of modern research, and by the aid of American methods. There is no need, then, to repeat what Dr. Jacobi has said, for it has been for years as well known as Dr. Jacobi himself, whose opinions I for one have always considered with the greatest respect, though I may not always have agreed with them. Following Dr. Jacobi's remarks are reported the views of pædiatrists well known throughout Europe, and as we read these views we are immediately struck not only with the apparent lack of knowledge of the practical investigations which have been made and the practical work which has been done in America during the last six, seven, or even ten years, but also with the fact that they pay no attention whatever to, and seemingly do not even understand, what Dr. Jacobi is referring to when, as a representative of American thought, he is reported as mentioning the American idea of percentage feeding.

Variot, Escherich, and Sevestre enunciate old ideas which American physicians now look upon as relics of the past. For instance, Variot and Sevestre still seem proud that they are able to in certain cases rear human infants on whole cow's milk. Again, Marfan disagrees with the only approach to modern methods which appears in the report of the Congress, and which was stated by Monti when he spoke of whey, but Monti does not seem to attempt to go on with the good work which he began so many years ago, simply because he does not know that his students and admirers of former years are working on his own lines.

The three points connected with infant feeding which I have been asked to speak of to-night, *Cereals, Emulsions, Proteids,* are of very great interest and importance when we wish to compare a substitute for human breast milk. It has so happened that within the last four months I have had unusual opportunities for the study of certain points connected with these questions in substitute feeding. These investigations and results are too extensive to formulate as I would wish, but will appear later in a paper on this subject which will be published by Dr. Franklin White and Dr. Maynard Ladd, of Boston, who have, under my supervision and direction, done some thorough and excellent work in connection with the treatment of milk mixtures with cereals, lime water, plain water, and whey in connection with the subject of milk modification.

I can only, in the time allotted to me to-night, outline the deductions which can be made from these investigations, and from certain clinical work which I have myself carried out with the same materials and under the same conditions as their experiments represent.

Cereals.—The addition of cereals to the milk is chiefly for one of two reasons: First, that the resulting food should have a greater nutritive value from the ad-

*Read before the New York Academy of Medicine, October 18, 1900.

ministration of starch in addition to the chief elements constituting human milk, namely, fats, milk-sugar and proteids. (The question of the use of mineral matter will not be taken up here, as it is not significant to the present discussion.) Second, to aid in the digestion of the proteids, by acting in some mechanical way on the coagulum of the caseinogen so as to render it finer and more closely to approximate the coagulum of human milk. Having once admitted that good milk as a food for infants is unrivaled by any preparation whatever, both from its nutritive and digestive qualities, it is very evident from a nutritive point of view that it is not consistent and is irrational to add an element, such as starch, which never exists in milk, except as a foreign element, and has been proved by Nature to be absolutely unnecessary for nutrition in the first year of life. If, on the contrary, starch is introduced into the milk for digestive purposes, it is supposed to act chiefly, so far as I can learn from those who believe in adding starch to an infant's food, by mechanically rendering the proteids more digestible. This brings us to the question of the mechanical subdivision of the caseinogen coagulum. In order to determine the relative value of adding a cereal diluent in preference to water or lime water or whey, or whether there was any difference in milk mixtures when centrifugal or gravity creams were used, the experiments just alluded to of Dr. White and of Dr. Ladd were made. Rennet and dilute hydrochloric acid were used in very much the same way as have appeared in the experiments of Dr. Chapin and others. The cereal diluent used was barley water, as representing the favorite cereal used by the exponents of those who have adopted the ideas of Dr. Jacobi in respect to barley water. Actual experiments, however, show that there is no difference in the action of the different cereals as diluents if they are all diluted alike, therefore Heubner's preference for a rice diluent does not seem to be of any more significance than Jacobi's for barley water. To obtain the best results the minimum amount of starch should be about 0.7 per cent., and there is no increase in the value of barley water as a diluent when a higher percentage is used.

White's experiments also showed that the employment of a dextrinized starch solution did not appear as a diluent to differ essentially from solutions of milk sugar (lactose) or plain water, and that barley water as a diluent gave a finer coagulum than lime water or plain water.

The more the starch is dextrinized the less is its action on the coagulum of the caseinogen.

Provisional Experiments of Dr. White and Dr. Ladd on Cereals.—A milk modification of fat 3.50 per cent., milk sugar 6.00 per cent., and proteid 1.00 per cent., in which the water had been replaced by barley water, was compared with similar percentage mixtures made up of gravity 16-per-cent. cream, and centrifugal 16-per-cent. cream. The results of their observation showed that the barley-water mixture differed from the other mixtures in that they gave a slightly finer coagulum with hydrochloric acid and rennin, and with the combination of hydrochloric acid and rennin. The barley-water mixture with lime water gave finer coagula than the barley water without lime water. No difference, however, was noted macroscopically or microscopically between the emulsion in the barley-water mixture and in the plain-milk mixtures.

In the light of the present advanced knowledge of the management of the proteids, which will be spoken of presently, we are so independent of this crude means of making a coagulum slightly finer by cereals that it would seem manifestly unnecessary to make use of such means, and entirely foreign to the information which we have received in recent years from physiological chemistry relating to the composition of the total proteids of human milk in comparison with those of cow's milk. My conclusions in regard to the addition of cereals to cow's milk for young infants are that such addition is unnecessary, because better results can be obtained by newer methods, and irrational as it differs so much from Nature's method. These conclusions are supported by a large clinical experience and an opportunity to investigate this question by exact laboratory methods.

Emulsions.—In a certain proportion of cases where cream is mixed with milk, water, and lime water, the emulsion seems to be at times partially disturbed, as evidenced by coalesced fat globules floating on top of the milk in the tubes. Much has been said against this condition by those who believe that such a disturbance of the emulsion contraindicates the general principle of percentage feeding. These same opponents of percentage feeding bring forward certain theoretical explanations, such as the use of centrifugal rather than of gravity cream, and other causes which are purely hypothetical, and which they have never proved to be the real cause. The investigations which I have had made included also the endeavor to solve the question of disturbed emulsion, and are as follows:

Provisional Report of White and Ladd on the Emulsion in Mixtures of Milk.—Modifications of milk giving a fat 3.50, milk sugar 6.00, and proteids 1.00 were used, and also whole milk without lime water and with lime water, heated and unheated.

The modified milk was arranged in two series, one of which was made from a 16-per-cent. gravity cream and the other from a 16-per-cent. centrifugal cream. In each series there were four bottles, two of which contained 5-per-cent. lime water, one of which was heated and the other not heated; of the two remaining bottles, which contained no lime water, one was heated and the other not heated. These specimens of milk were examined soon after bottling; again after they had been carted about the city for from eight to eleven hours, and again twelve hours after they had been delivered and had been set, one series in a warm place, and the other series in a cool place. As a result of these experiments, White and Ladd

have shown that under the above-mentioned varied conditions in no case were there any fat globules noted such as have been observed at times. Morever, they noticed the much greater frequency of such appearances in hot weather, and did not notice them on cold days when the milk was kept under the proper conditions of temperature. The macroscopic and microscopic appearances of the centrifugal-cream mixtures and gravity-cream mixtures were essentially the same as regards their emulsion, and their reaction to dilute hydrochloric acid and to rennin and to hydrochloric acid and rennin combined. In both series the milks which were pasteurized gave slightly finer coagulà than the milks which had not been heated. The fat globules under the microscope showed essentially as fine a subdivision as in an unmodified milk.

The results show that in a majority of cases there was no disturbance whatever in the emulsion in any of the mixtures, and that there was no difference in the emulsions when centrifugal or gravity cream was used. The deductions were that the disturbance of the emulsion occurred seldom under any of the above-mentioned conditions excepting in warm weather combined with much transportation, when it occurred quite frequently, and also that there must be a combination of the motion of transit with heat to produce it.

My present views on this subject are that in my experience, with milk carefully modified in the laboratories, I have of course many times met with this disturbance of the emulsion, and I have never been able to see that it did any special harm, as only part of the emulsion, and a small part, is disturbed, at any rate. Of course it is better to obviate all disturbance, but it has for years been very evident to me that the most vigorous outcries against the disturbed emulsion come from those who have had the least experience with large numbers of milks carefully modified in the milk laboratories, and not from those who by much use of the laboratories appreciate their value as practical, scientific, and exact time-savers to both physician and infant.

Proteids.—The management of the proteids in an infant's food is important. Up to within the last two months it has been customary, when prescribing for a desired percentage of the proteids, to write for the total amount of proteids. This, as was pointed out to me by Dr. Westcott, of Philadelphia, is not a rational way of dealing with the proteids, for it is no wonder that when we prescribe the same total proteids in cow's milk as exists in human milk, the coagulum is larger in the former, for we are, under these circumstances, according to König, giving about five sixths of caseinogen instead of the third that exists in human milk. The total proteids in all milks is practically and for clinical purposes made up of caseinogen and whey proteids. According to the analysis of König the proportion of whey proteids to caseinogen in human milk is about two thirds of the former to one third of the latter, while in cow's milk it is about one sixth of the former to five sixths of the latter. If, therefore, we wish to prescribe a total proteid of 0.75 we should, theoretically, write our prescription for whey proteids 0.50 and caseinogen 0.25. It is evident that young human beings have, as the best food provided for them, one which has a high percentage of whey proteids and a low percentage of caseinogen, while calves require a very high percentage of caseinogen and a very low one of whey proteids. An object which we should keep in view in regulating the lactation of the first twelve months of life is, in the early months, to start with the low percentage of the total proteids, and to make the composition of this low total proteid in the proportion of two thirds whey proteids and one third caseinogen. Then as the infant grows older we should not only increase its total proteids, so that in the latter part of the year it may take the high total proteids of undiluted cow's milk, but also that, at this late period of the lactation, the proportion of whey proteids to caseinogen should, as the total proteid becomes higher, gradually change from two thirds whey proteids to the one sixth contained in the total proteid of cow's milk. Following out this idea, I consulted with Mr. Waterhouse, of the Boston Milk Laboratory, as to how this method of dealing with the proteids could be carried out. We finally decided that it could be done by using whey. Hammarston's analysis of whey is as follows:

Fat	0.23	per cent.
Milk sugar	4.70	" "
Whey proteids	0.85	" "
Water (about)	93.24	" "
Lactic acid	0.33	" "
Salts	0.65	" "

By a series of calculations founded on the analysis of whey, it was then found possible to prescribe whey proteids by using whey, and to obtain the caseinogen by using milk. I then proceeded to write my prescriptions for whey proteids and caseinogen instead of for a total proteid, and requested Mr. Walker to have the laboratory prepared to receive such prescriptions. It was found, however, that it was not possible to furnish all the combinations desired and written for. This, however, may be accomplished in the future, but at present the laboratories can only put up a limited number of percentage combinations, such as I have been lately using and such as are shown in the table given on page following:

By referring to the table it will be seen that a total proteid over 1.50 per cent. cannot at present be obtained, and that the lowest percentage of caseinogen in the various percentage combinations cannot be less than 0.25, while the highest percentage of whey proteids cannot be higher than 0.75. These low percentages of the total proteid, however, are exactly what are needed for young infants or for sick infants with delicate digestion. It will be noticed, however, that we can prescribe any percentage of milk sugar in the various combinations from 4 to 7 per cent., and any percentage of fat from 1 to 4 per cent.

The results of the experiments as to the coagulability

of whey mixtures are still *sub judice,* but so far as they go they bear out the theoretical assumption that the coagula are very distinctly finer than in an ordinary modified milk (with or without barley water) of the same total proteids.

PRESCRIPTIONS THAT IT IS POSSIBLE TO FILL AT THE MILK LABORATORIES.

Fat.	*Caseinogen.*	*Whey proteids.*	*Sugar.*
1.00	.25	.25	4 to 7
1.00	.25	.50	4 to 7
1.00	.25	.75	4 to 7
1.00	.50	.25	4 to 7
1.00	.50	.50	4 to 7
1.00	.50	.75	4 to 7
1.50	.25	.25	4 to 7
1.50	.25	.50	4 to 7
1.50	.25	.75	4 to 7
1.50	.50	.25	4 to 7
1.50	.50	.50	4 to 7
1.50	.50	.75	4 to 7
2.00	.25	.25	4 to 7
2.00	.25	.50	4 to 7
2.00	.25	.75	4 to 7
2.00	.50	.50	4 to 7
2.00	.50	.75	4 to 7
2.25	.25	.25	4 to 7
2.25	.25	.50	4 to 7
2.25	.25	.75	4 to 7
2.25	.50	.50	4 to 7
2.25	.50	.75	4 to 7
2.25	.75	.50	4 to 7
2.25	.75	.75	4 to 7
2.50	.25	.25	4 to 7
2.50	.25	.50	4 to 7
2.50	.25	.75	4 to 7
2.50	.50	.50	4 to 7
2.50	.50	.75	4 to 7
2.75	.25	.25	4 to 7
2.75	.25	.50	4 to 7
2.75	.25	.75	4 to 7
2.75	.50	.50	4 to 7
2.75	.50	.75	4 to 7
3.00	.25	.25	4 to 7
3.00	.25	.50	4 to 7
3.00	.25	.75	4 to 7
3.00	.50	.25	4 to 7
3.00	.50	.50	4 to 7
3.00	.50	.75	4 to 7
3.50	.25	.50	4 to 7
3.50	.25	.75	4 to 7
3.50	.50	.50	4 to 7
3.50	.50	.75	4 to 7
4.00	.25	.25	4 to 7
4.00	.25	.50	4 to 7
4.00	.25	.75	4 to 7
4.00	.50	.25	4 to 7
4.00	.50	.50	4 to 7
4.00	.50	.75	4 to 7

The deductions to be made from this method of treating the proteids are that the management of the coagulum depends on the management of the caseinogen, and that the coagulum will be small and fine if the caseinogen is kept down to its proper relative proportion to the whey proteids. Also that by using whey we can obtain these desired percentages of whey proteids, and that in all probability it will in the future be proved that by using whey the coagulum will be finer than that obtained from the use of barley water or any other cereal diluent. My views on this subject are of course only provisional until further trial has been made of this method, but I have clinically already used it in quite a large number of cases, and I believe that it is safe and practicable with a carefully preserved milk supply, such as comes from the laboratory farms, to prescribe a percentage mixture which will retain its emulsion except under extraordinary circumstances of transit and heat; need not be pasteurized, except for long journeys in hot weather, and will not need to have cereals added for their mechanical action; also that a centrifugal cream no more disturbs an emulsion than a gravity cream, and therefore is preferable as about half a day fresher.

Whole milk has often been sent from the laboratory farms as far as Vienna without any pasteurization whatever, but simply sealed with paraffin, and has arrived perfectly fresh.

I.
SEPTICÆMIA—ACUTE BACTERIÆMIA; AND PYÆMIA—CHRONIC BACTERIÆMIA.

II.
THE INDICATIONS FOR HYSTERECTOMY AND THE INDICATIONS FOR ABDOMINAL SECTION AND DRAINAGE IN PUERPERAL INFECTION.*

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I.

To those interested in the study of pathogenic germs upon which depend the ailments which we are about to consider, I would suggest the perusal of an article "Zur Untersuchung von pathogenen Organismen," by Robert Koch (*Mittheilungen aus dem kaiserlichen Gesundheitsamte,* Vol. i, pp. 1 to 48).

Although it has been proved that there are a number of varieties of streptoccocci, such as—*Streptococcus conglomeratus, Streptococcus involutus, Streptococcus pathogenes longus,* etc. (Fluegge, *Die Mikroorganismen,* Vol. ii, pp. 107 to 109), it has been thought best by most writers to discard the difference in kind. Streptococci have, however, been divided into three varieties according to their virulence; 1st, those which cause only local changes that soon disappear; 2d, those which are "middling virulent"; and, 3d, those of "the highest degree of virulence," which cause death in a few days (*ibid.,* p. 113.)

"Most of the streptococci in pus, from different sources, are one species, having approximately the same morphological characters. Their different effects are due to different degrees of toxic virulence; they are always more virulent when associated with other bacteria, for example, the *Proteus* family." (George Newman, *Bacteria,* p. 301).

For the distinction of the streptococci forms, I refer to Ueber die Unterscheidung der Streptokokken, by Dr. H. Kurth (*Arbeiten aus dem kaiserl. Gesundheitsamte,* Vol. vii, p. 389, etc.)

To show the definitions for septicæmia and for py-

*Read before the New York Obstetrical Society, January 8, 1901.

æmia, and their mingling with the terms septic infection and septic intoxication, which may have a tendency to confuse some readers, I quote a number of the definitions found in recent text-books and dictionaries.

From Dorland's *Medical Dictionary,* 1900, Septicæmia, "A morbid condition due to the presence of non-specific pathogenic bacteria and their associated poisons (toxines and toxalbumins) in the blood. Also called septic infection and septæmia."

Duane's *Medical Dictionary,* 1900, "Poisoning of the blood by bacteria."

Foster's *Encyclopædic Medical Dictionary* gives several varieties, which causes confusion. Septicæmia is "a constitutional, generally acute disease * * * due to the absorption of various putrid substances into the blood." Fulminant septicæmia, "True putrefaction of the blood, as distinguished from septic infection." Lymphatic septicæmia, "in which the infecting material has entered the circulation by way of the lymphatics; it is rapid and severe in its course, and characterized by effusions into the serous cavities." Venous septicæmia, "That form in which the infection proceeds from a putrid thrombus, as in uterine phlebitis."

Cyclopædia of Medicine and Surgery, by Gould and Pyle.—"Septicæmia is an infective disorder produced by the absorption of septic micro-organisms and their ptomaines, generated in an open wound or by inflammation. There are two varieties: septic intoxication and septic infection. Septic intoxication is most generally met with in obstetric cases when a clot of blood or a portion of the retained placenta becomes putrid. This ailment is supposed to be due to the absorption of chemical poisons presumed to be ptomaines. Septic infection is due to the absorption of the ptomaines and the septic bacteria in the blood and to their subsequent proliferation."

Manual of Pathology, 3d edition, by Coplin, 1900, p. 272—"Infected thrombi are constantly throwing into the circulation bacteria or the products of bacterial life, this condition constituting what is known as septicæmia or mycosis of the blood. When the infected material contains pyogenic organisms, the emboli, lodging, give rise to abscesses; such abscesses are spoken of as pyæmic or metastatic, and the disease is known as pyæmia." Page 386.—"Commonly, the organisms active in the production of bacterial intoxications are pathogenic in the true sense of the word. It is not to be forgotten, however, that bacteria normally unable to infiltrate living tissues, and hence properly classified with non-pathogenic organisms, may pullulate in dead tissue, and may elaborate poisons the absorption of which may give rise to grave intoxication. The intoxication arising from the absorption of microbic products is known as septic intoxication, or sapræmia, and the element absorbed, the bacterial product, is termed pyrogenous."

The best definition for septicæmia is given by Coplin, under the term (p. 389) mycoses of the blood.—"In these the bacteria are present and multiplying in the circulating blood in which their products are generated. The intensity of the septic phenomena is augmented by the greater production of the poison, and, not having even the barrier of protection afforded by the necessity of osmosis or absorption, they are enabled to engender lesions not presumed to occur, at least not to the same extent, in either sapræmia or local infection. * * * The embolic production of abscess is the essential element of pyæmia, a disease recognized by surgeons as septicæmia plus the infected emboli to which are attributed metastatic abscesses."

Green and Martin, *Pathology and Morbid Anatomy,* p. 325.—"Under sapræmia (septic intoxication) are included those forms of septic absorption which are due to the introduction of the chemical products of the organisms without the organisms themselves; and under septicæmia (septic infection) those forms due to the introduction and multiplication of the organisms within the body. Pyæmia is a term used to denote those cases of septic absorption which are characterized by the presence of septic embolism and abscesses. The three conditions are frequently associated."

Sapræmia.—"This form of septic poisoning can occur only where extensive surfaces are open to the absorption of large quantities of septic products under considerable pressure. Pure sapræmia, without any septicæmia, is rare."

Delafield and Prudden, *Pathological Anatomy and Histology,* 5th edition, p. 196.—"If from a focus of suppurative inflammation due to micro-organisms, or if from a point of entrance of micro-organisms without local reaction, the germs and their products become distributed through the body, inducing disease, the general condition is called septicæmia. If by the invasion of the body by the micro-organisms and their products new suppurative foci be established, it is now customary to designate the condition as pyæmia."

Stengel, *Pathology,* 2d ed., p. 197.—"From local suppurative foci toxic products may be absorbed into the general circulation, and a condition known as sapræmia results. The infecting bacterium itself may invade the blood-current without giving rise to any secondary collection of pus. This is termed septicæmia. When, however, the microbe is carried to various parts of the body and there gives rise to secondary suppuration, the condition is called pyæmia."

Ziegler's *Pathology,* 9th ed., p. 458.—"If the symptoms of intoxication come strongly to the fore in the disease-picture, then the infection is known as septic intoxication, as toxæmia, or as septicæmia. Preponderance of the metastatic suppuration leads to the form of disease designated as pyæmia or as bacteriæmia. If the symptoms of both these forms of infection appear together, then one speaks of the condition as a septicopyæmia or a pyoseptæmia."

Pyæmia. — Dorland: Pyæmia. — "Blood-poison of

microbic origin; septic infection due to the absorption of pyogenic germs."

Duane: "A condition of septic infection produced by the absorption of germs (especially the *Staphylococcus pyogenes aureus*) from a focus of suppuration." (Streptococci are usually found.—H. J. B.)

Foster's *Dictionary:* "A febrile disease supposed to be due to the absorption of pus or its constituents into the blood. It is sometimes associated with phlebitis or embolism. It results in the formation of secondary abscesses in the viscera, joints, and connective tissue."

Cyclopædia of Medicine and Surgery, by Gould and Pyle: "Pyæmia differs from septicæmia in this respect, that the absorption and dissemination of the poison give rise not only to general disease, but also cause the formation of secondary foci of inflammation, the so-called metastic abscesses, that is to say, pyæmia is septicæmia combined with the formation of abscesses."

Green and Martin: "Pyæmia differs from septicæmia in that the absorption and dissemination of the poison give rise not only to a general infective disease, but also to scattered abscesses. It is always accompanied by some septicæmia.

"Secondary abscesses are of two kinds: 1. Those which follow septic embolism. 2. Those which occur without any apparent local cause."

The definition which I would favor is: Septicæmia (acute bacteriæmia) is a blood disease caused by parasitic micro-organisms invading the circulatory system from some primary seat of infection, the infection producing elements multiplying so rapidly in the blood that the patient generally succumbs within five days after the disease begins. Usually the parasitic germ is the *Streptococcus pyogenes;* other pathogenic germs may, however, be present also.

Pyæmia (chronic bacteriæmia) is likewise caused by the invasion of the system by the *Streptococcus pyogenes* alone or in conjunction with other pathogenic germs, but they disseminate from an infected thrombus. They are not diffused into the system in one large quantity, neither are they possessed with the same *foudroyant* virulence from a clinical viewpoint. The production of the abscesses found in the condition called pyæmia, upon which the pathological difference between the two conditions depends, is due to the parasitic organisms finding a resting place outside of the blood circulation, and there giving rise to abscess formation.

Let us endeavor to explain why there is such a difference in the course of the two ailments, both depending upon parasitic micro-organisms for their production. We know from animal experiments that a small quantity of some streptococci injected into the peritoneal cavity of an animal produces little or no disturbance, whereas a repetition of the injection at short intervals will cause death by septic peritonitis. It has also been proved that a large quantity of similar pathogenic germs injected at one time will cause a fatal issue rapidly.

That there is a decided difference in the virulence of streptococci no observer could deny; for instance, an incised wound of my finger had been infected with pus containing streptococci, and but slight local disturbance resulted. On the other hand, I have been infected, while operating on a woman suffering with puerperal septicæmia (acute bacteriæmia) where the denuded surface was so slight that only the epidermis was pierced, and not a fractional part of blood exuded. On that occasion the local and constitutional symptoms were very severe, resulting in a long siege of illness.

In addition to the clinical observations which have been made, there are numerous bacteriological studies supporting the assertion. I call your attention to the excellent work of Menge and Krönig (*Monatssch. f. Geburtsh. und Gynäk.*, Vol. ix, p. 703); (Stahler und Winkler, *ibid.*, p. 737); (Otto Burckhardt, *Beiträge zur Geburtsh. u. Gynäk.*, Vol. ii, p. 193).

When sepsis originates from infected thrombi, the infection elements, in my opinion, are diffused to a great extent through the lymph-channels by migration through the vessel-wall. Some micro-organisms are, however, carried by the blood into the circulation as the blood comes into contact with the thrombus. Small particles, not infrequently, are dislodged and carried by the circulation into a blood-vessel of such small calibre as to impede its farther progress; there the embolus produces a grave pathological lesion.

It is obvious that pyæmia (chronic bacteriæmia) should have a slower course than septicæmia (acute bacteriæmia), since the micro-organisms in the former are to a great extent disseminated through the medium of the slower lymph circulation and come from an infected thrombus, thus being thrown into the system in smaller quantities; whereas in septicæmia (acute bacteriæmia) they are thrown directly into the blood circulation and there multiply rapidly; as, for instance, infection with virulent parasitic germs on a fresh uterine wound.

Briefly consider the symptom "chills" in septicæmia (acute bacteriæmia) and in pyæmia (chronic bacteriæmia). We may diagnosticate that a patient has metrophlebitis if, in connection with other symptoms pointing to the uterus as being the seat of pathological changes, there is the occurrence of repeated chills about a week or more after confinement. Those chills are probably dependent upon a fresh addition of septic micro-organisms to the system. A woman with general septicæmia (acute bacteriæmia) has usually but one chill, or in some instances she may have none. The infection is intense and all at once. There is no repetition of the chill, because the rapidly propagating organisms are already in large quantity in the circulation.

I need not dwell upon the pathological differences found on autopsy between septicæmia and pyæmia; they are known to you. These differences harmonize with the manner in which the pathogenic germs are introduced into the system, and the difference in the duration be-

tween these conditions. But it is impossible to distinguish septicæmia from pyæmia by a bacteriological examination of the blood or tissues. Most authors classify these two conditions under two headings, septicæmia and pyæmia, whereas the conclusion I can draw from my observation is that they are in reality similar diseases, differing, so far as the symptoms and duration are concerned, only in this: septicæmia is an illness of short duration, while pyæmia is a similar illness, produced by like micro-organisms, of long duration. In septicæmia (acute bacteriæmia) the symptoms begin with intense severity and continue severe until death; in pyæmia (chronic bacteriæmia) there are exacerbations and remissions.

Again, the term "bacteriæmia" is more appropriate from the point of bacteriological science than those usually used, because it at once conveys to the mind the idea that the disease is caused by pathogenic germs. The term "septic infection" includes all ailments caused by micro-organisms diffused from some wound surface. I would propose, however, to limit its meaning to *local sepsis;* then there could be no misunderstanding as to what one meant when he spoke of the conditions which we are discussing to-night. Further, septicæmia, being an acute disease and of short duration, depends upon similar bacteriological matter to that of pyæmia. I would designate this ailment as acute bacteriæmia. To distinguish the ailment of longer duration, pyæmia, I would apply to the latter the term "chronic bacteriæmia."

II.

If the definition and the pathological changes of acute bacteriæmia are kept in mind, it should be evident that a surgical intervention, like extirpation of the uterus, whether performed *per abdomen* or *per vaginam,* or an abdominal section with drainage, and either with or without extirpation of the annexa, must be a futile operation. So far as my observation goes, it is a common error committed by many writers, when reporting clinical cases, that they include under "puerperal septicæmia" (acute bacteriæmia) cases of local septic infection accompanied by serious constitutional symptoms. This leads to confusion, especially when we see reports with such headlines as "Acute Puerperal Septicæmia; Laparotomy; Removal of the Annexa; Recovery"—or "Hysterectomy for Acute Puerperal Septicæmia; Recovery."

I maintain that such a result never has been and never will be achieved by the surgical interventions alluded to on patients suffering with acute bacteriæmia (puerperal septicæmia). For the cure of this, if ever we should be fortunate enough to find a remedy, we must look to a serum treatment.

My decisive assertion is verified by clinical experience. I have performed all the major operations which have been mentioned on a comparatively large number of patients, beginning eighteen years ago with abdominal section, extirpation of the annexa, and drainage of the peritoneal cavity. I began with the operation of vaginal hysterectomy for puerperal infection in 1893; yet I have not seen a single instance of recovery from acute puerperal bacteriæmia (general puerperal septicæmia) even if operations were performed. In my opinion, the only effect from the operation on such patients has been to hasten death. I continued to do these operations for acute bacteriæmia, thinking that it might be possible to save a life, because others had maintained that they had been successful, but it is evident to me that those who made these assertions were mistaken in their view as to what acute bacteriæmia (septicæmia) was.

There is, however, no doubt that the operations alluded to in my title are indicated in the cases of some patients ill with septic infection. It is not so much the question of performing an operation as it is to know when to operate, to individualize, to realize when an operation is indicated. To advise and perform such serious operation is a most responsible position, and requires good judgment. These surgical interventions might, yes, probably would, save some patients ill with septic infection when with less heroic measures they would be doomed.

Although much scientific work has been done, especially in Germany, to bring clearness on the subject of puerperal infection as a whole, yet the question of treatment, including the indication of the operations which this paper deals with, is still clouded with much uncertainty. This is verified by the diverse therapeutic measures in vogue and is due mainly to our inability to make exact diagnoses. It cannot be doubted that different infection elements cause different symptoms, neither can it be denied that similar infection-producing elements give rise to a varying clinical picture, this depending upon the seat of the agents to which the infection is due. It may be argued that it is not possible to make an accurate diagnosis. This is true in the beginning of infection symptoms in the case of some patients, because the symptoms resemble each other frequently, but observing the patient carefully for two or three days usually allows us to come to a correct conclusion, if also other diagnostic aids are resorted to. Some patients ill with sapræmia may show such severe symptoms that they simulate acute bacteriæmia, but a short observation will usually decide the question.

Occasionally patients who suffer from toxæmia (sapræmia) may present positive indications for the removal of the organ giving rise to the infection. To illustrate, B. S. Schultze, Heilung schwerer Puerperalerkrankung durch Amputation des septisch inficirten Uteruskörpers *(Deutsche med. Wochenschrift,* 1886, No. 44.): The patient was delivered of a dead child on September 7th. The placenta did not follow, and upon traction the cord was torn off. The physician subsequently called could not reach the placenta to remove it. In the hospital it was likewise found impossible to remove it, even under full anæsthesia. She began to show symptoms from in-

fection two days after delivery, and her condition became very much worse; she had frequent chills and high temperature, so that it was evident that she would die if the cause of the infection could not be removed, especially as peritoneal irritation had begun. On September 13th a supravaginal amputation was made. The uterus bicornis was gangrenous nearly to its peritoneal covering. The placenta was decomposed. Recovery.

Albert Sippel (*Centralbl. f. Gynäk.*, Vol. xviii, p. 667) reports a case in which the placenta was removed by manual extraction, which was followed by hæmorrhage. Some placental remnants remained in the uterus. Sippel could not remove them either, because of the softened condition of the organ. The patient was extremely anæmic from the loss of blood. All treatment instituted did not better the toxic symptoms permanently, which evidently arose from a septic endometritis. Thirteen days subsequently to the delivery, supravaginal amputation was performed. Recovery.

Fehling condemned the procedure vigorously in a discussion, but, on careful perusal of the conditions existing, I must coincide with Sippel, because, from his description, I believe that an infection by septic microorganisms had been added to the infection by saprophytes, an occurrence not uncommon in sapræmia.

While it is true that an infection usually originates in the cervix, in these two instances it is clear that the cervix was not affected, and to perform a vaginal hysterectomy under such conditions, the uterine body being so soft that during the operation by the vaginal route the organ must necessarily have been mutilated, and the peritoneal cavity contaminated with the foul contents, would have been unwise.

Here, then, we have a clear indication for abdominal hysterectomy. The only question which in such instances needs discussion is that of whether supravaginal amputation with extraperitoneal treatment of the pedicle or total extirpation should be performed. I have, on former occasions, placed on record my view on this point as favoring total extirpation, because we can guard the peritoneal cavity from contamination by appropriate safeguards. This was also done by Siedentopf (*Centralbl. f. Gynäk.*, Vol. xxii, p. 92), who followed a Cæsarean section on a septic uterus with total extirpation of the organ. Recovery. This course has also been adopted by others.

W. A. Freund (*Beiträge zur Geburtsh. u. Gynäk.*, Vol. i, p. 397), in view of the thrombosis of the internal spermatic vein on the side of the placental site, in instances of chronic bacteriæmia, proposed and did hysterectomy, with excision of the thrombotic vessels, twice, both times with a fatal result. It seems to me that this is a useless procedure in instances in which blood-vessels outside of the uterus are thus affected, because the infection elements have probably found lodging in other parts of the body. He, too, is of this opinion.

The most exact and scientific contributions bearing on the indications for extirpation of the septic puerperal uterus have been published by Prochownick (*Monatssch. f. Geburtsh. u. Gynäk.*, Vol. ix, p. 756, and *ibid.*, Vol. x, p. 14). He reports five cases in which hysterectomy was performed.

CASE I.—A criminal abortion at the third month. The products of conception were expelled completely. Rectal temperature 105°, pulse 140. The patient had three chills. The heart and lungs were normal. The urine contained some albumin. A smear preparation of blood from the index finger and expressed blood from the placenta contained many organisms, and only streptococci. Vaginal hysterectomy on the same day with clamps. One additional chill, with pulse rate of 160, but then the patient began to convalesce. In the parenchyma of the uterus numerous small abscesses were found. A wound of the uterus was not found. Pure streptococci cultures were obtained from the abscess cavities. According to the author, the infection was probably caused by an injury of the placenta with a uterine sound.

CASE II.—Premature birth (seventh month). Retention of placenta, which could not be removed because of myomata in the lower segment of the uterus. From the second day on, chills and fever. Supravaginal amputation. Slow recovery. No blood examinations were made.

CASE III.—Abortion in the third month, probably criminal. Retention of conception products, which were removed with a dull curette. Frequent chills and fever. First blood culture, negative. Cultures from interior of uterus showed only saprophytes; another blood culture, fourteen days after the abortion, showed positive results. Innumerable streptococci were found. Vaginal hysterectomy with clamps on the following day. Apparently the infection-producing process was limited to the uterus, but the chills continued, and the patient gradually sank and died thirteen days after the hysterectomy. Subsequently frequent blood cultures after the operation continued to show pure streptococci. On autopsy, the only serious lesion was found in the upper portion of the right lung, where a small metastasis containing a mixture of microorganisms was found. Serum treatment begun at the time of operation had no effect on the reduction of the number of streptococci.

CASE IV.—Abortion in the sixth week, from physical exertion. The patient was infected by her physician, who had just previously cleaned a septic uterus. Blood cultures showed streptococci. The sepsis-producing elements seemed, however, limited to the uterus. Hysterectomy with clamps; temporary improvement only. Death in thirty-six hours after the operation. (This was probably an instance of acute bacteriæmia [septicæmia], the blood showing pure cultures of streptococci shortly after infection by her physician.—B.)

CASE V.—Destruant mole in a patient aged fifty-three years. Frequent chills, but the blood cultures remained negative. The secretions from the uterus, however, showed streptococci infection. Hysterectomy with clamps. Recovery. For the details of this case see article by M. Voigt (*Monatssch. f. Geburtsh. u. Gynäk.*, Vol. ix, p. 63).

Prochownick proceeds as follows, as by information kindly furnished to me by him: "When called to see a patient seriously ill from puerperal infection, especially one who has chills, I take with me a sterile syringe, in sterile packing, three test-tubes with sterile bouillon, and

one empty sterile test-tube. The blood for the culture is taken, if at all possible, at the time of the ascending temperature curve (after the chill). The patient's arm is cleaned with soap, brush, and alcohol, then rinsed with sublimate solution. A gauze bandage soaked in sublimate solution is then wrapped around the elbow joint and left on from ten to fifteen minutes. Then moderate compression is made on the upper arm, and the surface rinsed off again with alcohol. Ten cubic centimetres of blood are aspirated from the median or basilic vein. From this two bouillon tubes are inoculated each with from 1½ to 2 cubic centimetres of blood. The third bouillon tube is retained for control purposes. The remaining blood is put into the empty tube. As soon as possible the three bouillon tubes are put into the oven. The tube containing the blood only is placed in a cool place until the serum has separated. 1. After six to eight, twelve to fourteen, and twenty-four hours, with a platinum point a smear preparation is made. 2. An agar or glycerin-agar tube is inoculated. A few times results were obtained after from six to eight hours, usually after fourteen hours. If positive results were obtained, they were usually pure streptococci cultures."

An interesting article bearing on puerperal infection and the variance in the clinical picture of streptococcus infection was written recently by M. Walthard, Der Diplostreptococcus und seine Bedeutung für die Aetiologie der Peritonitis puerperalis (*Monatssch. f. Geburtsh. und Gyn.*, Vol. xii, No. 6). He cites animal experiments and clinical observations with diplostreptococci. Because these streptococci show less tendency to chain-formation than the *Streptococcus pyogenes*, and because in bouillon cultures numerous diplococci are seen alongside of streptococci chains, Tavel has termed them diplostreptococci. Walthard's clinical observations are:

Case I.—Diplostreptococcus infection by way of the uterine mucosa, then the tubal mucosa and peritonæum. Death fifteen days after confinement. No streptococci were found in the blood or in the lymphatics.

Case II.—Diffuse puerperal peritonitis; puerperal uterus complicated by myofibromata. Diplostreptococcus infection. Abdominal hysterectomy; flushing with saline solution: drainage; recovery.

Case III.—*Streptococcus pyogenes* infection. Death on the seventh day after confinement, which is alleged to have been normal, and with the possibility of contact-infection excluded. The only point of entrance found for the transversely oval streptococci (the diplostreptococcus being oblong-oval) existed in the cervix, where the laceration was covered with grayish membrane.

From a pathological viewpoint, the *Streptococcus pyogenes* invades the peritonæum through the medium of the blood-vessels and lymphatics, whereas the diplostreptococcus may leave the blood-vessels and lymphatics intact, and encroach on the peritonæum by progressing on the uterine mucosa, then the mucous membrane of the oviducts, and then the peritonæum. For the morphological and bacteriological differences between these streptococci forms I refer to the original article. It is to be regretted that the author made no blood cultures from the living patients, or before operation in Case II, as suggested by Prochownick.

My own blood investigations in such cases are based entirely upon smear preparations obtained from a finger, and these were unsatisfactory. In two instances when streptococci were finally found, previous examinations having proved negative, the patients succumbed. In three successful instances, in which I based my indications for operation only on clinical conditions, the blood examinations were negative, the secretion alone showing streptococci. This I deem insufficient for a scientific report, because we know that we may find virulent micro-organisms in the uterus eight or ten days after the conception products are expelled, and yet the patient may not be seriously ill, the condition of the uterine parenchyma being such as to act as a barrier against the entrance of the micro-organisms into deeper structures.

In this connection I would say, however, that it would not, in my opinion, be just to a patient to wait always for an operation until positive evidence was found in the blood. To illustrate—in 1893, which was before I attempted blood examinations, I saw in consultation a woman who had been delivered three weeks previously. On the sixth day after delivery she had a chill followed by a temperature of 104° F. Two days later she had another chill with similar elevation of temperature. Her physician, probably fortunately for her, abstained from curetting and local treatment, relying on vaginal douches, stimulants, and quinine. The course of her illness continued with exacerbations and remissions. When seen by me she was greatly emaciated, the temperature 103° F., pulse 124 and feeble. The thoracic and abdominal viscera were normal. There was no exudate in the pelvis, but the uterus was large, boggy, and very sensitive to touch. Examination of the interior of the uterus under anæsthesia did not reveal the presence of placental tissue. Immediately after the examination the patient had another severe chill, with an elevation of the temperature to 105.8° F., pulse 156. In view of the gradual sinking of the patient, the irregular chills, the high fever, the size and consistence of the uterus, I diagnosticated the condition as septic metritis, and because of the general condition of the patient, and the recognition of the fact that my examination had perhaps disseminated the germs more, as evidenced by the severe chill, high temperature, and pulse rate, I proposed hysterectomy, which was performed on the following morning. The microscopical examination of several sections of the uterus proved the diagnosis correct. The tissue of the organ tore as though it was decomposed. The result of the operation was that the patient had no more chills; the highest temperature after the operation was 101° F. She was able to retain her food, which she could not do before—in short, she made an uninterrupted recovery. Some may say that recovery would have taken place without such radical

treatment. Perhaps it would, but I doubt it, and the almost sudden change in the condition of the patient gives me reason to be satisfied with the course adopted, and I should repeat the same treatment now, even with a negative result of a blood examination, were I to meet with a similar condition.

I realize the great difficulty in answering the questions of if and when a patient may be saved by hysterectomy, and I believe it is impossible with our present knowledge to lay down absolute rules for the performance or omission of the operation. One's conscience must be the judge, but for general guidance I would suggest the following indications for hysterectomy, if it is evident that less heroic treatment is useless:

1. If, after a full-term delivery or an abortion, there are no conception products in the uterus, and the patient has fever with exacerbations, chills, and a small and frequent pulse (120 to 140 or more), if careful observation should show that the infection comes *from the uterus alone,* that organ being enlarged, and relaxed in its consistency, if there is no evidence of peritonitis, the parametria being free, if streptococci are found in the uterus, and, especially, if the blood shows the presence of pathogenic germs, as in Prochownick's patients.

2. If there are decomposition products in the uterus, as in the instances reported by Schultze, Sippel, Prochownick, Stahl, and others, which cannot be removed satisfactorily *per vaginam;* if, on doing a Cæsarean section, the uterus is found septic, then an abdominal hysterectomy is indicated.

Abdominal section with drainage is indicated in diffuse septic peritonitis when there is no evidence of an exudate in the pelvis. The annexa are to be left undisturbed unless there is some positive indication to do otherwise.

OBSERVATIONS ON THE TOXIC EFFECTS OF SOME COMMON DRUGS.

By PHILIP F. HARVEY, M. D.,
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THE physiological distinction between a food and a drug, broadly stated, is that the former is absorbed by the lacteals after conversion into a diffusible peptone, and the latter directly by the veins in an unchanged form; that a food is further changed by a process of metabolism and excreted or stored up in a form different from its natural one, while a medicine passes through the system unchanged. It is therefore reasonable to regard a substance which resists the functional activities of the bodily organs as a body foreign to their normal use, and to believe that, even if exhibited in doses which appear to be tolerated, many such substances insensibly produce effects injurious to the organic integrity.

There is hardly any department of medicine so recondite as that of the *modus operandi* of drugs. Much, it is true, has been made clear, but it contains many dark corners. Function and nutrition may be modified by the action of medicines on the protoplasm, on the enzymes, on the micro-organisms, on the blood, etc., and this modification may proceed to injury, not only by idiosyncrasy, cumulative action, etc., but by an insensible change in organic structures, due to prolonged use.

It is not my purpose, however, to enter into the scientific consideration of the mode in which drugs operate to produce their physiologic or therapeutic actions, but to indicate in a practical way some of the injurious effects which follow the protracted use, and in some instances the temporary use, of authorized doses.

There is a growing tendency toward greater conservatism in the treatment of chronic ailments by the use of drugs, and, happily, nowadays we do not see patients with necrosed inferior maxillæ, or caries of other parts of the osseous system from the excessive use of mercurial salts. But the disposition to push certain medicinal substances to and beyond their physiological tolerance is only too manifest and is sanctioned in the works of most authors.

Experience is a costly teacher, but in its school we have learned and must continue to learn our most valuable lessons. Where we make one permanent addition to our therapeutics by scientific deduction, we add dozens by practical experience.

It has repeatedly been my observation that the curative action of medicines in chronic diseases has been defeated by the harmful effects to the digestive, nervous, or circulatory system, following the administration of doses too large to be tolerated long enough to ultimately produce the slow alterative change required to cure the morbid condition. I think one of the most striking examples of this within my observation is the following case:

Miss C. applied to me for the relief of a pustular acne of the face of long standing. She was naturally a remarkably handsome girl, but considerable disfigurement of her face existed at that time, and she wore a thick veil to conceal her features. She stated that she positively could not take arsenic or mercury in any form, that many physicians had prescribed one or both for her, only to cause her great suffering, and she would not take any more of either. I told her the prescription I would give her would produce no such effect, and that she could take it for months without injury. I gave her very minute doses of the bichloride of mercury and chloride of arsenic. She had suffered from this acne for seven years, had never been benefited by arsenical or mercurial preparations before, or by any other treatment during that time, but in three months after the commencement of the treatment by minute doses she was well.

Many times we are in too great a hurry to achieve a certain end, and in consequence overload the bridge we rely on to carry us over; very much as a captain does when he marches his company in column of fours across

a weak bridge, which breaks down under the load, but which would have taken the company over safely in single file.

Hartzell (*American Journal of the Medical Sciences*, September, 1899) mentions arsenic when used in the usual doses in the treatment of psoriasis as an ætiological factor in the development of epithelial cancer. He cites eleven cases, eight of which had been under prolonged treatment by arsenic, and the direct influence of arsenic appears to be strongly indicated by the antecedent appearance of palmar and plantar keratosis, such as is now recognized as caused by the protracted use of arsenic. Reference is made to the suggestive observation of Geyer among the arsenic miners in Reichenstein, Russia, that carcinoma frequently occurs among them, having its beginning in "arsenic warts" on the fingers.

That such a grave effect actually follows the internal use of arsenic as affirmed is rendered all the more probable by the occurrence of other irritant effects now well established by observation, such as dermatitis with sensations of burning, proceeding even to pustulation; various lesions of the skin and mucous membrane, multiple neuritis simulating locomotor ataxia, nephritis, pigmentation of the skin, asthma, and vitreous opacities of the cornea.

In addition to the well-known train of symptoms following the continued or too free use of mercurials, there are others more insidious and less well known; one example of which will suffice in this connection: The mercurial treatment of syphilis in the infant is attended with serious danger to its future well-being, as it has been established by observation that mercury is apt to cause injurious effects on the enamel of the permanent teeth. It is, moreover, very doubtful if mercury at this age has the power to obviate attacks of keratitis, otitis, and other affections incident to puberty and afterward. An infant should not be put upon mercurial treatment unless called for by symptoms. (*Twentieth Century Practice*, Vol. xviii, page 381.)

I have met with persons who were so susceptible to iodoform, that a minute quantity dusted on a wound would at once bring on symptoms of general systemic poisoning. Scarlatinal rash, malaise, nervous disturbance, headache, insomnia, vomiting, and delirium are all effects which may be developed by iodoform absorption; and, more remotely, the drug is capable of causing fatty degeneration of the internal organs and œdema of the pia mater.

Bromide of potassium escapes very slowly and unchanged from the body, and may be found in all the secretions. It diminishes tissue waste and its long use renders breathing slower. Albertoni found that it decreased the excitability of the motor cells of the brain, and diminished the development of thought. The hydrochloric acid of the stomach sets bromine free, and acne, fœtid breath, drowsiness, feebleness, blunted faculties, and general torpor may follow its continued use, and some patients are much more easily affected than others. Féré asserts that naphthol or salol will prevent acne and digestive disorder.

Iodide of potassium causes symptoms somewhat similar to the foregoing, in some patients, and Eaton reports a case in which acute iodism developed twenty hours after taking three grains (*Philadelphia Medical Journal*, October 28, 1899).

During the Spanish-American war, typhoid fever made sad havoc among our troops, especially in our home camps. I know from personal observation in some instances, and from report in others, that the exhibition of strychnine as a heart tonic became in many hospitals a routine treatment in that disease. From the effects it produced in certain patients who came under my observation as a consultant, I am of opinion that many lives were sacrificed to its injudicious use. The symptoms, in brief, presented by these cases, were excessive cardiac debility, denoted by a thready pulse, cyanosed surface, and great irregularity of action. In every instance the suspension of the strychnine sufficed to restore the heart function to a more normal condition.

The works on therapeutics of to-day class strychnine, with reference to its action on the heart, as a tonic; but Headland affirmed that it had no such action. The weight of evidence is in favor of its action as a heart stimulant up to a certain point, and such, no doubt, is the correct view. Theoretically, strychnine might be viewed as a heart sedative on account of its stimulating action on the vagus centre, but this depressing influence is overcome by the direct stimulating action on the heart muscle. Its routine or long-continued use in typhoid fever is regarded by the writer as fraught with danger, for the reason that it spurs on an organ which is undergoing a progressive weakening from the toxic assaults made upon it by the disease and hastens the advent of cardiac exhaustion. In the opinion of the writer, the long-continued use of strychnine to stimulate the heart in typhoid fever is unscientific and more prone to prove hurtful than beneficial. Hare says: "In some cases of exhaustive disease the prolonged use of full doses of strychnia may produce a talkative delirium with great peevishness, and, if the drug is continued, this condition may pass into a state of temporary insanity." It should be used only during short periods to bridge over some interval of danger.

The writer has many times seen cases in which quinine acted as a poison, with symptoms familiar to all experienced practitioners. Dr. J. D. Head reports a case* in which one eighth of a grain sufficed to cause an acute universal erythema with desquamation and headache. Dr. F. F. Simpson reported two similar cases,† one suffering general desquamation, including the nails, and the other going into collapse and recovering under stimulation; and Dr. P. F. Eaton reported a case in

Philadelphia Medical Journal, October 28, 1899, page 791.
†*Ibid.*

which quinine produced intense prolonged headache and insomnia.*

Some very interesting observations upon the toxic action of chloroform have been reported by Dr. Paul A. Heinick, in the *Medical Standard* for July, 1899. According to this, Heintz has proved by autopsies and experiments that chloroform inhaled for long periods produces, through a slow secondary action, pathological changes in the organs capable of causing death, one or several days after anæsthesia. He finds that the elimination of chloroform inhaled is completely effected only in about a week. The secondary action of chloroform exhausts itself in about a week also. He believes that ninety-five per cent. of air mixed with the chloroform is necessary to lessen the danger of an overdose.

It is probable that the rate of elimination has a direct bearing upon the systemic action of drugs, those passing rapidly out of the system being less prone to act injuriously than those eliminated slowly. Idiosyncrasy, degree of functional activity, and many inherited tendencies respond in their own way to the influence of drugs, and the careful practitioner will give them due consideration before putting his patients under treatment, especially in chronic diseases.

The subject is one of great interest and importance, and deserves more careful and earnest study than has hitherto been given it.

The writer, however, at present can only touch upon the main theme and embody in this brief note a few data which have fallen under his notice without special research.

Zamboanga, Philippine Islands.

THE TREATMENT OF INFLUENZA.†

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Much stress was laid in former years on the doctrine of change of type in acute diseases. It was supposed among our forefathers, for example, that pneumonia was of a high sthenic type, and that the reason why vigorous antiphlogistic measures, socalled, were no longer as successful in modern practice as in previous generations, was because of a change in the type of the disease itself. A plausible support to this theory was the undoubted difference in severity from one year to another of prevailing epidemics of the exanthemata, but, on the other hand, in these affections, when the comparison is instituted over a series of years instead of between two successive seasons, it is plain that they have altered but little, if at all, from the times of their first recognition in medical literature.

A present exception to this statement, however, I think can be made out in the case of the influenza. Its epidemic prevalence in this city and throughout the country during the past month is about as extensive as it was when it made its first invasion, in 1889-1890. But nothing is more certain than that its clinical accompaniments now are much milder, as a few illustrations from my own personal experience will suffice to show.

In 1890 numerous suicides were reported of persons attacked by the grippe, one of whom was a valued personal friend of mine and who, without the least known reason to his friends, and evidently when impelled by a very sudden impulse, threw himself out of a window. I also had four cases of sudden insanity, all delusional in character, in no case with symptoms of acute mania, and all very transient except the last, which continued for some months and gave rise to legal complications. I saw in consultation two cases of chronic meningitis with very serious sequelæ which followed influenza, and a very considerable number of cases of neuritis, both of nerve trunks and of obstinate peripheral neuritis. In one case also with chronic cerebral symptoms, accompanied by dilated pupils for several months, before recovery very extensive desquamation of the skin occurred. I also met with three cases of extraordinary acute gastritis, one of them rapidly fatal. Several cases also of the most profuse sweating that I have ever witnessed, one being that of a lady, in which it dripped from the bed upon the floor. Also several cases of acute nephritis, one in a physician which ended in chronic Bright's disease, and so on. In short, a more universal and virulent poison than this infection appeared to be on its first visitation has hardly been recorded in the annals of medicine: for, though cholera, yellow fever, and the plague have each been at times more destructive of life, yet they are always very specific and well-defined in their symptomatology according to their own special lesions, while influenza seemed to make its attack along the whole line as it listed.

My own personal experience with my first and only attack was in that epidemic, when, without any warning whatever, while I was returning in my carriage from a consultation in a case of grippe pneumonia, I felt as if a disc of iron had transfixed my temples. It was with difficulty when I got home that I reached my bed. Excruciating pains in the back and limbs, high fever, and a sense of intense prostration lasted through the night and all the next day. The catarrhal symptoms were very slight. In three days I was able to sit up, but there then followed an experience which hundreds that winter described as their own also after *la grippe*. For fully six weeks I felt as weak in my muscular system as if I had suddenly passed seventy years of age. It was not so much that I would be easily exhausted by muscular exertion as that I did not seem able to exert myself from the start, but rather seemed to have all the debility of advanced life settled upon me.

The other attendants of the influenza are familiar to all and seem due primarily to general diminution of the resisting power of the system to bacterial invasion. We

*Ibid.

†Read before the Section of Medicine of the New York Academy of Medicine, January 15, 1901.

may, in fact, regard this lowering of vital resistance as one of the most serious results of this infection at all times. Pneumonias occurred with all the characteristics of the lobar or croupous variety, and were exceptionally fatal.

Bronchopneumonia, of course, followed suit, engrafted upon the influenzal catarrh, and carried off multitudes of the aged. Pulmonary phthisis increased to more than double its usual prevalence, and whoever had a vulnerable part in his body was very likely to have his trouble there greatly aggravated. In many a fatal case of chronic disease the beginning of the end would be very probably dated from an attack of the influenza.

On the other hand, my experience in the present epidemic has been that of meeting with very numerous cases of simple catarrhal fever, beginning as often gradually as suddenly with malaise, chilliness, coryza, and bronchitis, accompanied with the usual train of achings in the head, back, and limbs—in short, with all the characteristics of a severe old-fashioned cold, with an increased tendency to general debility. As might be expected, the most common of the serious complications are connected with the bronchi and lungs.

Now, I scarcely believe that this change in the clinical aspects of the disease is owing to any change in the character or properties of the specific bacillus which is the cause of the infection, but rather that it is due to the same kind of modification in the system of those at present attacked which a previous vaccination causes in a subsequent infection of variola. When we consider how great the number now is in any community who have had one or more attacks of the influenza since 1890, the greater the probability is that those previous attacks have rendered them less susceptible to the worst effects of the infection, so that it now develops in them in a milder form. I am the more confirmed in this inference by two cases which I have lately seen which presented the same severe constitutional conditions which were so common in the first epidemic, and both these patients had never experienced an attack of influenza before. Moreover, I am of the impression that in young children it is this year relatively more severe than in adults.

As to treatment, my own experience and sensations during my illness with this complaint led me to deal with it symptomatically somewhat on the following lines, and, as we do not yet possess either antidote or antitoxine for the poison of Pfeiffer's bacillus, we can only prescribe for its symptoms. In the first place, I have long relied upon aconite as the best remedy with which I am acquainted for the general achings which characterize the onset of so many febrile infections. Not only is it one of our most effective analgetics for this class of pains, but it counteracts the accompanying vascular derangements, particularly of the upper respiratory tract. I believe that I have often aborted an acute tonsillitis by administering early a dose of the tincture of aconite sufficient to cause this drug's specific sense of constriction in the throat. At the beginning of the febrile infections, including that of croupous pneumonia, aconite has seemed to me not only to relieve the systemic pains, but to modify much for the better any local capillary stasis setting in with the onset of the fever. The heart under its influence becomes much quieter and the pulse softer; all results more than temporarily beneficial, as the subsequent course of such acute affections often appears to be better for timely dealing with the initial derangements. This particular action of aconite seems to me further promoted by the addition of a small dose of Dover's powder.

One member of the coal-tar series has also proved in my hands very serviceable in these febrile pains, and that is phenacetine, because its analgetic action, especially when combined with aconite, is more marked in influenza than in any other affection. I would not give it in influenza in doses sufficient to reduce temperature, for temperature here is a very secondary matter; and, moreover, in antipyretic doses it may have the undesirable effect of weakening muscular function, which, in the case of the heart, is to be dreaded in a grippe bronchitis or pneumonia. But, combined with quinine, it may have another action also; namely, these two drugs may not improbably act as true antitoxines to the influenza poison. There is no *a priori* reason why these blood antiseptics may not be effective as such against this infection, and only experiment can determine the question. My own experience is decidedly in favor of this hypothesis, for these combined agents have seemed to me to mitigate the symptoms and to prevent the sequelæ of the disease, evidently not by their antipyretic properties, but by a specific neutralization of its effects, as is indicated by the less favorable course of those cases in which these medicines have not been taken.

Influenced by these considerations, I devised for my own case while suffering from the grippe a prescription containing in each dose $\frac{1}{6}$th of a grain of solid extract of aconite, 1 grain of Dover's powder, 4 grains of phenacetine, and 3 grains of quinine, made into two pills; three doses, or six pills, to be taken on the first day of the attack, and continued daily as long as a febrile temperature lasted. As soon as the temperature declines, whether on the second day or subsequently, the dose is reduced by one pill a day, till three, or one half the first daily dose, are taken, and this is continued until all catarrhal symptoms have subsided. My experience with this prescription was so uniformly favorable that I often had occasion to recommend it in consultation, with the result that by the request of different physicians the wholesale firm of the Messrs. Schieffelin & Co., in this city, have put up the prescription under the name of the compound phenacetine pill, the formula for which is printed on the labels upon the bottles. Owing, apparently, to the extensive sale of these pills, they are also manufactured by McKesson & Robbins, of this city; Upton & Co., of Kalamazoo, Michigan, and other wholesale druggists. Some patients who are very susceptible to aconite find the dose in this for-

mula causes numbness and tingling, in which case its proportion may be reduced.

When coryza and nasal catarrh are leading symptoms the peculiarity is often developed in influenza of a sudden shifting of the trouble from the nasal passages to the trachea and then back again. In such conditions a pill of a quarter of a grain of extract of belladonna with a grain or two of camphor seems to afford relief. To this should be added a flushing of the throat by a fountain or a Davidson syringe with a quart of hot water in which two teaspoonfuls of potassium chlorate and five drops of oil of peppermint are dissolved. This measure often affords a marked relief by causing a great flow of mucus from both nose and thorax with the return current from the mouth. On the other hand, a very troublesome complication occasionally occurs by the supra-orbital sinuses becoming involved, with attacks of excruciating pain and often photophobia. It is curious that these pains are very commonly periodical, commencing at a definite time in the forenoon and measurably subsiding at night. The specific for these pains is the fluid extract of ergot, in drachm doses, repeated every three hours if necessary. The addition of a drachm of elixir of cinchona makes it better borne by the stomach. I once published a paper on the use of ergot in periodical neuralgias, not necessarily confined to the head, and in 1890 I had frequent illustrations of its curative powers in these pains following influenza whose seat was sometimes in the sides of the thorax, in the abdomen, and in the sacrum or pelvis. In each case morphine hypodermically, with large doses of quinine, Warburg's tincture, etc., had been unavailingly prescribed, while the ergot afforded immediate relief.

One accompaniment, or sequel, rather, of influenza may be mentioned here, and that is the supervention of a markedly paroxysmal dry cough which has nothing to do with bronchitis, but is evidently of a nervous character and which may persist for weeks after other symptoms have subsided. It is apt to be especially troublesome at night. I have generally found it yield to doses of twenty grains of the ammonium bromide with ten of antipyrine.

In no other infection does an intercurrent bronchitis so often become serious as in influenza, particularly in patients past middle life with more or less endarteritis and habitually high-tension pulse. The course of the affection very commonly is that after a week or more of the ordinary catarrhal symptoms, the temperature rises rather suddenly from 99° to 102° or 103° F. The cough may then become less frequent but more severe when it does occur. Insomnia then may be much complained of, and the physician be disappointed at his morning call by the discouragement of his patient from passing such a bad night. He changes his remedies from day to day only to find each improvement very temporary and a bad relapse follow. After a time disquieting signs of respiratory failure develop, with the constant presence of râles at both bases along with lessening power of expectoration. This condition calls for active treatment, and it is well to note what the chief elements in its production may be. I have long thought that the influence of the mechanical factor of unexpelled viscid mucus in the smaller bronchi has been too much overlooked in accounting for the graver symptoms in bronchitis. When we note the inevitable and peculiar pneumonia which follows the plugging of a main bronchus by a foreign body, it seems natural to infer that a like occlusion of the smaller bronchi by tough plugs of secretion will entail a local pneumonia of the same kind in the areas supplied by these bronchi, and it is the supervention of this condition which is marked, as I believe, by the new rise of temperature. This bronchopneumonia, therefore, is not by an extension of the catarrhal process itself from the bronchi to the air lobules, but rather is allied to the serious mechanical pneumonia of occlusion, which, as is well known, disorganizes the delicate structure of the air-vesicles and soon implicates the interstitial tissues with consequent frequent caseation of the inflammatory products. The chief indications for treatment, therefore, would seem to be to liquefy the retained secretions as effectively as possible, and simultaneously to stimulate the function of expectoration. It is remarkable how easily the bronchial tract is sometimes freed from contents which are really fluid, as we often note a copious bronchial hæmorrhage got rid of with so little coughing that the patient may be uncertain whether the blood came from the lungs at all. Now, I have been struck with the apparent failure of the preparations of ammonia to subserve this purpose of promoting expectoration when the inflammation has reached the smaller tubes, compared with their apparent benefit in inflammation of the trachea and larger bronchi. My own remedy, which I have often advocated for the past twenty-five years for converting a viscid bronchial secretion into a freely flowing liquid, is the emulsion of linseed oil. This emulsion is now sold extensively throughout the country as a proprietary article, and during the past year I have been in frequent receipt of other linseed emulsions made and sold as proprietary articles by druggists both in this and in other cities. All that I wish to say about it now is that I do not know of any so-called expectorant in bronchitis which equals it, as I have lately had occasion to note in consultation cases of influenza when other remedies for this purpose had been previously fully but vainly tried. I always add to each dose of the emulsion a twelfth of a grain of morphine and eight grains of chloral, simply because the nervous element of irregular bronchial muscular action is always a hindrance to efficient expectoration in bronchitis.

Adjuvants which should not by any means be neglected are, first, thorough dry cupping of the chest, both anteriorly and posteriorly. We scarcely possess a more powerful stimulant to the bronchial muscles than the peculiar reflex action of this cutaneous impression, both to restore their rhythm, as is shown by the prompt arrest of

the sibilant wheeze, and by increased power of both acts of respiration following it. We should not be afraid of repeating this application too often, but the weak cupping by glasses with rubber bulbs is wholly useless. Following the cupping, the stimulant action of large cloths applied to the surface of the chest, wet with the infusion of capsicum, made with a drachm to the pint of boiling water, is quite preferable to mustard, as it does not occasion vesication or an intractable sore. It is well to keep up such cutaneous stimulation for a long time, because the patient who has once had a bronchitis develop basal râles is not likely to cease coughing for weeks. One of my prescriptions for this purpose is a liniment of one part each of aqua ammoniæ, oleum terebinthinæ, and tincture of capsicum, with three parts of linimentum saponis. For the tedious debility which follows influenza I rely mainly on the fluid extract of coca with nux vomica. Inhalation of oxygen is also often serviceable if administered with a funnel over the nose and mouth as in administering ether. The usual method of simply holding the tube to the nostrils scarcely gives the patient any appreciable amount of the gas.

It should always be impressed upon the patient, as soon as the diagnosis of influenza is made, that he should at once go to bed and stay there till further orders. A slight attack of influenza scarcely ever means the same thing as a slight attack of illness, any more than a mild scarlatina ever means that it is really mild. A slight influenza may cost the patient his life, all the same, for we are continually meeting with cases of fatal complications developing after the most moderate beginnings of this infection. Rest in bed is quite enough for most persons to get well of influenza without any medicines, if they will only take this prescription faithfully to the end. But the majority wish to get out too soon, it may be to attend a dancing party, when they succeed in furthering the epidemic spread of an infection which is every whit as catching as measles.

Therapeutical Notes.

For Firemen's Cramp.—Willis Cummings (*Merck's Archives,* August, 1900; *Medicine,* November, 1900) considers this colic due to an excessive loss of fluids and solids, consequent on the profuse sweating, with a reflex vasomotor paralysis of the abdominal circulation and a spasmodic condition of the muscles. In a crude way he attempted to estimate this loss and to supply a water which contained a sufficient quantity of solids to supply the waste. To one gallon of water were added:

Calcium phosphate	256 grains;
Sodium phosphate	256 "
Potassium phosphate	256 "

with an excess of orthophosphoric acid. Four ounces of this solution were put into nine gallons of water; to this was added some oatmeal and ice, if available. Each man was given a gallon of the acidulated water during four hours, the phosphates in solution amounting to three and one-half drachms. After this treatment was instituted the cramps and colic immediately disappeared. The solution was very highly appreciated by the men, and it resulted in a diminution of the desire for alcoholics, so common among this class of men.

For Amenorrhœa.—The *Journal de médecine interne* for December 15th gives the following hypodermatic treatment for amenorrhœa:

℞ Crystallized apiol	300 grains;
Sterilized oil	1,500 "

M.

A Pravaz syringeful (one cubic centimetre, or sixteen minims) daily.

A Lotion for Genital Pruritus.—A formula of Robin's is given in the *Journal de médecine de Paris* for December 9th as follows:

℞ Mercury bichloride, Ammonium chloride, each	1 part;
Emulsion of almonds	2,000 parts.

M.

An Abortive Treatment of Chalazion.—Strzeminski, of Wilna (*Semaine médicale,* 1900, No. 42; *Fortschritte der Medicin,* December 19th), recommends this ointment:

℞ Iodine	2 parts;
Potassium iodide	6 "
Lanolin	enough to make 75 "

M.

To be rubbed gently on the affected lid.

An Ointment for Intertrigo and Acute Eczema.—The *Journal de médecine de Paris* for December 16th gives the following formula as Wende's:

℞ Camphoric acid	1 part;
Bismuth subnitrate, Zinc carbonate, Powdered starch, Vaseline, Anhydrous lanolin, each	2 parts.

M.

Caffeine as a Cardiac Stimulant.—The *Klinisch-therapeutische Wochenschrift* for December 16th attributes this formula to Capitan:

℞ Caffeine, Sodium salicylate, each	15 to 22 grains;
Sparteine sulphate	6 "
Ammonium acetate	15 "
Distilled water	1½ ounce.

M. S. A coffeespoonful every half hour till three doses have been taken. It is said to be very prompt in its action.

Cod-liver Oil Soap in Pulmonary Consumption.—Rohden (*Deutsche medicinische Wochenschrift,* 1900, No. 39; *Fortschritte der Medicin,* December 12th) employs a superfatted soap made of cod-liver oil and an alkali, to which may be added various medicaments, such as balsam of Peru, potassium iodide, etc. It is employed by inunction on the legs, the neck, the breast, and the back, about two drachms and a half at a time. The treatment lasts for several weeks at least.

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FILTH AND THE SPREAD OF DISEASE IN NEW YORK.

THE recent action of a Columbia University professor in causing the arrest of a passenger in a public conveyance for spitting on the floor, an act forbidden by a board of health ordinance, has, we understand, resulted in the offender's being punished; at all events, it may be presumed to have served the good purpose of giving the public an inkling of the determination of the sanitary authorities and of all good citizens to suppress the indecent and dangerous practice of promiscuous spitting. Not only upon this vicious practice, but also upon many allied means of disseminating pathogenic germs, is a vivid light shed by Mr. Elmer W. Firth, a civil engineer and a fellow in sanitary engineering of Columbia University, in a paper entitled Micro-organisms in the Air of Public Buildings and Conveyances, due to Improper Methods of Cleaning, a paper submitted in partial fulfilment of the requirements for the degree of doctor of philosophy in the University Faculty of Pure Science and published in the seventh volume, recently issued, of *Studies from the Department of Pathology of the College of Physicians and Surgeons*, which, as our readers know, is the university's school of medicine.

The New York public has improved somewhat of late years in attention to the joint demands of decency and health, but Mr. Firth's examinations of specimens of air contaminated with bacteria and his descriptions of certain processes still in vogue in the so-called cleansing of buildings, street railway cars, ferry boats, and the like, show that a great task is yet to be accomplished in the direction of public cleanliness, and much of the cleaning that is now done might better go undone, for it actually adds to the spread of germs. In his summary Mr. Firth properly insists that no attempt should be made to conceal dust and dirt, as by the use of certain absorbent floor-coverings. Carpets and fibre mats should no longer be used in churches, theatres, court rooms, street cars, and ferry boats. When a room is swept or dusted, the process should be performed several hours before it is to be occupied by an assembly, unless there can be such a draught of air completely through it as to clear out the bacteria, and this, as he points out, is hardly possible in the case of a theatre. Unless, he says, the draught can pass directly across the room, between openings on opposite sides, currents of air from open doors and windows may keep micro-organisms in suspension for an indefinite length of time. Dry sweeping and dusting should never be done in the presence of numbers of people, as is now the practice in some conveyances. The absolute removal of the solid impurities of the air, which settle in all buildings, is best accomplished by the use of damp cloths, and frequent washing or mopping of the floors is essential to proper cleanliness in public places. Dust thus moistened may be removed unobjectionably. "Finally," says Mr. Firth, "the material accumulated in cleaning should be so disposed of that it will not be merely a nuisance transferred to another place, but one absolutely suppressed."

THE LESSON OF THE ENGLISH "EPIDEMIC" OF ARSENICAL POISONING.

IT was very clearly brought out in an interesting discussion on epidemic arsenical neuritis at a meeting of the Liverpool Medical Institution held on December 20th (*Lancet*, January 5th) that, as Dr. R. J. M. Buchanan remarked, the lesson of the recent prevalence of arsenical poisoning from drinking contaminated beer was that members of the medical profession individually should cultivate the faculties of observation and deduction to the highest degree. The familiar association of alcohol and peripheral neuritis in the relation of cause and effect, he said, had no doubt tended toward incredulity regarding the statements made by patients who denied excess, "thus narrowing the field of mental vision and hindering the elucidation of the truth."

A prejudiced state of mind on the part of the medical man when confronted with a morbid condition is almost a bar, for the time being at least, to his arriving at a correct diagnosis. To elicit the salient signs and symptoms and then to say to one's self that only alcoholic indulgence, syphilis, malaria, hysteria, or some other stock ætiological agency can lie at the root of the trouble is not only to waste time which should be devoted to further investigation, but positively to bar the way to the true solution of the case. It is always well to look askance at the plausible; it so easily leads one into error. One

should cross-question his first impressions, leaving no stone unturned in an exhaustive investigation to determine, on the one hand, that there is no feature in the case incompatible with the diagnosis that seems most obvious, and, on the other, that no other hypothesis than the one tentatively entertained will cover all the points. Minor exceptions, of course, have to be allowed for, and we cannot hope to meet always or even almost always with typical pictures of disease; otherwise the art of diagnosis would be a marvel of simplicity, whereas, as we all know, it is the most difficult that the physician has to practise. It is in prognosis perhaps, as was maintained by Trousseau, that the physician's wisdom is most conspicuously shown, but it still remains true that it is in diagnostic acuteness that lies his straightest path to success in practice. The lesson is always before us; it is but emphasized by the recent extensive prevalence of arsenical poisoning in England.

THE CARE OF THE DYING.

When, at the close of a naval engagement in the recent war with Spain, Captain Philip besought his men not to cheer, saying "the poor devils are dying," he gave voice to the humane feeling of all well-ordered people. To disturb the dying purposely is left to savages, to disquiet them unthinkingly is a mark of reprehensible carelessness if not of selfishness, to sooth them with all possible art and tenderness is the part of gallantry. In general terms it may be said, we think, that comparatively few dying persons are in physical pain; we doubt, indeed, if most of the dying have any feeling of dread, even when they are conscious that the end is near. Nevertheless, the assiduity with which we minister to the sick should not be relaxed—rather should it be heightened—in the case of the dying. A dying person, if conscious, is easily harassed, and often one who seems unconscious is not wholly insusceptible to impressions from without. It is said that ordinarily the sense of hearing is the last of the special senses to leave a dying person, that for a considerable time after the sight and the sense of touch are gone the power of hearing lingers; hence the caution has been given, and should always be observed, to exercise great care as to what is said at the bedside of one who seems unconscious.

Actual suffering, whether bodily or mental, is probably, as we have said, not generally felt by those who are really dying, but discomfort is apt to be present. A fold of the linen or an inequality of the bed may give rise to real interference with composure, and that at a time when death is so close at hand that the faculty of speech is gone. The open mouth may be parched or a glare of light may offend the eyes. It is the duty of the physician, of the nurse, and of all present to be alert to do away noiselessly and unostentatiously with all these sources of annoyance. Such matters as these are wisely and humanely treated of by Brunke, of Uchtspringe (*Irrenpflege*, December; *Zeitschrift für Krankenpflege*, December), who remarks that, while the thought of approaching death is one of awe and anxiety to most persons, the conviction that it is stealing on, coupled with readiness to meet it, makes the nurse's part immeasurably easier than it otherwise would be, for she is relieved of the harrowing dread lest in an unguarded moment she may involuntarily add a sudden pang by suggesting the fatal termination.

When a dying adult person is unaware of his condition, it is sometimes, perhaps generally, the physician's duty to intimate the truth, but never should a blunt declaration of impending dissolution be made. There are few tasks that call for more tact and delicacy than the care of the dying, and it is particularly in what is said to the dying person, whether spontaneously or in answer to questions, that the humane physician and nurse best show their title to the love of their fellow-beings.

THE PASSING OF A GRACIOUS SOVEREIGN.

There is probably no person in the world whose fatal illness could have caused the widespread sorrow and sympathetic reverence and respect occasioned by that of Queen Victoria. The termination of her long and arduous life, which, in the ordinary course of events, could not have been long delayed, forbade us to expect much from the greatest resources of medical aid and skill at her disposal; but the efforts of those who were privileged to minister to her—privileged, not because she was a queen, but because being a queen she had been all that she was in every capacity of life—have been followed closely with the warmest prayers of the world at large in their support, and with its tenderest sympathies. For this reason the names of Sir Thomas Barlow, Sir Douglas Powell, and Sir James Reid will be preserved in history, irrespectively of their services to medical science in general, as those who cared in her last moments for the most universally beloved monarch that ever sat upon a throne. The medical profession in all countries will ever cherish the memory of a sovereign who constantly interested herself in the relief of suffering, who held medicine in high esteem, and who was the first British monarch to publicly recognize the importance of medical science by conferring a patent of nobility on a medical man.

TOBACCO AND COLOR BLINDNESS.

It is stated that one of the prominent American railway lines has, on the initiative of its medical examiner, decreed that henceforth all tobacco users shall be barred from its employ in certain capacities, because of the danger of the induction of color blindness by the habit. Of course the poor, unfortunate, and much maligned cigarette is especially damned. It is strange that probably eighty per cent. of artists are, and always have been through the present and many preceding generations, inveterate users of tobacco, till the mingled smell of paint and tobacco has become the recognized odor of the artist's painting-room. Yet we do not hear of many artists being incapacitated from their profession on that account. Is color perception, after all, not essential to the artist?

EXECUTION BY POISON.

This ancient fad has been revived. According to press dispatches Representative H. B. Passage moved on January 21st in the Indiana House of Representatives that the method of executing criminals be changed from hanging to administering morphine. The motion was tabled. The proposed change came up in consideration of a bill fixing the Michigan city prison as the legal place for the execution of criminals. The bill has been passed by both branches, and is now in the hands of the governor.

Hemlock is a time-honored medium for this purpose, and the reflection that Socrates suffered thereby might aid in lessening the injury to the poor criminal's sensibilities. A hybrid and barbarous name for the process will doubtless be essential. How would "toxicution" do?

REPORT OF THE SURGEON-GENERAL OF THE ARMY.

This report has already been noticed in our columns, so far as its more strictly medical portion is concerned, and an abstract given of its substance. The report now before us in its entirety is a further evidence of the careful scientific and administrative work of our army medical department. The vast range of inquiry embraced in it cannot but prove of incalculable value, not only to the military medical service, but to the science of medicine at large. The sections on the Division of the Philippines, the Division of Cuba, and the Department of Puerto Rico are of special interest, the former being illustrated with excellent process pictures of many of the buildings employed for hospital uses. The reports on the prevalence of various diseases are exhaustive, and show much careful work. Special notice may be taken of those on bubonic plague, by Major Guy L. Edie, and First Lieutenant W. J. Calvert, the latter of whom gives a most interesting description of the methods of dealing with plague in Japanese cities and in Hong Kong; and the report on the treatment of yellow fever, by Acting Assistant Surgeon Bat Smith. In the matter of alcoholism in the army, it is gratifying to find the admission rate fallen to nearly one half of its rate for 1897, though still in excess of that of 1898. Commenting on the figures, the report says: "From this it will be seen that there is more drunkenness in a command doing garrison duty in time of peace than among troops on active service." This is only what might be expected.

THE DANGERS OF CELLULOID.

From time to time cases occur which ought to emphasize the danger of celluloid articles of wearing apparel, especially ladies' hair combs, etc. A report comes from Birmingham, Ala., of a young lady who has been seriously, perhaps fatally, burned by the ignition of her celluloid hair comb. If there were no other material available for such articles, the rarity of accident might outweigh the consideration of the dangers of this material; but considering how many things can be used to make the articles commonly made of celluloid, we can only wonder at its continued employment.

A PHARMACOLOGIST IN FICTION.

We have been much interested in a recent book of fiction by a well-known Cincinnati pharmacologist, Professor Lloyd.* The story proper consists of the personal history of a girl of apparently illegitimate birth, who, however, turns out to have been the daughter, born in wedlock, of a prominent citizen of Kentucky, who cruelly disowns her and her mother. Left a waif on the outskirts of Stringtown, she is adopted by a fanatical and superstitious old negro, and most of the thrilling incidents of the story, and they are numerous, cluster about the imaginings of this old negro, "Cupe." She is beloved by "Sammy Drew," a stupid boy who seems to have had but one bright spot in his mind, an aptitude for chemistry; but he is a chump to the end, and it is greatly to Professor Lloyd's credit as a story-teller that almost to the very last he keeps the reader interested in so dull a character. Drew becomes a professor of chemistry, examines the gastric contents of a man supposed to have been poisoned with strychnine, finds the proper reactions, and testifies to the presence of strychnine, thereby leading to the conviction of the accused. The girl, "de Susie chile," doubts the validity of the evidence, studies chemistry herself, and eventually confronts her lover with the statement that hydrastine and morphine, mixed in proper proportions, will give the color reaction of strychnine, whereupon he commits suicide by taking a certain mysterious vegetable poison obtained from Arkansas. How far this narration will tend to intensify the present prejudice against expert testimony it is difficult to say. Possibly Professor Lloyd's object, apart from furnishing entertainment, was to discredit chemical testimony in criminal cases.

* *Stringtown on the Pike; a Tale of Northernmost Kentucky.* By John Uri Lloyd, author of *Etidorhpa*, etc. New York: Dodd, Mead & Company, 1900.

News Items.

Society Meetings for the Coming Week:

MONDAY, *January 28th:* Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, *January 29th:* Rome, New York, Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, *January 30th:* Auburn, New York, City Medical Association; Berkshire, Massachusetts, District Medical Society (Pittsfield); Middlesex, Massachusetts, North District Medical Society (Lowell); Gloucester, New Jersey, County Medical Society (quarterly).

FRIDAY, *February 1st:* Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, *February 2d:* Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague, were reported to the surgeon-general during the week ending January 19, 1901:

Small-pox—United States.

Oakland, California	Dec. 29-Jan. 5	1 case.	
Bridgeport, Connecticut	Jan. 7	3 cases.	
Cairo, Illinois	Jan. 5	8 cases.	
Chicago, Illinois	Jan. 5-12	19 cases.	
Wichita, Kansas	Jan. 5-12	6 cases.	
Baltimore, Maryland	Jan. 5-12	1 case.	
Springfield, Massachusetts	Jan. 5-12	1 case.	
Minneapolis, Minnesota	Dec. 29-Jan. 5	1 case.	
Winona, Minnesota	Dec. 29-Jan. 5	30 cases.	
Manchester, New Hampshire	Jan. 5-12	21 cases.	
New York, New York	Jan. 5-12	17 cases.	3 deaths.
Ashtabula, Ohio	Jan. 5-12	4 cases.	
Cleveland, Ohio	Jan. 5-12	51 cases.	
Philadelphia, Pennsylvania	Jan. 5-12		1 death.
Memphis, Tennessee	Jan. 5-12	8 cases.	
Nashville, Tennessee	Jan. 5-12	5 cases.	
Wheeling, West Virginia	Jan. 5-12	1 case.	

Small-pox—Foreign.

Prague, Austria	Dec. 22-29	12 cases.	
Port Elgin and Cape Tarmentine, New Brunswick, Canada	Dec. 28	40 cases.	
Leeds, England	Dec. 29-Jan. 5	1 case.	
London, England	Dec. 22-29	1 case.	
Bombay, India	Dec. 4-18		3 deaths.
Calcutta, India	Dec. 1-15		81 deaths.
Karachi, India	Dec. 2-16	16 cases.	2 deaths.
Madras, India	Dec. 8-14		1 death.
Vera Cruz, Mexico	Dec. 29-Jan. 5	4 cases.	2 deaths.
St. Petersburg, Russia	Dec. 15-22	5 cases.	1 death.

Yellow Fever.

Havana, Cuba	Dec. 29-Jan. 5		5 deaths.
Matanzas, Cuba	Dec. 29-Jan. 5	1 case.	
Vera Cruz, Mexico	Dec. 29-Jan. 5	1 case.	

Cholera.

Bombay, India	Dec. 4-18	6 deaths.
Calcutta, India	Dec. 1-15	56 deaths.
Madras, India	Dec. 8-14	1 death.

Plague.

Hong Kong, China	Nov. 24-Dec. 1	2 deaths.
Bombay, India	Dec. 4-18	178 deaths.
Calcutta, India	Dec. 1-15	39 deaths.
Constantinople, Turkey	Jan. 11	On Steamship Berrig from Poti.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the United States Marine Hospital Service for the Seven Days ended January 17, 1901:

CRAIG, R. C., Acting Assistant Surgeon. Granted leave of absence for seven days.

GLENNAN, A. H., Surgeon. Detailed to represent the service at the meeting of the Third Pan-American Medical Congress, to be held in Havana, Cuba, from February 4th to the 8th.

LAVINDER, C. H., Assistant Surgeon. To proceed to Vineyard Haven, Massachusetts, and assume temporary charge of the service during the absence of Surgeon F. W. Mead.

MCMULLEN, JOHN, Assistant Surgeon. Granted leave of absence for twenty-one days from January 21st.

MEAD, F. W., Surgeon. Granted leave of absence for sixty days from January 21st.

NYDEGGER, J. A., Passed Assistant Surgeon. Granted leave of absence for thirty days.

SAWTELLE, H. W., Surgeon. Leave of absence for thirty days granted by Bureau letter of December 18, 1900, revoked.

THOMAS, A. R., Passed Assistant Surgeon. To proceed to Shields, England, for special temporary duty. Relieved from duty in Glasgow, Scotland, and assigned to duty in the office of the United States Consul-General in London, England.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 5 to January 19, 1901:

ARTHUR, WILLIAM H., Major and Surgeon, will report to the commanding general, Department of Northern Luzon, for duty.

BANISTER, WILLIAM B., Major and Surgeon, will report to the commanding general, Separate Brigade, Provost Guard, Manila, for duty as surgeon of the Twentieth Infantry.

BRADLEY, ALFRED E., Captain and Assistant Surgeon, is detailed to take charge of the office of the chief surgeon of the Department, in addition to his present duties, during the illness of the latter, and will make four round trips a week between Fort Snelling and St. Paul.

CHAMBERLAIN, WESTON P., First Lieutenant and Assistant Surgeon, is granted leave of absence for one month.

COMEGYS, EDWARD T., Major and Surgeon, is assigned to the command of the First Reserve Hospital, Manila, relieving WILLIAM R. HALL, Major and Surgeon, who will report to the commanding general, Department of Southern Luzon, for duty.

EDIE, GUY L., Major and Surgeon, will report to the commanding officer of the first available transport carrying sick to the United States, for duty thereon while *en route* to San Francisco, and will return to Manila.

MEACHAM, FRANKLIN A., Major and Surgeon, will report to the commanding general, Separate Brigade, Provost Guard, Manila, for duty as president of the Board of Health of Manila.

SIMPSON, MAXWELL S., Captain and Assistant Surgeon, Squadron Philippine Cavalry, having tendered his resignation, is honorably discharged from the service of the United States, to take effect January 31, 1901.

A board of medical officers to consist of BENJAMIN F. POPE, Lieutenant-Colonel and Deputy Surgeon-General; FRANCIS J. PURSELL, Acting Assistant Surgeon; A. J. PEDLAR, Acting Assistant Surgeon, is appointed to meet at the Presidio of San Francisco for the examination of candidates for the position of acting assistant surgeon.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the two weeks ending January 19, 1901:

DENNIS, J. B., Assistant Surgeon. Ordered to delay reporting for duty at the Naval Academy.

LIPPITT, T. M., Assistant Surgeon. Detached from the Naval Hospital, Yokohama, Japan, and ordered to the Naval Hospital, Mare Island, California, via the *Solace.*

PRYOR, J. C., Assistant Surgeon. Ordered to duty at the Naval Hospital, New York.

WILLIAMS, R. B., Assistant Surgeon. Detached from the Navy Yard, New York, and ordered to the Navy Yard, Pensacola, Florida.

WRIGHT, B. L., Assistant Surgeon. Detached from the Naval Hospital, Yokohama, Japan, and ordered to the Naval Hospital, Mare Island, California, via the *Solace.*

A Book on Army and Navy Cooking.—We learn that Anton F. Miller, of the U. S. Army Hospital Corps, has compiled a *Manual for Hospital and Army Cooks,* which has been sent to the surgeon-general. Mr. Miller has had many years' experience as a cook and steward, and should know whereof he writes.

The Chicago Clinic has been purchased by Dr. George Thomas Palmer and will hereafter be edited by Dr. Marcus P. Hatfield. A special feature will be made of a series of papers on the relation of the law to physicians, by Hon. John Mayo Palmer.

Epidemic in New Jersey State Prison.—An epidemic of grippe has broken out in the New Jersey State Prison and 140 convicts, or about 15 per cent. of the entire prison population, are suffering from the malady. Most of the cases are slight.

Osteopaths to be Licensed in Wisconsin.—A bill has been introduced in the legislature of Wisconsin providing for a State board of osteopathy. This is a move on the part of the osteopaths to secure registration without having to go before the board of medical examiners.

Plague among British Troops is said by reports from Brussels to be raging in Cape Colony. It is stated that many deaths attributed to typhoid are really due to bubonic plague, but that the fact is concealed. It is doubtful how much credence can be attached to the report.

The Richmond Academy of Medicine and Surgery.—At the last regular meeting, on Tuesday evening, the 22d, the subject for discussion was a paper by Dr. J. Page Massie, entitled Cæsarean Section; the Modern Antiseptic Method.

The Chicago Eye, Ear, Nose and Throat College has moved into the four-story and basement building on the southeast corner of Franklin and Washington Streets. The building has been remodeled and equipped with the latest approved apparatus throughout for carrying on demonstrations. The new quarters will afford a largely increased space for the work of the college.

A Sturdy Veteran Practitioner.—Dr. John P. Wood of Coffeyville, Kan., who celebrated his ninty-ninth birthday anniversary on January 5th, has decided to take the lecture platform early this coming spring. He will lecture at first on Longevity. Dr. Wood is probably the oldest practising physician in the world. He is unusually hale and hearty, and is feeling better now than for many years.

The Boston Medical Society Building Dedicated.—More than 200 members of the medical profession in Boston assisted in the recent dedication of the new home of the Boston Medical Society. Guests were present from all parts of Massachusetts, among them being Dr. Francis W. Draper, president of the Massachusetts Medical Society.

Hospitals to be Exempted from Liability.—Nurses or attendants in hospitals sustained in whole or in part by charity, must alone be held responsible for their brutal or neglectful acts should a bill introduced by Senator Grady at Albany become a law. The bill exempts such hospitals from liability arising out of the neglect, want of skill, or malicious acts of their officers, agents, or employees, and provides that the individual offenders shall be liable in suits to recover damages.

A Congress of Medical Associations.—Headquarters have been established at the Aberdeen hotel, St. Paul, Minn., for the meeting to be held in that city during the first week of June, of the National Association of Military Surgeons, the State Medical Society, the American Medical Association, the American Academy of Medicine, and the Society of Medical Colleges. Three hundred rooms have been engaged at the Aberdeen.

Richmond County Medical Society.—At the recent meeting of the Richmond County (N. Y.) Medical Society at Staten Island, the following officers were reelected: President, Dr. Jefferson Scales; vice-president, Dr. C. Wilmot Townsend; secretary and treasurer, Dr. H. C. Johnstone; members of the board of censors, Dr. James J. O'Dea, Dr. Walker Washington and Dr. William Bryan; Dr. E. D. Wisely was elected delegate to the meeting of the State Medical Society.

The Middlesex South District Medical Society of Massachusetts celebrated its golden anniversary on January 17th, with a reception and banquet at the United States hotel, Boston. There were 175 guests present. A historical sketch of the organization was read and speeches were made by a number of prominent physicians. The newly elected officers are: President, Dr. C. H. Cook, of Natick; vice-president, Dr. E. G. Hoitt, of Marlboro; secretary, Dr. Albert August, of Cambridge; treasurer, Dr. Walter Ela, of Cambridge; librarian, Dr. E. Scott Dow, of Allston.

The Medical Association of the Greater City of New York met at the Academy of Medicine on Monday evening, January 14th. Dr. J. Blake White was elected chairman for the borough of Manhattan. Dr. Henry D. Nicoll presented a report as chairman of the memorial committee on the death of Dr. Horace T. Hanks, which was adopted. Papers were read on The Operative Treatment of Umbilical Hernia in Adults, by Dr. Joseph A. Blake, and on Cocaine Anæsthesia in Eye Affections, by Dr. Neil J. Hepburn.

A French Medical Association in Canada.—A movement has been started in Montreal by leading French-Canadian physicians for the organization of a French Medical Association embracing all the French physicians on this continent. It has been decided to hold a French medical congress in Montreal next summer, which is to form the basis of a permanent association. A French physician in Louisiana has written to the promoters that the physicians of that State are in full sympathy with the movement and will attend the congress. It is stated that there are over five hundred French physicians in the United States and Canada.

A Convention of Sanitarians.—The Pennsylvania Board of Health announces the eighth annual meeting of the Associated Health Authorities and Sanitarians of Pennsylvania at Harrisburg for February 6th and 7th. Governor Stone will preside. The annual address will be delivered by Dr. George G. Groff on Sanitary Work in Puerto Rico since the American Occupation. Water supply, city sanitary regulations and the means of preventing contagious diseases will be considered. The officials of the State Board of Health have made arrangements for reduced railway rates and hotel accommodations, particulars of which may be obtained by addressing Dr. W. B. Atkinson, 1400 Pine Street, Philadelphia.

The Erie County Medical Society.—At the eighth annual meeting of the Erie County Medical Society which was held in Buffalo on January 8th, the following officers were elected for the ensuing year: President, Dr. W. C. Phelps; vice-president, Dr. Walden M. Ward

North Collins; treasurer, Dr. Edward Clark; secretary, Dr. F. C. Gram; librarian, Dr. W. C. Callanan. Legislative committee, Dr. W. W. Potter, Dr. Ernest Wende, Dr. Edward Clark. Censors, Dr. J. B. Coakley, Dr. Henry R. Hopkins, Dr. Irving W. Potter, Dr. Francis E. Fronczak, Dr. Henry C. Lapp, Clarence.

Sisters' Hospital Election.—The annual meeting of the active staff of the Sisters' Hospital of Buffalo, N. Y., was held on January 9th, and the following officers elected: President, Dr. L. G. Hanley; vice-president, Dr. H. C. Buswell; secretary, Dr. Nelson W. Wilson; executive committee, Dr. James J. Mooney, Dr. Eugene A. Smith and Dr. Walter D. Green. The staff re-elected Dr. C. M. Daniels secretary by a unanimous vote, but Dr. Daniels declined the honor, and a new vote being ordered, Dr. Wilson was chosen unanimously.

Dr. Unna's Dermatological Clinics.—On the 1st of January Dr. Unna's clinic, which has heretofore been held at the dermatological laboratory at Heussweg 13, Erinsbüttel, Hamburg, was established on an independent footing with largely increased facilities. The following gentlemen will hold regular clinics in their several specialties: Dr. Abel, Dr. Cohn, Dr. Delbanco, Dr. Herz, Dr. Leistikow, Dr. Smilowski, Dr. Tropolowitz, and Dr. Unna. The lectures will be arranged in two courses of six weeks each, the first of which lasts from the beginning of February till the last of March, and the second of which begins at the end of September. Besides these lecture courses, students who are competent to conduct independent investigations may work the year round. All students have free admission to Dr. Unna's policlinic and to his library.

Alumni Association of the Medico-Chirurgical Society.—At the eighteenth annual meeting of the Alumni Association of the Medico-Chirurgical College, Medical Department, at Philadelphia, the following officers were elected to serve for the ensuing year: Dr. John Welsh Crosky, president; Dr. Stillwell C. Burns, secretary; Dr. Samuel S. Gans, treasurer; executive committee, Dr. Easterly W. Ashton, Dr. A. E. Blackburn, Dr. Napoleon L. Boston, Dr. A. C. Buckley, Dr. Philip C. Cleaver, Dr. M. P. Dickeson, Dr. John H. Egan, Dr. Webster L. Fox, Dr. Charles H. Gubbins, Dr. Howard Kinne, Dr. Ernest Laplace, Dr. D. W. Levy, Dr. John A. McGlinn, Dr. John A. McKenna, Dr. A. C. Morgan, Dr. R. D. Newton, Dr. G. E. Pfahler, Dr. G. W. Pfromm, Dr. Alexander Romsay, Dr. J. B. Roxby, Dr. J. V. C. Roberts, Dr. H. J. Smith, Dr. J. V. Shoemaker and Dr. M. P. Warmuth.

Massachusetts Surgical and Gynæcological Society.—At the annual meeting in Boston the Massachusetts Surgical and Gynæcological Society elected the following officers: Dr. H. E. Spaulding, president; Dr. G. F. Martin and Dr. W. T. Hopkins, vice-presidents; Dr. T. M. Strong, general secretary; Dr. H. D. Boyd, assistant secretary; Dr. Grace E. Cross, treasurer; Dr. M. H. Houghton, auditor; Dr. George F. Adams, Dr. George H. Earle, Dr. Frank A. Gardiner, censors. Six doctors were admitted to membership. The following papers were read: Annual Summary of the Progress in Surgery and Gynæcology, by Dr. George E. May, of Newton Centre; Tic Douloureux Hysterectomy and Cure, by Dr. Lamson Allen, of Worcester, discussed by Dr. H. E. Spaulding and others; Sterility, by Dr. Charles T. Howard, of Worcester, discussed by Dr. N. W. Emerson, Dr. G. R. Southwick, Dr. E. B. Cahill and others; Side Lights on Anæsthesia, by Dr. F. P. Batchelder, of Boston, discussed by Dr. J. B. Bell, Dr. Horace Packard, Dr. W. H. Stone and others; The Treatment of Epithelioma Other Than by the Knife, by Dr. J. L. Coffin, of Boston, discussed by Dr. Alonzo Boothby and Dr. A. H. Powers.

Diphtheria and Scarlet Fever.—An epidemic of diphtheria has become prevalent at Eastport, L. I., and alarm is manifested because of a likelihood of the disease becoming more widespread. Diphtheria has also put in its appearance in Central New York. Scarlet fever is alarmingly prevalent at Windsor, Mich.

Tuberculosis Should be Reported.—Representatives of the Philadelphia County Medical Society and the Society for the Prevention of Tuberculosis appeared before the bureau of health recently in Philadelphia to urge that the bureau compel the reporting by physicians of all cases of consumption. The board listened to the arguments and expressed its sympathy, but its chief, Colonel Good, pointed out that there was no legal power invested in him by which he could compel physicians to report such cases. Colonel Good also made clear the position of the bureau. While not favoring the placarding of houses wherein cases of consumption exist, nor the isolation of the patient, it does favor compulsory registration.

Grippe.—Surgeon-General Wyman, of the United States Marine-Hospital Service, at Washington, has taken cognizance of the prevailing grippe epidemic, an inquiry having been set on foot by him to ascertain its exact extent, severity, and peculiarities, in various parts of the United States. Surgeon-General Wyman has issued instructions to the officers of the service at the different seaports and cities to report fully all facts regarding the prevalence of the disease, the number of people affected, deaths resulting therefrom, and other information that will enable him to determine the cause of the epidemic and offer suggestions for guarding against it in the future. The various health board officials of different cities have urged the greatest precautions on the part of those persons susceptible to colds. In New York the number of deaths due to the grippe ranges into the hundreds.

Small-pox.—Small-pox is now uncommonly prevalent in the United States, the report of the Marine Hospital Service for January 1st showing its existence in forty-five of the fifty-one States and Territories, with a total of 9,229 cases, of which Ohio had 1,732; Tennessee, 1,405; Minnesota, 1,199; Texas, 674; North Carolina, 578; Nebraska, 467; Wisconsin, 412, etc. There were in Pennsylvania thirty cases, in New Jersey thirteen, in Delaware one, and in Maryland twenty-three. How quickly the disease may spread was shown in 1898. At the beginning of that year it was confined to four localities in three States (New York, Tennessee and Alabama); at the close of the year it was reported to be in 151 localities in twenty-four States. In New York, at present, small-pox is abating, although wholesale vaccination is still being practised.

The Health of Havana.—The official report of Major W. C. Gorgas, chief sanitary officer of Havana, for the month of December, shows that the death rate has sunk to 23.28 per thousand, the lowest death rate recorded in the history of the city. In December, 1897, the rate was

100.18 per thousand; in 1898, 96.27; in 1899, 27.10. There were 21 deaths from yellow fever out of a total of 485 deaths for the month. During the month, 119 new cases of yellow fever were reported. Examinations of premises to the number of 10,500 were made during the month.

The Death Rate of Santiago, as shown by the official report of Dr. Ira A. Shiner, United States Army, president of the board of health, was only 17.86 per thousand during December, as against the following rates in previous years: 1888, 30.66; 1889, 25.86; 1890, 25.33; 1891, 24; 1892, 23.73; 1893, 22.66; 1894, 27.73; 1895, 58.40; 1896, 73.33; 1897, 101.06; 1898, 78.93; 1899, 26.99. There has been no yellow fever reported during December for three years past.

Brooklyn's Death Rate.—The recently issued report of Dr. Sylvester J. Byrne, head of the bureau of records of the Brooklyn health department, shows that there have been more deaths than births recorded in the Brooklyn health office. Dr. Byrne's report shows that in 1900 the number of deaths reported in Brooklyn was 23,475; the number of births, 22,572. In 1899, according to the report, 21,683 persons died in Brooklyn, while only 21,203 were born in the borough during the same year. The figures in 1898 were: Deaths, 21,856, and births, 21,395. It would appear from these figures that more Brooklynites are going out of the world than are coming into it, but Dr. Byrne declared that such was not the case. The births, he said, quite invariably exceeded the deaths in number, and the failure of the department records to present this fact was due to the negligence of physicians in reporting the births.

Diphtheria Antitoxine to be Furnished Free.—The recent action of the common council of Sioux City, Ia., places antitoxine upon the same standing in that city as vaccine virus. On the advice of the city health officer, the council approved a measure which makes imperative the inoculation with antitoxine of all members of families in which there is a case of diphtheria. This is believed to be the most radical step so far in this country in the use of antitoxine, and it has met with the opposition of many physicians. The latter declare that inoculation with antitoxine produces such different results in different individuals that it is impossible to foresee the consequences, which are often serious. Some physicians who are opposed to the measure assert that exposure to diphtheria in its early stages rarely causes contagion, but that the use of the serum much more frequently produces ill effects, and in many cases light forms of the disease itself.

The Health Department Appeals to Comptroller for Necessary Funds.—Assistant Health Commissioner Francis, of St. Louis, recently notified Comptroller Sturgeon that unless more money was provided for this purpose during the month of January the city would be left without the material for checking the spread of contagious diseases. Mr. Francis has countermanded an order for a large quantity of formaldehyde, and the department will have to purchase a much smaller quantity, paying a higher price. In his letter Mr. Francis states that the appropriation of $13,000 for disinfectants is nearly exhausted, and that it cannot be made to last longer than February 1st. The appropriation of the previous year was $14,000, which sum sufficed, but Mr. Francis explains that the number of cases of diphtheria and typhoid and the number of houses fumigated to the present time have been one third greater than in the same period of the previous fiscal year. In another department, the coroner's, the work of the postmortem examinations is being carried on absolutely without funds.

Sues the Doctors who Declared him Insane.—Dr. Henry Flood and Dr. E. A. Reilly, of Elmira, N. Y., are defendants in an action for $50,000 damages brought by James Coyle, of Brooklyn, who alleges conspiracy in having been pronounced insane by them. Coyle had business and domestic troubles which figured in the courts. Mrs. Coyle made application to County Judge Pratt for the appointment of a commission to examine her husband as to his sanity. Judge Pratt appointed the doctors, who, after an examination, reported that they had found the patient to be insane. A commitment was made out to the Binghamton State Hospital, but Coyle could not be found. He was next heard from in Brooklyn. Coyle returned to Elmira, and new proceedings were brought and a second commission was appointed to examine him. This time Coyle objected to the proceedings and legally opposed them. He was taken to New York, where he was examined by Dr. Carlos McDonald and pronounced sane. The proceedings to have him committed were dismissed and he returned to Brooklyn and secured a position on a railroad. He alleges that because of the local decision declaring him to be insane, he has lost his position.

Foreign University News.—Dr. A. Schüle, *privat-docent* at Freiburg, has been made professor extraordinary.——Dr. Wollenberg, chief physician to the hospital for the insane at Hamburg, has been appointed professor of mental diseases at the University of Halle to succeed Professor Siemerling, who goes to Kiel.——Professor Ewald has succeeded Dr. Goltz as director of the physiological institute at Strassburg.——Dr. M. C. Simon has been appointed professor of surgical pathology and operative medicine at the University of Rheims.

Foreign News Notes.—An association for the higher education of practising physicians has been formed in Berlin. The association will arrange for a series of lectures by eminent specialists which will be open to any physician practising in Berlin or the vicinity on the payment of a merely nominal fee (2 marks) for the clinical expenses incurred. It is expected that a large number of lecturers will be engaged in addition to the following, who have already agreed to lecture upon the respective subjects named: Professor Eulenberg, on nervous diseases; Dr. Finkelstein, on pædiatrics; Dr. Jansen, on otology; Dr. Max Joseph, on dermatology; Dr. Koblank, on obstetrics; Dr. Robert Kutner, on genito-urinary diseases; Dr. Meyer, on diseases of the throat and nose; Professor Renvers, on internal medicine; Professor Rotter, on surgery; Professor Silex, on ophthalmology; Dr. von Wasielewski, on certain phases of hygiene and bacteriology. The courses are to begin next April and they will be divided into winter and summer sessions. Professor E. von Bergmann is president of the association, and Dr. Robert Kutner is the secretary.

Foreign Obituary Notes.—Dr. Pierre Karl Edouard Potain, professor of clinical medicine in the medical faculty of the University of Paris, died on January 5th, at the age of seventy-five years. Professor Potain was the author of several important articles in the *Dictionnaire encyclopédique des sciences médicales*, and was an occasional contributor to current medical literature. He remained in active practice up to the day previous to

his death.——Dr. James Morris, Fellow of the University of London, and author of *Germinal Matter and the Contact Theory*, and of *Morbid Conditions Bordering on Disease*, died in London on December 22d, at the age of sixty-five years.——Dr. John B. Potter, obstetric physician to the Westminster Hospital, London, and a prominent member of the Obstetrical Society of London, died on December 30th, at the age of sixty-one years.——Dr. L. Ollier, professor of clinical surgery at Lyons, died suddenly on November 25th. He was well known to the profession outside as well as in France through his original work and his valuable contributions to medical literature. His most important works are a treatise on the regeneration of bone and the artificial production of bony tissue and a work on the conservative surgery of the bony structure. A committee has been formed in France for the purpose of erecting a monument to his memory.

Lady Curzon's First Public Speech.—According to the *Indian Medical Record* for December 19, 1900, her excellency Lady Curzon recently made her first public speech to a large assembly at Bangalore on the occasion of opening a new hospital for women and children in that town. In a clear, self-possessed voice, her excellency said: "It gives me great pleasure to come here to-day to open this hospital; and it is a matter of great gratification to me that it is to be called by my name. It is not possible for a viceroy's wife to take part in any of the public duties and responsibilities of her husband; but one sphere of work it has always been her happy privilege to take part in; and I feel that I am only carrying on the tradition, bequeathed to me by the wives of successive viceroys, when I take part in so interesting a function, and express my deep concern and tender sympathy with all efforts to relieve the suffering of my sex and of the children in India. In this cause there is no such thing as distinction of race or creed, since suffering or distress is the bond that makes all humanity one. It was therefore a delight to me to open this hospital, which has been so very generously subscribed to by the gentlemen to whom Colonel Dobson has referred. I congratulate the committee on the admirable plan of the hospital, and the outlying wards for caste, non-caste, and European cases, and trust that each will prove an infinite blessing to the sufferers for whom they are set apart. I am very proud to receive such a beautiful key and casket, and thank the committee very warmly."

A Tuberculosis Hospital for Connecticut.—A bill has been introduced in the Connecticut legislature for the establishment and maintenance of a tuberculosis hospital at New Haven, and an appropriation of $100,000 is asked for that purpose.

The Brooklyn Eye and Ear Hospital.—At the annual meeting of the board of directors of the Brooklyn Eye and Ear Hospital, the following officers were elected for the ensuing year: President, Carll H. De Silver; vice-president, Thomas E. Stillman; treasurer, Henry D. Atwater; secretary, F. H. Colton, M. D.

Mount Zion Hospital, San Francisco.—A grand ball is to be given on February 2d at the Palace hotel, San Francisco, to raise funds for the benefit of the Mount Zion Hospital. The directors of the hospital desire to raise enough money to build an extra wing to the hospital. The present accommodations of the hospital are too small and if this extension were added it would give room for the care of paying patients which would defray the expenses of the hospital. Mount Zion is free to the poor of all people, irrespective of creed or nationality.

Changes at the City and County Hospital, San Francisco.—It is announced that sweeping changes are in contemplation in connection with this institution. The funds of the board are so low that a saving of some $300 or $400 must be made somewhere, and the hospital committee has decided that at least six or eight employees—names have not yet been decided upon—must lose their positions. The committee believes that the efficiency of the service will not be impaired by curtailing the staff, as under reorganization the work will be so apportioned as to leave no portion of the hospital neglected. At the beginning of the new fiscal year in July next it is said that still another organization will take place, as the board is determined to reduce the expense of management to the lowest possible point.

Hospital Staff Changes.—Governor Odell has appointed Mr. G. L. Thompson to act as a member of the board of managers of the Long Island Hospital in place of Mrs. Mary E. Jones, of Cold Spring Harbor, who has resigned.——Dr. William J. Chandler, of South Orange, N. J., has been appointed on the staff of the Orange Memorial Hospital to fill the vacancy caused by the death of Dr. William Pierson, and Dr. Harry E. Matthews and Dr. Mefford Runyon have been appointed to the general staff. Dr. Frank H. Glazebrook has been appointed house physician.——Dr. F. S. Ward, who has for the past two years been in charge of the pathological work of the Taunton, Mass., State hospital, has resigned his position with that institution and has opened an office for private practice in Springfield, Mass.——Dr. Hiram N. Vineberg has been appointed adjunct attending gynæcologist to Mount Sinai Hospital, New York City.

Dr. J. W. Moore Reinstated at Bellevue.—Dr. J. W. Moore, who was suspended by John W. Keller, Commissioner of Charities, has resumed his duties as a member of the medical house staff of Bellevue Hospital, as reported in our last issue. At the time Dr. Moore was suspended, Commissioner Keller said that after reading the testimony given by Dr. Moore at the Hilliard inquest he thought it showed that Dr. Moore had been negligent, and he had therefore suspended him. A transcript of the evidence was sent to the Committee of Five of the medical board of the hospital. Soon after this committee was appointed, it decided that the work of caring for the patients in the alcoholic and the insane wards was too much for one interne, and it assigned one interne to have charge of the alcoholic ward and another to attend to similar duties in the insane ward. Dr. Moore had had charge of both wards. This action was considered favorable to Dr. Moore. One result of the conferences between Commissioner Keller and the committee of the medical board has been the formulation of regulations fixing the responsibility for the care of patients, and the defining of the relations and duties of physicians and nurses, so as to form a chain of responsibility, which Commissioner Keller hopes will make abuses and ill-treatment of patients practically impossible in future.

Hospital Buildings and Endowments.—William T. Wardwell, president of the Red Cross Hospital, in West Eighty-second Street, New York, has given $40,000 to the institution to aid the erection of a new hospital.——A maternity department has been added to the Children's Hospital of Germantown, Pa.——The will of

Henry T. Dortic, a wealthy New York business man, contains the following bequests: New York Eye and Ear Infirmary, $3,000; New York Society for the Relief of the Ruptured and Crippled, $3,000; Manhattan Eye and Ear Hospital, $3,000; St. Mary's Free Hospital for Children, $3,000; New York Skin and Cancer Hospital, $3,000.——Owing to the overcrowded condition of the State Hospital for the Insane at Augusta, Maine, the erection of a new hospital was begun six years ago at Bangor. Thus far, $440,000 has been expended, of which $35,000 was advanced by the governor from his private means, and the new hospital is still incomplete. The legislature is to be asked for a further appropriation of $200,000.——The contract for the new almshouse hospital building at Buffalo, N. Y., has been let for the sum of $49,900.——A charity hospital is to be erected at Eureka Springs, Arkansas, at a cost of $5,000 by Mrs. R. C. Kerens, of St. Louis.——Secretary Gage has requested from Congress an appropriation of $20,000 for the improvement of the buildings of the Marine-Hospital Service at Chicago.——A bequest of $11,000 has been made to the Delaware Hospital of Philadelphia by the will of Dr. William Wood Lesley, of that city.——A new hospital is to be built at Albuquerque, N. M., the cost of which will be $25,000. It is to be in charge of the sisters of charity.——Miss Mira Hershey, of Los Angeles, Cal., purposes to found a free hospital at Muscatine, Iowa, at a cost of $300,000. ——The question of the erection of a new $40,000 hospital, instead of adding a wing to the old structure, is being considered by the directors of the Union Hospital of Terre Haute, Ind.——The twelfth annual report of the Babies' Hospital of the City of New York, makes a strong appeal for aid in increasing the building and endowment fund to $200,000. It is desired to erect a new hospital, as the old buildings cannot accommodate all the patients seeking admission.

Births, Marriages, and Deaths.

Married.

Brackett—Pedrick.—In Marblehead, Massachusetts, on Thursday, January 17th, Dr. Elliot Gray Brackett, of Boston, and Miss Katharine Frances Pedrick.

Duncan—Ogburn.—In Mount Holly, Pennsylvania, on Thursday, January 3d, Dr. Joseph P. Duncan, of Princeton, N. J., and Miss Mabel Ogburn.

Leiter—Cushwa.—In Baltimore, on Wednesday, January 16th, Dr. James W. Leiter, of Washington, and Miss Jane Frances de Chantal Cushwa.

Lewis—Moseley.—In Manila, Philippine Islands, on Wednesday, December 12th, Dr. William F. Lewis, United States Army, and Miss Lillian Moseley.

McCall—Baskett.—In Mexico, Missouri, on Thursday, January 10th, Dr. G. D. McCall, of Fulton, Missouri, and Miss Annie Baskett.

Severson—Mead.—In Chicago, on Wednesday, January 16th, Dr. Frank Millard Severson, of Seneca Falls, N. Y., and Miss Anna Evelyn Mead.

Tincher—Carter.—In Mexico, Missouri, on Thursday, January 10th, Dr. E. H. Tincher, of Fulton, Missouri, and Miss Maude Carter.

Died.

Adee.—In Washington, on Thursday, January 10th, Dr. David Graham Adee.

Booth.—In Shreveport, Louisiana, on Thursday, December 27, 1900, Dr. A. R. Booth, United States Marine-Hospital Service, in the sixtieth year of his age.

Brown.—In Washington, on Wednesday, January 16th, Dr. Benjamin Brown, of Chicago, aged sixty-six years.

Cole.—In San Francisco, on Tuesday, January 15th, Dr. Beverley Cole, aged seventy years.

Connally.—In Abilene, Texas, on Sunday, January 13th, Dr. William Prescott Connally, of Atlanta, in the twenty-seventh year of his age.

Gaston.—In Indianapolis, on Thursday, January 10th, Dr. John M. Gaston, in the eighty-second year of his age.

Graham.—In Pittsburgh, on Sunday, January 20th, Dr. Robert Graham, of Lexington, Kentucky, aged seventy-nine years.

Halburt.—In Canastota, New York, on Friday, January 11th, Dr. Horace Halburt.

Ireland.—In Baltimore, on Monday, January 14th, Dr. David Caldwell Ireland, in the fifty-eighth year of his age.

McKelvey.—In Bloomsburg, Pennsylvania, on Tuesday, January 15th, Dr. James Boyd McKelvey, aged seventy-six years.

Smith.—In Montreal, on Wednesday, January 2d, Mrs. A. L. Smith, wife of Dr. A. Lapthorn Smith.

Von Clossman.—In St. Louis, on Friday, January 11th, Mrs. Martha H. von Clossman, wife of Dr. A. von Clossman, United States Army.

Obituaries.

PROFESSOR POTAIN,

PARIS, FRANCE.

On the night of the 4th of January Pierre Karl Edouard Potain, honorary professor of the Faculty of Medicine of Paris, member of the Institute of France, and commander of the Legion of Honor, died suddenly at his home in Paris.

Born in Paris on the 10th of July, 1825, he began his medical studies at the Paris school of medicine in 1843, became interne in 1848, and graduated in 1853, passing his thesis for the Doctorate on the subject *Les souffles vasculaires qui suivent les hémorrhagies.* This remarkable work showed what might be expected of Potain, who devoted almost his whole life to the study of diseases of the heart. In 1859 he became adjunct professor, and in 1876 professor of clinical medicine in the faculty of medicine of the University of Paris, and taught for ten years at the Necker Hospital, and from 1886 to 1900 at the Charité Hospital.

His contributions to medical literature on nearly all subjects of internal medicine, but more particularly on diseases of the heart and blood-vessels, are numerous. His articles in the *Dictionnaire encyclopédique des sciences médicales* are a marvel of erudition, and his book *Leçons cliniques de la Charité*, published in collaboration with François Frank and his pupils Vaquez, Teissier, and Suchard, will remain a standard work on diseases of the heart for many years to come. He had probably the largest consultation practice of any one in Paris. His kindness to the pupils, his gentleness to his poor patients, his justice in the examination of students, which was always tempered with kindness, made him one of the most beloved of all the teachers in the faculty of medicine. He was a physician for over fifty years and a teacher for forty years. Throughout his long career Professor Potain was honored by his colleagues, beloved by his countless patients among rich and poor, and worshipped by his pupils. He had no enemies, and those who knew him could understand why he had none. He deserved the admiration and veneration which were recently manifested anew when he resigned his position as clinical teacher last year and was made honorary professor, and his pupils from all over the world united to present him with a gold medal as a token of their esteem.

In the death of Professor Potain France has lost one of her noblest sons, the medical profession one of its most illustrious members, the world a good and noble man.—*S. A. Knopf, M. D.*

Pith of Current Literature.

Journal of the American Medical Association, January 19, 1901.

A Clinical Study of One Hundred and Fifty Cases of Hyperphoria. By Dr. Wendell Reber.

Ocular Complications of Injuries to the Head. By Dr. John T. Carpenter.—The author discusses these complications, and gives illustrative cases, one of which is particularly interesting because of the irritative symptoms, namely, spasm of convergence and photophobia, due to traumatic meningitis of the anterior portion of the skull, followed by paresis of the left external rectus and levator palpebræ superioris, with left optic neuritis. The association of paralysis of a branch of the third, with paralysis of the sixth nerve, and optic neuritis on the same side, make it possible to locate the intracranial lesion at or near the sphenoidal fissure.

The Silver-injection Treatment of Pulmonary Consumption. By Dr. Thomas J. Mays.—The author believes that any therapeutic agent which affects this disease favorably and permanently appeals, either directly or indirectly, to the pulmonary organs through the nervous system. After making an effort to reach the lung condition of this disease through the pneumogastric nerves, by massaging, kneading, and compressing them, he finally concluded that the subcutaneous introduction of some well-known conservative irritant, like nitrate of silver, immediately over the course of the nerves in the neck, would furnish the stimulus necessary to modify the morbid condition of the lungs. The author's practice is to inject five minims of a two-and-five-tenths-per-cent. solution of this agent preceded by a cocaine solution of the same strength and dose. A week or ten days should elapse before the injections are repeated, and there should be the same interval between all successive injections. The author has used these injections in one hundred and fifty cases. The best results are obtained in incipient cases, both in regard to the symptoms and to the physical signs. In most of the advanced cases they have a beneficial and, in some instances, an exceptional influence on the symptoms and physical signs. In the great majority of the far-advanced cases they ameliorate cough, expectoration, and other symptoms temporarily, while in some instances their effects are apparently lasting.

Tuberculosis of the Lungs Treated by Compression with Nitrogen after the Method of Murphy. With Further Remarks on the Rationale of the Procedure and a Record of Experiments on Dogs. By Dr. A. F. Lemke. —Tuberculous lungs after compression show much fibrosis in and about the foci of the disease; hence extension from these foci is less likely to occur. As tuberculous lesions always heal by cicatrization it is rational in attacking them to further this natural tendency. Good effects of compression, locally, are brought about by the limitation of the areas of disease already existing by favoring fibrosis in and about these areas; by occluding the avenues of dissemination of the virus, and by compressing cavities to enable them, mechanically, to heal. Other effects of compression are due to rest to the organ as a whole; the emptying of secretions; the prevention or diminution of absorption of toxic bodies; the prevention of secondary infections, and the diminished tendency to hæmorrhage. The actual risk of the operation is very slight. Uses of intrapleural injections of nitrogen: (1) curative in pulmonary tuberculosis; (2) palliative—to prolong life for weeks or months, though the disease be too extensive to make recovery probable; to diminish fever and expectoration; (3) to check pulmonary hæmorrhage; (4) to compress cavities, tuberculous and other, and to establish mechanical conditions that will permit their healing; (5) to compress the lung just prior to surgical operations in which the pleural cavity is to be freely opened, and to determine the presence or absence of pleural adhesions before opening the pleural cavity to drain abscesses or bronchietactic cavities, cysts, etc.

Angina Epiglottidea Anterior. Report of Three Cases. By Dr. Clement F. Theisen.—This is very often primary and is an acute infectious process. The term "acute infectious epiglottiditis" is suggested for this condition as being more scientific, and more fully explaining its probable nature. The inflammation and œdema involve only the anterior surface of the epiglottis.

Athrepsia Infantum—Marasmus, or Wasting Disease—Atrophy—Mal-assimilation of Food: Its Cause and Treatment—Proper Infant Feeding. By Dr. Louis Fischer.—No matter how beneficial boiling, or sterilization, or pasteurization may be, they cannot transform cow's milk into woman's milk, and it is a mistake to believe that the former, by mere sterilization, is a full substitute for the latter.

Light and Seating in the School. By Dr. C. Zimmermann.—The window surface should be to the floor surface as one is to five, and the width of the schoolroom must not exceed twice the distance between the desk and the upper window-sill. As to position, it is well to recollect that the best constructed seats and desks cannot prevent children assuming faulty positions, if not carefully watched.

Some Remarks on the Plantar Reflex, with Special Reference to the Babinksi Phenomenon. By Dr. J. T. Eskridge.

Costa Rica: Its Physicians and Medical Institutions. By Dr. N. Senn.

Medical Record, January 19, 1901.

The Mosquito Theory of the Transmission of Yellow Fever, with its New Developments. By Dr. Charles Finlay.—When the *Culex mosquito, fasciatus,* is confined in an atmosphere artificially rarefied to correspond to altitudes of from four thousand to six thousand feet, it is unable to fly, at least for a while, or to sting. It seems unlikely, considering the smallness of this mosquito's wings, that it will, of its own accord, fly to any considerable height or distance, especially when weighted by the blood which it has absorbed. These peculiarities, according to the author, agree with what is known about the propagation of yellow fever, its tendency to invade the lower stories of buildings in preference to the upper ones, and its non-transmissibility in places like the City of Mexico, Puebla, Petropolis, situated at considerable altitudes above the sea level. The army yellow-fever board has placed beyond a doubt the fact that the *Culex mosquito, fasciatus,* does transmit the yellow fever from a patient to non-immune persons perfectly isolated from other sources of infection, and it has undertaken to demonstrate experimentally the fact that other sources to which the yellow-fever infection has been hitherto attributed are absolutely incapable of determining an attack of the disease.

Notes on Ovarian Grafting. By Dr. Robert T. Morris.—The consensus of opinion seems to be now that a properly transplanted ovary may continue to perform its full normal function, and that we may not only expect to prevent the symptoms of the menopause after a

patient's ovaries have been removed, but we may reasonably expect a pregnancy in a certain percentage of cases. The author believes that the reported cases of pregnancy after double ovariotomy, are in reality cases of pregnancy after accidental ovarian grafting. The special dangers to be expected from ovarian grafting would seem to be no more than the dangers from simple uncomplicated laparotomy.

Case of Thrombophlebitis of the Left Sigmoid Sinus Masking a Latent Brain Abscess in the Temporo-sphenoidal Lobe, both Arising from Chronic Otitis Media. By Dr. Carl Koller.—For the diagnosis of cerebral abscess in this case one had to depend more on the general symptoms present in the initial stage of the abscess than on any focal symptoms. An abscess in the latent stage can hardly ever be diagnosticated, especially when masked by sinus phlebitis.

Subarachnoid Cocainization in Obstetrics and Gynæcology: A Report of Twenty-one Cases. By Dr. N. J. Hawley and Dr. F. J. Taussig.—Fourteen of these cases were obstetrical and seven were gynæcological. Concerning the technique of operation, the important points are: 1. Surgical cleanliness in all things and a fresh, aseptic solution of cocaine, full strength. The method of sterilization used at the present time is to raise the temperature of the solution (in small bottles) to 80° C. for one hour on two successive days. 2. The needle need not be longer than seven centimetres and should be kept sharpened. 3. A nurse should stand at the patient's head when the puncture is made, to keep the back arched forward. 4. During an operation the patient's ears should be kept closed with cotton and the eyes covered with a towel or cloth. As the result of experience, the author supports the view that spinal anæsthesia is not very dangerous except, perhaps, to the child *in utero*. When it produces disagreeable symptoms they are usually transient. In the labor cases it usually retarded progress. In instrumental deliveries, when urgency is required and the patient is not of a very nervous temperament, the spinal narcosis seems to meet every indication. In minor gynæcological work it seems to have its greatest field of usefulness.

Important Points in the Management and Treatment of Consumption. By Dr. Charles R. Upson.—While some writers advise against the use of intrapulmonary medication, the author takes exception to such views, and he asserts that properly selected remedies thus applied may have great value. He has found a mixture of eucalyptol, pine-needle oil, menthol, and formic aldehyde to be most beneficial. He urges upon physicians the importance of the strictest attention to the hygienic environment of the consumptive patient. "The more rigidly we follow the methods adopted in lung sanatoria in the management of these patients, the greater will be our success—the constant supervision and control of the patient being the most important factor in the cure of the disease."

Philadelphia Medical Journal, January 19, 1901.

On Perforation and Perforative Peritonitis in Typhoid Fever. By Dr. William Osler.—There are many lessons to be learned about typhoid fever, but one that the author particularly wishes to enforce is the necessity of watching carefully in the severe cases for the very first features of perforation, in order that the patient may be given the benefit of operation at the earliest possible moment. In general hospitals it may be feasible in the future to save one half, at least, of the perforation cases. In the severer cases the condition of the bowel is hopeless. In another group, the patients recover from the operation, but die of the effects of the disease itself. One of the most gratifying circumstances connected with the disease is the demonstration by the surgeons that there is a third group in which complete and perfect recovery may follow. In the limited number of operations performed thus far the percentage of recovery has been 37.5.

Hæmoglobinuria Complicating Typhoid Fever. By Dr. John H. Musser, and Dr. Aloysius O. J. Kelly.—Aside from the rarity of the complication, this case is interesting because of the absence of malaria as an ætiologic factor, the association of marked hæmoglobinæmia, the persistence of the hæmoglobinuria for at least seven days, and the ultimate recovery of the patient.

Two Cases of Localized Neuritis Occurring as a Complication of Typhoid Fever. By Dr. H. J. White.—This is one of the rarer of the many and widely distributed complications of typhoid fever. Multiple neuritis is much more common and its ætiology is fairly well established, the most generally accepted theory being, that the toxine produced by the typhoid bacillus acts directly on the nerve fibres, causing a mild perineuritis. The singling out of one nerve, or set of nerves, however, must be due to some special individual susceptibility to the effects of the toxine. The author's first case is one of double ulnar neuritis, which is more marked on the right side. The second case is one of a still more uncommon condition called *the tender toes of typhoid fever*. The question of a local inflammatory condition might arise, but the absence of redness, swelling, and heat, as well as the absence of leucocytosis, would entirely exclude that condition.

The Phenomena of Atropine Poisoning Following the Cessation of the Respiratory Movements. By Dr. Edward T. Reichert.—The results of the author's experiments on dogs with enormous doses of atropine have a very important bearing upon the treatment of poisoning in man. They show clearly that death is due to a paralysis of the respiratory centre, that the centre has great recuperative power, and that if artificial respiration is properly practised the respiratory centre recovers its activity, which is accompanied by general and marked improvement of other depressed states. In man, it seems that atropine poisoning should be readily treated if artificial respiration is persistently and intelligently practised, as by Laborde's method, and accompanied by such other treatment as indications suggest.

Report of a Case of Cholelithiasis with Formation and Rupture of an Abscess of the Abdominal Wall. By Dr. John H. Gibbon.—An interesting question suggested by the author's case is that of diagnosis, and he refers to the fact that there is sometimes difficulty in making a diagnosis between inflammatory conditions of the gall bladder and the appendix, and also to the fact that a number of excellent surgeons have reported cases where they operated, expecting to find one of these conditions and, to their surprise, have found the other. In this case the abnormal situation of the gall bladder—in the right iliac fossa—is also of interest.

A Case of Mirror-writing and of Diffuse Hypertrophy of both Breasts in an Epileptic Negress. By Dr. W. G. List.

Medical News, January 19, 1901.

Conclusions Formed after Six Years' Experience with the Antitoxine Treatment of Diphtheria. By Dr.

Henry F. Koester.—Antitoxine, to obtain its best effects, must be used fearlessly and in quantity sufficient to be effective, which is never less than two thousand units, in very mild cases. In severe cases at least three thousand units must be used, and this dose repeated in from twelve to twenty-four hours. Antitoxine in itself, contrary to the expressed belief of some observers, never does any harm. The author concludes: (1) that antitoxine is a positive cure for diphtheria, when employed in sufficient quantity and sufficiently early in the disease; (2) that even when employed too late in the disease to produce its specific action, it cannot under any circumstances be productive of harm; (3) that when used before the invasion of diphtheria, antitoxine possesses a positive immunizing power which lasts for about thirty days.

Problems in the Ætiology, Diagnosis and Treatment of Tuberculous Disease of the Upper Air-passages. By Dr. Jonathan Wright.—The author protests against the tendency to consider the tubercle bacillus as the *sole* agent in the production of tuberculosis. He also denies that the tubercle bacilli are ever the cause of large tonsils and adenoids, and he is disposed to doubt that this overgrowth of tissue is the *chief* pathway by which the tubercle bacillus enters the organism. He believes that the bacillus usually enters the tissues of man before it reaches the stomach by the œsophagus, or the lungs by the trachea. As to diagnosis, it is important, in these cases of laryngeal disease, both in the incipient stage and in the ulcerative stage, where there is danger of confounding it with syphilis, that the sputum analysis should not be neglected. If the bacillus is not found, iodide of potassium and mercury should be given until the case is cured or the diagnosis is clear. Treatment of this disease is a most vivid reminder of the impotency of man in the face of the destructive forces of Nature. Climatic change is the most effective agent. A certain very small number recover under surgical treatment. Lactic acid, and probably some other drugs, will stimulate torpid granulations to a more florid and healthy appearance, and it will frequently cause a marked diminution in the amount of secretion. The local application of iodoform, and especially of orthoform, is of use. The employment of opiates is often justifiable and indicated. Detergent sprays may be used to wash away the secretions.

Notes on the Interesting Cases of a Month's Dispensary Practice. By Dr. William L. Stowell.—A case of *universal eczema* is reported, in which the treatment consisted of solution aluminum acetate externally, with rhubarb internally. The tumefaction of the lips, eyes, and ears was prominent. The rapidity of extension and the fine, bran-like scales tended to strengthen the diagnosis. The patient was entirely cured in six weeks. The author also presents a case of typhoid fever. He says: "Nursing is more important than drugging." He contends that, as at present 27,000 patients (a standing army) are lost each year, exact rules should be laid down as to prophylaxis.

A Case of Adiposis Dolorosa. By Dr. Ellice M. Alger.—This disease always occurs in women, generally past middle life, and almost invariably has been associated with some neurotic or alcoholic taint. In the cases that have gone to autopsy, the thyreoid has been found to have undergone calcareous degeneration. The author's case was typical; the patient was put on gradually increasing doses of thyreoid extract, reaching as much as thirty grains a day. Some improvement followed. Under thyreoid medication the skin became notably less soft, and showed a brownish pigmentation.

Ligation of the Internal Jugular Vein Followed by Thrombosis of the Lateral and Sigmoid Sinuses. By Dr. Charles G. Levison.—The indications laid down by Rohrback for ligation of the internal jugular are: (1) Hæmorrhage due to a laceration or erosion—here the lateral ligature or suture has its place; (2) tumors involving the brain; (3) periadenitis due to tuberculous lymphomata closely adherent and inseparable from the vein; (4) aneurysmal varices; (5) pyæmic otitis, complicated by thrombosis of the lateral sinus.

In the author's case, upon autopsy, infection was practically excluded, for the thrombus was in full process of organization.

Boston Medical and Surgical Journal, January 17, 1901.

Note on the Treatment of Epidermoid Cancer by the Röntgen Rays. By Dr. Francis H. Williams.—The author's experience at the Boston City Hospital would seem to indicate that we have, either in the x-rays themselves, or in some other form of radiation from an excited Crookes's tube, a valuable therapeutic agent in epithelioma, and that the beneficent action of the x-rays can be brought about without causing a burn. The earlier this treatment is undertaken the better. It is not improbable that we shall find its curative action limited to superficial growths, though as a means of relieving the painful features of the disease in other forms it may be of use.

Lancet, January 12, 1901.

Enlargement of the Prostate. By Dr. P. J. Freyer.—The overgrowth of the prostate gland may be uniform in character, the hypertrophy extending equally to all parts of the gland, which thus preserves its symmetry. This form of enlargement is least liable to be attended by symptoms. Or the enlargement may be limited to any one of the three lobes of the gland. It is the enlargement of the middle lobe that gives rise to the most urgent symptoms. This lobe has a tendency to grow upward and inward into the bladder, forming a pyramidal tumor which presses against and occludes the urethral orifice. The average weight of the normal prostate being six drachms, one weighing seven drachms is regarded as hypertrophied. As the prostate enlarges, the urethral orifice is carried up with it; a post-prostatic pouch is thus formed in the bladder, which is never emptied of urine during the acts of micturition. This "residual" urine gradually increases in quantity as the hypertrophy progresses and the muscular power of the bladder diminishes. In course of time changes occur in the ureters and kidneys from the backward pressure due to the obstruction of the urinary flow. Hæmorrhoids and prolapsus ani also occur frequently in connection with this disorder from straining at micturition.

The author reviews the various theories as to the causation of prostatic enlargement (Velpeau's and Guyon's), and rather inclines to the view that it is analogous to fibroid disease of the uterus. None of the symptoms are referable to the prostate itself. They are: (1) increased frequency of micturition; (2) difficulty in starting the stream; (3) diminution in the strength of the urinary flow; (4) straining to help the flow, but which has little or no effect in strengthening the stream; on the contrary, the straining may arrest the flow completely; (5) incomplete stoppage as indicated by dribbling at the end of micturition; and (6) intermittency of the flow due to the ball-valve action of the middle lobe. As the disease progresses, pain and hæmaturia supervene.

The author describes the method of passing a ca-

theter to draw off the residual urine, and the kind of catheter to be used. Little information with reference to the condition of the middle lobe can be gained by rectal examination. There may be great outgrowth of this lobe into the cavity of the bladder when no enlargement of the gland is to be recognized by rectal examination. Some information can be gained by the use of a short-beaked sound, but examination of the bladder by the cystoscope will, in a large proportion of cases, give a still more correct estimate of the size and shape of the middle lobe and as to whether or not it is capable of being removed by operation. (*To be continued.*)

Pneumococcic Arthritis. By Dr. E. J. Cave.—The author's article is based upon a tabulation of thirty-one cases of arthritis associated with the presence of the pneumococcus in the affected joint, which he has collected from the literature of the subject. Of these thirty-one cases, twenty-three patients died and eight recovered. The vast majority of the cases occurred in immediate association with pneumonia (twenty-eight out of thirty-one), the symptoms of arthritis usually following the onset of the pneumonia at intervals varying from a few days to a fortnight. In two instances the arthritis is said to have preceded the pneumonia. The affection is essentially one of adult and advanced life and is far commoner in men than in women. Both these peculiarities may stand in relation to the predisposing influence of previous damage of the joint. The arthritis is commoner in the upper extremity than in the lower. In twenty-seven of the thirty-one cases, one or more of the joints suppurated. In all the cases included in the table, with one exception, the pneumococcus was demonstrated in the fluid in the joints. But it is highly probable that cases occur in which the arthritis is due to the toxines produced by the pneumococcus elsewhere in the body. Many cases of supposed rheumatic fever may thus be due, in reality, to pneumococcus infection.

The morbid anatomy of the joint infected by pneumococci is essentially that of any other septic arthritis. The arthritis is especially liable to be located in a joint previously damaged, whether by disease or mechanical injury.

The symptoms may vary in severity from pain and slight swelling limited to a single joint, to an intense inflammatory œdema of the whole neighborhood of the articulation or of a whole limb, with severe pain, heat, and redness, with abnormal motility from destruction of the ligaments, and with grating of the bared surfaces of the bones. The fever is generally high. The nature of the arthritis can be determined only by its association with pneumonia and by bacteriological examination of the joint contents. The prognosis is grave both as regards danger to life and the ultimate restoration of function to the joint. In the cases that recover, progress is slow, extending over many weeks, and the function of the joint is, as a rule, permanently impaired. In suppurative cases there should be no hesitation in practising aseptic incision of the joint, with flushing, drainage, and fixation. And even in cases of serous effusion it may be questioned whether an arthrotomy for the removal of the morbid products, avoiding important ligaments and tendons, would not be followed by a speedier cure and more favorable result as regards the ultimate restoration of function to the joint; while at the same time one possible source of generalized infection would be largely removed. In any case, convalescence is apt to be tedious and prolonged with much stiffness and adhesion in and about the articulation.

A Case of Siriasis. By A. E. Griffin, M. R. C. S.—By "siriasis" is meant the condition of intense pyrexia developed by prolonged exposure to a heated atmosphere, and which is not to be confounded with that of simple "heat exhaustion."

The author reports the case of an assistant engineer on a Red Sea steamship, who had been working in the engine room at a temperature of 114° F., and who was found unconscious in his bunk an hour later. His temperature was 108.6° F., respiration 60, and pulse 180 to the minute. He was packed in an iced sheet and digitalis was administered hypodermically, with the effect of reducing his temperature to 103° F. He did not recover consciousness for twenty-four hours, and his temperature ranged from normal (after ice packs) to 103° F. for a week. The reflexes were at first absent; later they were exaggerated. Some tremor of both the upper and lower extremities persisted for months after his recovery. There was no evidence of any focal lesion.

Dorsal Dislocation of the First Phalanx of the Little Finger. By H. L. Barnard, F. R. C. S.—The author reports a case of this injury, and sums up his conclusions as follows: 1. That dislocation backwards of the first phalanx of the little finger is rarer than that of the index finger and much rarer than that of the thumb. 2. That, unlike the similar dislocation in the thumb, it is probably produced in most cases by violence applied to the dorsal surface of the head of the metacarpal bone. 3. That the three varieties—(*a*) incomplete dislocation; (*b*) the complete single dislocation; and (*c*) the complete complex dislocation, so admirably described by Faraboeuf in the case of the thumb—apply equally to the little finger. 4. That the incomplete dislocation is easily reduced by pushing the phalanx forward; the complete simple form by the method of manipulation described by Faraboeuf; whilst the complete complex dislocation, the result of ill-directed manipulation, requires the simple operation suggested by Desault, Faraboeuf, and Hulke.

The Treatment of Dupuytren's Contraction and other Points in the Surgery of the Hand. By A. H. Tubby, F. R. C. S.—Contraction of the palmar fascia is an affection of insidious onset and slow but sure progress. Certain points stand out clearly: (1) it is more common in men than in women; (2) it is met with generally after forty years of age; and (3) a large number of the patients who suffer from it have a gouty history. Crystals of urate of soda have been found imbedded in the affected structures. About fifty per cent. of the patients can trace the onset to a slight injury or repeated rubbing of the hands. No bacteria have ever been demonstrated in the tissues. The method of treatment by multiple, subcutaneous tenotomy has certain disadvantages, so that in suitable cases the author dissects out all the affected fascia in the palm. The advantages of this latter method of operating are: (1) all the affected fascia can be completely removed and there is no tendency to recurrence; (2) the treatment is shortened; (3) no expensive apparatus is necessary, thin, narrow, malleable iron splints being all that are required. The disadvantages are the necessity for prolonged dissection and the danger of septic infection.

Club Hand.—Morphologically, the cases of club hand may be grouped thus: 1. The skeleton is complete and well-formed otherwise, the malformation consisting in a modification of the relations of the articular surfaces. 2. The skeleton is complete but deformed in parts, the radius is often shortened and the carpal bones atrophied.

This is the usual variety. 3. The skeleton is incomplete and deformed. Unfortunately, this deformity does not admit of very successful treatment.

Failure of union after division of a tendon is dependent upon: (1) the index of tension at which the muscle and tendon are set—*i. e.*, their powers of retraction; (2) the limitation of retraction of the tendon by bands of fibrous tissue binding it in its grooves; and (3) the character of the structures at the spot where division of the tendon occurs. A most important point is to keep the wrist fully flexed for at least four weeks after the accident and then gradually bring the hand into the straight position, taking at least a month to do so.

Loss of the Left Forearm by Amputation; Death Forty-nine Years thereafter; Necropsy; Localized Area of Atrophy at the Base of the Right Second Frontal Gyrus. By Dr. P. Maclulich and Dr. E. Goodall.—The authors report the case of a man, aged sixty-three years, whose left arm had been amputated forty-nine years previously. He died suddenly from angina pectoris. At the necropsy, on removal of the pia mater, a patch of softening, roughly oblong, about one and a half centimetres in length and from three quarters to one centimetre in breadth, was found occupying the gray matter of the brain at the base of the second right frontal gyrus, where it joined the ascending frontal. It was ochre colored. The disorganized tissue was thin, wrinkled and wasted. There had never been any fits or convulsive movements. It would be contrary to all experience to correlate the cerebral lesion in this case with the loss of the hand and forearm, on account of the forward position of the lesion. That it was due to atheroma would be highly improbable.

A Case of Chronic Inversion of the Uterus of Seven Months' Duration Successfully Treated by Avelingh's Repositor. By Dr. T. Oliver.—The author reports a case of the above-mentioned affection, occurring in a woman aged twenty-four years, in which taxis under the influence of an anæsthetic had failed to replace the organ. Avelingh's repositor was applied, the vagina was packed with iodoform gauze, and the suspenders of the instrument drawn together. It was left *in situ* for three days, the bands being tightened daily. When the repositor was removed the inversion had entirely disappeared, the steady and continuous pressure of the instrument having accomplished what forcible taxis failed to do. The restoration of the uterus to its normal position was permanent and was quickly followed by signs of improvement in the general health of the patient.

The Relation of the Bowel Lesion of Typhoid Fever to the General Symptoms of the Disease. By Dr. T. J. Maclagan.—The action of the typhoid bacillus is a dual one: (1) there is the specific local action of the parasite in the intestinal glands; and (2) the general action of the organism on the blood and tissues. The bowel lesion does not cause the fever and the fever does not cause the bowel lesion. They are conjoint results of the double action of the bacillus. It is the organic growth in the tissues of vast hordes of typhoid bacilli that causes the fever and general disturbance noted in typhoid fever. The cause of the wasting of the nitrogenous tissues is the consumption by millions of bacilli of the nitrogen desired for tissue nutrition. Similarly, the thirst, dry skin, and scanty secretion of urine are due to the consumption by the same bacilli of the water destined for the tissues. The increased metabolism which necessarily results from this action in the minute structure of the nitrogenous tissues, the chief seat of heat formation, is the cause of the rise of temperature and of the quickening of the circulation. Recrudescences of the fever indicate either the invasion by the bacilli of one or more fresh glands or of a fresh absorption of septic material.

Though all the symptoms of typhoid fever are ultimately to be traced back to an action started by the typhoid bacillus, not one of its serious symptoms or special dangers is due to the direct action of that bacillus. The dangers attendant upon the bowel lesion (hæmorrhage and perforation) are due to the processes of sloughing and suppuration. The high temperature and feeble cardiac action are due to the superadded growth of the millions of cocci absorbed into the system from the sloughing glands.

British Medical Journal, January 12, 1901.

Observations on Wind Exposure and Phthisis. By Dr. W. Gordon.—The author has acquainted himself with the distribution of the phthisis death rate in Devonshire, especially with reference to the relative exposure to wind of the various parishes and districts. He concludes that the paramount influence which now determines a higher or lower rate of phthisis mortality is the degree of exposure to or shelter from the west and southwest winds. So that in the climatic treatment of phthisis, the choice of sufficiently wind-protected localities, where the patient's whole time can be spent in a tranquil atmosphere, is of the greatest possible importance. The author's article is accompanied by numerous tables, showing the phthisis death rates, the influence of shelter from west and southwest winds, and of soil, in the various districts of Devonshire, which go far to support his assertions. In none of the districts do definite differences in race, character of dwellings, occupation nor closeness of intermarriage exist.

Jaundice in Typhoid Fever. By G. Ogilvie, M. B.—Jaundice is generally considered a rare and grave complication of typhoid fever. The author has met with three cases of typhoid fever with jaundice, in two of which, at least, the icterus must be considered as produced by the typhoid process. In the first case the jaundice was present from the beginning of the disease, and persisted until the patient became convalescent. In the second case the jaundice appeared on the fourth day after admission, apparently at the end of the first week of the disease; it again gradually disappeared as the temperature fell, and lasted nearly through the whole of the disease. In the third case, the jaundice preceded the onset of the enteric fever by several weeks and lasted during the first three weeks of its course. All three cases recovered.

The frequence of jaundice in typhoid fever is between one and one and one-half per cent. Clinical and pathological evidence alike seem to prove that catarrhal jaundice in typhoid fever, so far from being the rule, is an exceedingly rare occurrence. The first two cases herein reported were certainly not catarrhal in nature. But the precise seat and nature of the affection, as well as the reasons why the infection occasionally attacks the liver at so early a stage, and why it, all the same, runs a mild course, while in others the implication of the liver quickly leads to a fatal termination, are questions which in the present state of our knowledge must remain unanswered.

Influenza and the Nervous System. By J. Carslaw, M. B.—The author reports four cases of acute meningitis, which he thinks were influenzal in nature. Only one of the four patients recovered. The points to which he specially draws attention in all the cases, are as follows:

The illnesses occurred in otherwise healthy subjects and at a time when influenza was present in the neighborhood. Some of the cases had early catarrhal symptoms, considered by their medical advisers to be of the nature of influenza. In all, severe headache was prominent, and grave cerebral symptoms developed with alarming rapidity, and with no apparent cause, in the ears or elsewhere. They were all characterized by very restless delirium, with, in the main, little or no paresis of limb or ocular muscle to indicate any important localization. Most likely, the meningitis was more vertical than basal, though in the only case that was examined *post-mortem* the purulent exudation was found very prominently both at the base and on the convexity, and in this case there had been prominent clinical facts in regard to the pupils, ptosis, and strabismus, indicating that the base of the brain was involved.

The Detection of Arsenic in Beer and Brewing Material. By S. Delépine, M. B.—The author gives a short account of the methods of analysis for the detection of arsenic in beer and brewing materials, used by him during the recent epidemic of arsenical neuritis in Manchester. After discussing the wide distribution of arsenic in Nature, and the various methods for its detection, he describes his own method. After depositing the arsenic on copper by Renisch's method, it is oxidized and sublimed upon cover-glasses, when, by microscopical examination, the triangular crystals of arsenious acid can be readily recognized.

A Note on the Value of Inoculation against Enteric Fever. By H. Cayley, F. R. C. S.—The author gives the results of the inoculations against typhoid fever of members of the staff and establishment of the Scottish National Red Cross Hospital, serving in South Africa. The members of the first section of the hospital, sixty-one persons in all, were inoculated twice at an interval of about ten days. In many cases the symptoms were just as severe after the second as after the first inoculation.

There was not a single case of typhoid amongst the *personnel* of this first section. The second section of the hospital, comprising eighty-two persons, was inoculated on board ship, but many of them only once. The material for inoculation had been on board for some time, and was not so fresh as in the first instance. Of the second section, one nurse and five orderlies had typhoid fever at Kroonstadt, of whom two died. Of these six, there were two inoculated (once) and three non-inoculated. Of the two who died, one had been once inoculated, the other had not been inoculated. A third section, consisting of twenty persons, were all inoculated and none of them had the disease. Examination by means of the Widal test four months later, gave the following results: of the first section, the blood of twenty-three individuals was tested, with positive results in twenty-one instances; of the second section, the blood of twenty-two was tested, with positive results in only two instances.

The results above given are very strong evidence in favor of the protective power of the antityphoid inoculation, when the inoculations are very carefully performed, and they point to the necessity for two inoculations at a suitable interval. During the period of five months that the hospital was stationed at Kroonstadt there were ninety-two admissions for enteric fever and eleven deaths. Of the ninety-two cases, fifteen said they had been inoculated, a few were doubtful, and about seventy had not been inoculated. Of the eleven deaths, one had been inoculated once, the others had not been inoculated. The author is convinced that the attacks of typhoid fever were, as a rule, much milder in the inoculated than in the non-inoculated, and the duration of the disease was much less.

The Toleration of Arsenic. By R. W. MacKenna, M. B.—The author's article is based upon a table of forty-eight cases of various skin diseases, in which arsenic was given over long periods of time, without any untoward symptoms appearing. The arsenic was given in the form of Donovan's solution of the double iodide of arsenic and mercury. The table shows that some patients had taken daily 0.409 grain of arsenious acid without any harmful effects. A consideration of the statistics forces one to the conclusion that an undue importance has been attached to the arsenic in the beer drunk by the sufferers in the recent epidemic of peripheral neuritis in Liverpool and Manchester. Only those cases should be ascribed to arsenic in which there was a well-marked clinical picture of arsenical toxæmia, or in which arsenic was found in the excretions, or *post-mortem* in the organs of the body.

Indépendance médicale, January 2, 1901.

Hæmorrhagic Form of Influenza.—M. N. P. Bénaky describes a grave form of influenza, terminating fatally, characterized by hæmoptysis, epistaxis, metrorrhagia and subcutaneous and submucous hæmorrhages. The patient was undoubtedly suffering from influenza and the bleedings could not be traced to any other source.

Curettage in Uterine Infection.—M. J. Thiénot believes in curetting for uterine infection following abortion or labor. The details of the operation do not differ from those in general use. Anæsthesia is always given. General tonic and supporting treatment is recommended at the same time.

Gazette hebdomadaire de médecine et de chirurgie, December 27, 1900.

Mammary Tuberculosis.—M. Edouard Pluyette reports a case. He says that the germs may gain entrance through abrasions of the nipple. In this case the glandular tissue was entirely destroyed, and gave evidence of tuberculous infection, while the lacteal canals presented only ordinary inflammation. The disease progresses rapidly. There was retraction of the nipple, but no external evidence of disease was noticed until the whole gland was involved. The prognosis is good if early operation is performed.

Lyon médical, December 23, 1900.

Clinical Significance of the "Choc en Dome."—M. J. Mollard says that this sign is not infallible in aortic insufficiency and does not deserve an important place in the semeiology of the disease, as it is frequently absent. It may even be present in other cardiac diseases than aortic and mitral insufficiency and the chronic myocarditides.

Treatment of Two Cases of Diabetes with Serum from the Pancreatic Vein.—M. P. Chatin and M. L. Guinard have treated two well-marked cases of diabetes mellitus by this method and have made daily observations on the amount of sugar present in the urine. Their results have been totally negative. They conclude that this method of opotherapy is useless. It is possible, they think, that the pancreatic products are carried away by the lymphatics rather than by the veins.

Spontaneous Rupture of the Biliary Passages, Laparotomy; Recovery. By M. M. Lagoutte.

Presse médicale, December 22, 1900.

Hæmostatic Medication.—M. H. Vaquez writes a review of the recently introduced glandular extracts for hæmostatic use. He says that while the recorded facts as to their employment are interesting, the scientific results are not yet well established. While these substances have led to their empirical employment, it is probably only a question of time before their use will rest upon a scientific basis.

Agglutination of Colon Bacilli by Typhoid Serum.—M. Paul Courmont and M. C. Lesieur have found that the serum of twenty-two typhoid patients agglutinated feebly pure cultures of the *Bacillus coli communis,* while typhoid bacilli showed the reaction in varying degrees with the same sera, usually very intense. They conclude that the serum of typhoid patients which agglutinates Eberth's bacillus, has not influence ordinarily upon the colon bacillus. When the latter shows the reaction it is usually very feeble and does not compare with the intensity of the agglutinative action of the typhoid bacilli.

December 26, 1900.

Hypertrophic Blennorrhagic Periosteitis.—M. Hirtz and M. Delamare report such a case in which the femoral diaphysis was the seat of the lesion. The authors consider the condition similar to that of the so-called gonorrhœal rheumatism. The diagnosis in this case was established by means of the Röntgen rays.

Berliner klinische Wochenschrift, December 24, 1900.

Normal and Pathological Histology of the Human Hypophysis Cerebri.—Dr. C. Benda has made numerous examinations of the normal and diseased hypophysis in man. In four cases of acromegaly he has found it enlarged, and in two instances the seat of a tumor. He hesitates, nevertheless, from drawing the conclusion that the enlarged gland is responsible for the growth of the bony system.

Serpentine Aneurysm of the Spinal Vascular System.—Dr. Felix Brasch records such a case in which the abnormity of the spinal blood-vessels evoked the most unusual and peculiar complex of symptoms.

Extirpation of the Hypophysis Cerebri. By Dr. Friedrich F. Friedmann and Dr. Otto Maas. An experimental study.

Amyloid Degeneration, especially of the Kidneys. *(Conclusion).*—Dr. M. Litten says that in the majority of instances of amyloid kidney, the urine is clear, abundant, of light yellow color, and of low specific gravity. There is no other renal disease in which different cases show such a variance in quantity excreted and in inorganic constituents. The presence of albumin is by no means a certain sign of amyloid degeneration; it may or may not be found, although with the large white kidney due to amyloid degeneration, immense quantities of albumin are excreted. [The whole article should be read by those interested].

Centralblatt für Chirurgie, December 15, 1900.

Surgery of the Nose. By Dr. Ludwig Löwe.—A description of the technique of, and indications for, opening the skull to operate upon its base, and for the removal of diseased tissues from the nasal cavities.

December 29, 1900.

Skin Transplantation for Severe Stenosis of the Larynx and Trachea.—Dr. H. Alopy has used Gersuny's suggestion to transplant skin in a stenosed larynx. He has performed a fission of the larynx and trachea, excised the portion filled with scar tissue and covered in the defect with skin. The patient recovered well, with good functional power.

Wiener klinische Rundschau, December 30, 1900.

Significance of the Presence of Acetone in the Urine.—Dr. Waldvogel says that while the origin of acetone as it appears in the urine is not perfectly clear, its presence is significant of inanition or of diabetes mellitus. Acetonuria following chloroform or ether narcosis is due to an intensity of fat metabolism.

Tuberculosis Pseudoleucæmica.—Dr. Enrico Ferrari and Dr. Vittorio Ceminotti say that some cases which clinically resemble pseudoleucæmia, are in reality tuberculous in nature, representing a tuberculosis of the lymphatic apparatus. They report a case with histological findings which agree with those reported in literature, except that the authors also found the peculiarly characteristic cells in the muscle-tissues.

Ætiology of Early Ulcerative Syphilide. *(Continued article.)* By Dr. Jaroslav Bukovsky.

Wiener klinische Wochenschrift, December 27, 1900.

Contribution to the Study of Thomsen's Disease. Dr. Julius Mahler records minutely a case of myotonia congenita (Thomsen's disease). Myotonic movements were present. On passive motion there was no muscular contraction, the muscles feeling neither hard nor soft. The muscles of the trunk, the extremities, and the masseter and tongue musculature, were affected. From a study of his patient, the author concludes that this disease is of spinal origin.

Extirpation of the Spleen.—Dr. Karl Schwarz reports a case in which the spleen was removed. The organ was hypertrophied and was freely movable. The patient made a good recovery.

Centralblatt für Gynäkologie, December 15, 1900.

Autocystoplastic and Colpocystoplastic Operation.—Professor O. Witzel reports a very difficult operation performed for the relief of a large defect in the vesicovaginal sæptum, in which he employed as flaps, part of the bladder wall and part of the vaginal wall, with a perfect result. The vaginal cavity is greatly reduced in size, but is sufficiently patent to allow the passage of a catheter. The uterus was removed, as the woman was above fifty years of age. A slight modification of the procedure could be performed on a woman still capable of bearing children, giving her practically a normal vagina.

Beneficent Influence of Pregnancy upon Enteroptosis.—Dr. Hector Maillart says that when the uterus reaches a certain size, the intra-abdominal pressure is heightened, thus relieving many of the digestive and neurasthenic symptoms of enteroptosis. The patient gains in weight and feels encouraged by this quasi cure, which may be permanent.

Cure of Probably Tuberculous Bilateral Salpingitis by Ligature of Blood-vessels. By Dr. Max Nassauer.—A polemic article.

Wiener medizinische Blätter, December 27, 1900.

Usual Forms of Pneumonia in Children.—Dr. M. Marfan says that lobar pneumonia in children is of the same pathogenesis and clinical course as it assumes in adults, except that the symptomatology differs somewhat in the former. There are an initial chill, a short cough, and dyspnœa, and frequently pain is complained of in the upper abdominal regions. Bronchial breathing and

crepitant râles appear later in children than in adults, which may be accounted for by the fact that, in children, pneumonia often begins as a central process. The right apex and the left base seem to be the favorite spots of localization. The characteristic symptoms may not be seen for four or five days after the onset and the diagnosis is, therefore, at times, difficult.

Deutsche Aerzte-Zeitung, January 1, 1901.

Pleural Effusions in Heart Disease.—Professor D. Gerhardt narrates the clinical histories of a number of such cases. He says that, theoretical considerations aside, there are a number of patients who have cardiac disease, especially of the myocardium, who have effusions into the pleura which seem to have some dependence upon the basic disease. The prognosis is not favorable, being about the same as that of cutaneous dropsy seen in heart disease. Digitalis seems to be the most efficacious drug, but occasionally the effect of the drug is not evident until part of the fluid has been evacuated by puncture.

So-called "Poison Primulæ." By Professor R. Kobert.

Significance of Eosinophile Cells in Tuberculous Sputum. By Dr. Franz Meyer.

On Xeroform. By Dr. Alfred Japha.

Riforma medica, December 15, 17, and 18, 1900.

Concerning a Case of Friedrich's Unilateral Polymyoclonus. By Dr. Clemente Ferraris.

Concerning a Case of Fibroma of the Tongue. By Dr. Eugenio Arcoleo.—The patient was a man aged twenty-six years. Six years before admission he noticed accidentally a small tumor on the surface of the tongue. It was red in color and of the size of a pea. The tumor gradually grew and finally impeded mastication. There was no history of syphilis. On examination the tumor was found to be situated in the median line on the base of the tongue, and to have reached the size and shape of a mulberry, with an irregular surface, red in color. On palpation it was movable on the surface of the tongue, on which it was implanted by means of a short pedicle. It was not sensitive and was hard in consistence. The submaxillary and cervical lymphatics were not enlarged. The tumor was removed, and the wound healed on the sixth day. On microscopic examination it was found to be a fibroma.

Concerning Two Cases of Leprosy in the Province of Pesaro-Urbino. By Dr. Goffredo Ungaro.—The purpose of the author is to contribute to the statistics relating to the diffusion of leprosy in Italy.

December 19, 20, 21 and 23, 1900.

The Semeiology of the Pulse in the Foot. By Dr. M. Crispino.—The author describes the application of sphygmography to the pulsation of the arteries of the foot. He has tested the value of this diagnostic measure in health as well as in various arterial and cardiac diseases, and concludes that it is very useful in determining the condition of the circulation. The tracings obtained were clear, constant, and characteristic. He has succeeded in improving Tatti's method of "pedography" by devising an apparatus which records the pulsations directly, instead of indirectly, as in that employed by Tatti.

Vratch, December 2 (O. S. 14), 1900.

Concerning the Influence of the Statutory Limit of Appropriation on the Development of Zemstvo Medicine. By Dr. D. N. Jbankoff.

Concerning the Relation between Bubonic Plague and other Forms of Hæmorrhagic Septicæmia. By Dr. S. V. Konstansoff.—The author's conclusions are as follows: (1) active artificial immunity against chicken-cholera or hog-cholera has no influence upon the course of a subsequent bubonic plague infection; (2) in the same manner, passive immunity against bubonic plague has no effect on infections with the germs of the aforementioned diseases; (3) the absence of an interrelation of immunity between bubonic plague and other hæmorrhagic septicæmias speaks for a special position of bubonic plague in this group of diseases; (4) antibubonic serum may be used with success as a diagnostic measure for the determination of the presence of bubonic plague; (5) there is a marked difference between closely related germs of hæmorrhagic septicæmias, particularly as regards their resistance to the temperature of 45° C. (113° F.)

Schleich's Method of Anæsthesia in Operative Surgery. By Dr. V. E. Neschel.—The author reports a number of cases operated on under anæsthesia according to Schleich's method. He says that this method of local anæsthesia is a real boon to country practitioners, who are often obliged to operate without any medical assistance. In the four cases which he reports, he performed suprapubic cystotomy without any trouble, so far as the anæsthesia was concerned, except that in one case the patient became restless toward the end of the operation, and chloroform had to be given.

The Appearance of Plague in the Territory of the Eastern Chinese Railway. By Dr. V. P. Avroroff.—An account of an epidemic of plague which occurred in the Chinese towns of Inkoy and New-djuang in the summer of 1899.

Proceedings of Societies.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Twenty-second Annual Congress, Held (in Conjunction with the Congress of American Physicians and Surgeons) in Washington, on Tuesday, Wednesday, and Thursday, May 1, 2 and 3, 1900.

The President, Dr. SAMUEL JOHNSTON, of Baltimore, in the Chair.

(Continued from Vol. lxxii, page 1119.)

On the Employment of the Upright Position in Ether Operations upon the Nose, Throat, and Ear.—This was the subject of a paper by Dr. THOMAS R. FRENCH. (See page 621.)

Severe Hæmorrhage after Operations on the Throat and Nose. A Report of Five Cases.—Dr. ARTHUR A. BLISS reported these cases. (See page 406.)

Secondary Hæmorrhage Following the Use of Suprarenal Extract.—This was the title of a paper by Dr. F. E. HOPKINS. (See page 315.)

Dr. W. P. PORCHER, of Charleston: I should like to ask the essayist how he prepares the suprarenal extract, and whether he makes it fresh every day.

Dr. HENRY L. SWAIN, of New Haven: The subject of secondary hæmorrhage has greatly interested me. If we look at this matter from the standpoint of the anatomy of the turbinated tissues and septum on which we operate, we can readily see that we must have some hæmorrhage following the use of these two agents together or with either alone. As Dr. Hopkins has pointed out, we have more hæmorrhage when they are combined than with either one alone. In any case the hæmorrhage is

stopped merely by the presence of the circular fibres in the blood-vessels, which are made to contract. Any coagulating agent put upon the surface increases the coagulability of the clot, but then there is nothing which prevents hæmorrhage any more than in the ordinary wound, except that the vessels are contracted by the action of the circular muscular fibres. Unless that is kept up, relaxation will take place. If we have a small clot stopping up a blood-vessel, and the blood-vessel increases to four times its size by relaxation, the clot is no longer big enough to plug the opening. The question, then, arises, How much more hæmorrhage do we have in these cases than without the use of the suprarenal extract? I have not been able to minimize the hæmorrhage I have seen after operations, as some of the other gentlemen have done who have been quoted.

I remember particularly one hot summer night, two years ago, having an alumnus of Yale come to consult me for the purpose of having an exostosis removed from his sæptum. He said it was necessary to have it done that night, as he was going to take the train for home the next morning. I told him I would do the operation for him. I had used all the suprarenal extract I had in a previous operation a few moments before. I operated on him and used cocaine. There was very profuse hæmorrhage, which gave me much concern for three-quarters of an hour. Finally I succeeded in controlling the hæmorrhage, but the patient was awakened three times in the night by bleeding. He got up and went through various operations of his own suggestion with a view to stopping it and managed to control the hæmorrhage. The patient operated upon with the suprarenal did not have any trouble at all. Perhaps, with this picture in my mind and those of other cases in which the suprarenal extract was used, my opinion has been somewhat warped.

Dr. John W. Farlow, of Boston: I have used the suprarenal extract in many cases, and have not seen any trouble following its use in my own work, but I have heard some of my assistants speak of severe secondary hæmorrhage in several instances. Even if there is a possibility of such a hæmorrhage, it is such a great advantage to be able to do a practically bloodless operation, for instance, in removal of sæptal spurs, that we must certainly admit the very great value of the extract. We can see readily into the nose unobstructed by blood, and are able to complete the operation and place a pledget of gauze to control any possible hæmorrhage in a much more satisfactory manner than when the blood interferes with our sight, and we are obliged to grapple more or less in the dark.

As regards its use in causing coryza, I have seen some noses very much irritated by it, and more instances in which the action of the extract caused a decided diminution in an already irritated nose.

As an example of its very beneficial effect, I recall the case of a boy eight or nine years of age, who was well in all respects except that he had very frequent and incapacitating headaches, for which no cause could be found, although he was examined for malarial disease, for poisoning with arsenic, lead, etc., and for possible defect of vision. There was some deviation of the upper part of the sæptum, with pressure against the middle turbinal. An application of the suprarenal extract to the upper part of the nose caused an almost magical disappearance of the headache. He experienced the same relief on several later occasions, and after he had used it more or less frequently for about two weeks the headaches entirely disappeared and have not returned, although he had suffered for eight months. It is now more than three months since there has been any need of using the extract, for there has not been the slightest suspicion of pain in the head.

Dr. A. W. Watson, of Philadelphia: I have not had much experience in using the suprarenal extract in connection with my operative work. I have found cocaine to be efficient enough. But, as to the question of hæmorrhage after the use of suprarenal extract, it has struck me that the reason for this secondary hæmorrhage is that the relaxation which takes place after the use of the extract is delayed. The relaxation following the use of cocaine takes place within half an hour, as a rule, and it has been my practice to keep the patient under my control in my office until the relaxation has come on and there is no sign of hæmorrhage. In this way a clot is formed when the vessel is dilated. Of course, if the clot is formed earlier it will not be large enough, as Dr. Swain has just said, for the vessel, consequently hæmorrhage is very apt to occur. If sufficient time is allowed for the formation of the clot, when the patient goes home the increased action of the heart is not sufficient to force the clot out through the dilated vessel. With regard to the suprarenal extract causing acute coryza or inflammation in the nose, I have not seen it do so in ordinary cases. But I had an experience myself, not very long ago, which would suggest that it could do so, not by its physiological effects, but from the possibility of its having undergone decomposition in the nose. I had a severe coryza some time ago, and after the acute symptoms had subsided relaxation took place, so that my nose was stopped up and was in an uncomfortable condition. This was about two weeks after the beginning of the attack. I used the suprarenal extract to reduce the turgescence, in which it was very effective. But in less than twenty-four hours thereafter I had an acute inflammation of all the accessory sinuses. Quite a discharge came from the antrum and other sinuses, which lasted for about a week. The solution used was a fresh extract, and was used only during one day. The extract did not decompose during the time that it was in use, so far as appearance and odor would indicate.

Dr. Farlow: I should like to ask if any of the members are familiar with the preparation which Dr. H. L. Wagner, of San Francisco, showed at our meeting two years ago. I have tried to find it in the market, but have been told that no such preparation was to be obtained.

Dr. James E. Newcomb, of New York: I desire to say that Dr. Wagner gave me a little of his preparation, which I put on my shelf and kept some months before I opened it. When I did open it there was a distinct putrefactive odor, although the phial was apparently well sealed. It was entirely unfit for use.

Dr. Swain: I believe that if the fresh glands can be obtained, it is possible to make a solution of their active principles in very dilute acetic acid, and that this solution can be put up in sealed glass tubes and kept indefinitely, giving one a perfectly fresh solution at all times.

Dr. Hopkins: I have nothing to say except reply briefly to the remarks of Dr. Porcher. I have not followed one rule in making the solutions. I first used sterilized water, and later antiseptic solutions, and in neither case did it seem to make any particular difference.

Dr. Porcher: Do you prepare the extract fresh every day?

Dr. Hopkins: I did at first with sterilized water, and this fresh solution was just as irritating; later I used

an antiseptic solution, and this was as well tolerated and effective after a considerable period.

The object of my paper was to call attention to the fact that secondary hæmorrhage seemed to occur more frequently than we had been led to believe, but not in any way would this seem to me to contra-indicate the use of the extract; it would only show that we should exercise more care in the after-treatment of our patients.

A Case of Ozæna of Probably Sphenoidal Origin.—This case was presented by Dr. J. W. FARLOW. (See page 534.)

Dr. J. E. LOGAN, of Kansas City: I have been much interested in Dr. Farlow's paper because my experience coincides with his in at least two cases which I have had of a similar nature. I have never been able to gain access to the body of the sphenoid in the manner suggested. One case I have in mind was unilateral, in which large, foul crusts would form. I operated and gave relief by opening the posterior ethmoidal cells. The patient from time to time complains of some crust formations in the upper portion of the posterior nares, suggesting to my mind that possibly the body of the sphenoid was involved. The case reported by Dr. Farlow and the relief obtained by his treatment only go to prove what I have often thought and advocated, and that is, that these particular pathological phenomena characterizing atrophic rhinitis are secondary to sphenoidal, ethmoidal, or frontal-sinus inflammation, developed there by conditions of deformity, climatic influences, or the like, and that the relief is to be found in proper attention to these accessory sinuses.

Dr. SAMUEL W. LANGMAID, of Boston: I have seen five cases of acute sinus inflammation within two weeks. In the forenoon of the day I left Boston to attend this meeting, I had the case of a gentleman who had suffered great pain for several days. There was very little frontal pain. He came to my office for relief, and after cocainizing the parts I used a probe, with the consequent discharge of considerable bloody mucus. Some of it contained purulent matter. There is no doubt that influenza is the cause of much sinus trouble. If the inflammation of the mucous membrane subsides quickly and if the obstruction in the orifices of the outlets of the sinuses is removed quickly, there may be nothing left. The case would simply be an acute one which would go on for perhaps forty-eight or sixty hours. Occasionally we observe cases of chronic sinus trouble as the result of influenza. Many such cases have occurred as the result of the last epidemic of this disease. We ought in every case to ascertain the condition of the sinuses and not be content with simply spraying the nose. By opening these sinuses in a gentle way, we may guard against the development of chronic trouble.

Dr. A. W. WATSON, of Philadelphia: I am very glad to have heard the paper of Dr. Farlow, as it confirms my own views on this subject. I have been in the habit for some time of looking upon all cases of ozæna as occurring independently of atrophy—that is to say, there may be atrophy of the nose without the ozæna, without crusts, or with crusts without ozæna. We see many such cases. I have seen cases in the same family, in which one child would have a severe ozæna, while in examining another child I would find a case of atrophy, and cases without any ozæna at all and but few crusts, or with crusts without ozæna. It has been my experience that cases of ozæna are due to infection of the accessory sinuses, particularly the sphenoid and posterior ethmoid cells. I have for some time, as a routine measure, washed out these cells and the spaces between them, that is, the posterior spaces, behind the superior and middle turbinates and in front of the sphenoid, with a curved or straight cannula that will pass into the sphenoid cells themselves, and I have had good results. In a paper read before the Laryngological and Otological section of the College of Physicians of Philadelphia, I mentioned this method of treating atrophic rhinitis, and my results have been good. I have had many obstinate cases of many years' duration which were relieved by this method, the patients remaining free from odor when seen at long intervals afterward. I have been using a weak solution of formaldehyde in an alkaline solution, but I think the chief point in the treatment consisted in washing out the cells and spaces in the posterior region.

Dr. FARLOW: There is one point in the treatment of these diseases which is important, and that is, after the nose is thoroughly cleansed, the patient should be asked to remain in the waiting-room without blowing the nose, with the head in the upright position. After a while the nose should be examined again, when, possibly, we may get a clue to the source of the secretion.

(To be continued.)

Book Notices.

A Text-book of the Practice of Medicine. By JAMES M. ANDERS, M. D., Ph. D., LL. D., Professor of the Practice of Medicine and Clinical Medicine in the Medico-chirurgical College, Philadelphia, etc. Illustrated. Fourth Edition, thoroughly Revised. Philadelphia and London: W. B. Saunders & Company, 1900.

WITH the exception of some few changes and additions, especially in the chapters upon disorders of digestion, the fourth edition of this able work is a repetition of the third. The reason for this is understood when we recollect that the third edition appeared only a year ago.

Therapeutics: Its Principles and Practice. By HORATIO C. WOOD, M. D., LL. D. (Lafayette-Yale), Professor of Materia Medica and Therapeutics, and Clinical Professor of Diseases of the Nervous System, in the University of Pennsylvania, etc. Eleventh Edition. Remodeled and in greater Part Rewritten by HORATIO C. WOOD, and HORATIO C. WOOD, Jr., M. D., Demonstrator of Pharmacodynamics in the University of Pennsylvania. Pp. xxxi-850. Philadelphia and London: J. B. Lippincott Company, 1900.

IT must indeed be a small fraction of all American physicians who are unfamiliar with this classic work, and we should be much surprised if it did not form a part of the greater number of medical libraries in this country. Under these circumstances the eleventh edition needs no introduction from us and a review is almost as unnecessary. It may be well, however, to say that the present edition brings pharmacology to its most recent step, and that the arrangement of the material is such as to make the work even more available and useful than formerly.

The Theory and Practice of Hygiene (Notter and Firth). By J. LANE NOTTER, M. A., M. D. (Dub.), Fellow of the Chemical Society, etc., and W. H. HORROCKS, M. B., B. Sc. (Lond.), Assistant Professor of Hygiene in the Army Medical School, Netley, etc. Second Edition. Pp. xvii-1085. Philadelphia: P. Blakiston's Son & Company, 1900.

MANY changes and additions mark the second edition of this excellent book, as they have been required by the

advances in hygienics that have taken place in the past few years, but they are for the greater part inconspicuous and the volume as a whole is unchanged. The work is a thorough and exhaustive one, dealing with hygiene in all its branches; indeed, it is one of the ablest of its sort that have appeared in recent years.

A Manual of Materia Medica and Pharmacology. Comprising all Organic and Inorganic Drugs which are and have been official in the United States Pharmacopœia together with Important Allied Species and Useful Synthetics. Especially Designed for Students of Pharmacy and Medicine as well as for Druggists, Pharmacists, and Physicians. By DAVID M. R. CULBRETH, Ph. G., M. D., Professor of Botany, Materia Medica, and Pharmacognosy in the Maryland College of Pharmacy, etc. Second Edition, Enlarged and thoroughly Revised. With 464 Illustrations. Pp. xv-17 to 885. Philadelphia and New York: Lea Brothers & Company, 1900.

THE second edition of this work is the correction and elaboration of the first, and, as four years have elapsed between them, there has been some opportunity for revision. The character of the work, however, remains unchanged, and what we formerly had to say of the first edition applies now with equal force.

A Manual of Hygiene and Sanitation. By SENECA EGBERT, A. M., M. D., Professor of Hygiene and Dean of Medico-chirurgical College of Philadelphia, etc. Second Edition, Enlarged and thoroughly Revised. Illustrated with 77 Engravings. Philadelphia and New York: Lea Brothers & Company, 1900.

THE complete revision of the work, a moderate number of additions, and a chapter upon military hygiene distinguish this second edition from the first. The last-named chapter is disappointing in its brevity, but the work as a whole is one of much merit, in testimony whereof the rapid exhaustion of the first edition may be cited.

BOOKS, ETC., RECEIVED.

A Text-book of Pharmacology and Therapeutics, or the Action of Drugs in Health and Disease. By Arthur R. Cushny, M. A., M. D. Aberd., Professor of Materia Medica and Therapeutics in the University of Michigan, etc. Second Edition, Revised and Enlarged. Illustrated with Forty-seven Engravings. Pp. v-7 to 732. Philadelphia and New York: Lea Brothers & Company, 1901.

Handbook of Practical Hygiene. By D. H. Bergey, A. M., M. D., First Assistant, Laboratory of Hygiene, University of Pennsylvania. Pp. 164. Easton, Pa.: The Chemical Publishing Company, 1901. [Price, $1.50.]

A Text-book of Urine Analysis for Students and Practitioners of Medicine. By John H. Long, M. S., Sc. D., Professor of Chemistry and Director of the Chemical Laboratories in the Schools of Medicine and Pharmacy of the Northwestern University. With Numerous Illustrations. Pp. iv-249. Easton, Pa.: The Chemical Publishing Company, 1901. [Price, $1.50.]

Physicians' Manual of Therapeutics, referring especially to the Products of the Pharmaceutical and Biological Laboratories of Parke, Davis, & Company. Pp. 5 to 526. Detroit, Mich., 1900.

Anatomie générale appliquée à la physiologie et à la médecine. Par Xavier Bichat, Médecin du Grand Hospice d'Humanité de Paris, etc. Première partie. Pp. 256. Paris: G. Steinheil, 1901.

La Insuficiencia Hepàtica. Por el Doctor D. Nicolás Rodriguez y Abaytúa. Discurso de recepción en la Real Academia de Medicina el 25 de Noviembre de 1900, seguido del Discurso de Contestación del Doctor D. Antonio Espina y Capo. Pp. 5 to 135. Madrid: Nicolás Moya, 1900.

Klinische und pathologisch-anatomische Studien zur Aetiologie des Uterusmyoms. Von Elis Essen Möller. Akademische Abhandlung. Pp. 106. Berlin: S. Karger, 1900.

Aetiologie und Prophylaxe der Lungentuberkulose. Von Dr. J. Ruhemann, Arzt in Berlin. Mit 13 Kurventabellen. Pp. 88. Jena: Gustav Fischer, 1900.

Die pathologische Anatomie im 19. Jahrhundert und ihr Einfluss auf die äussere Medicin. Von Professor H. Chiari in Prag. Pp. 16. Jena: Gustav Fischer, 1900.

Die Mechanik des Hörens und ihre Störungen. Von Dr. med. Gustav Zimmermann, Ohrenarzt in Dresden. Mit vier Abbildungen im Text. Pp. vi-110. Wiesbaden: J. F. Bergmann, 1900.

Experimentelle Untersuchungen über das Conserviren von Fisch und Fleisch mit Salzen. Von Alfred Pettersson, Med. Lic. Pp. 70. München: R. Oldenburg, 1900.

Experimentelle Untersuchungen über die Einwirkung des Eserins auf den Flüssigkeitswechsel und die Circulation im Auge. Von V. Grönholm, früherem Assistenten an der Universitäts-Augenklinik in Helsingfors, Finnland. Hierzu 2 Tafeln mit Curven I-XI. Pp. 620 to 711. Leipzig: Wilhelm Engelmann, 1900.

Der Stand der Volksheilstätten-Bewegung im In- und Auslande. V. Bericht. Herausgegeben von Dr. med. G. Liebe, in Braunfels. Pp. 85. München: Seitz & Schauer, 1900.

Arzneiverordnungen in der Kinderpraxis. Für Studirende und Aerzte. Bearbeitet von Dr. med. H. Guttmann, prakt. Arzt in Berlin. Pp. 110. Berlin: S. Karger, 1900.

The Eighteenth Annual Report of the Mothers' and Babies' Hospital and Dispensary. From January 1, 1899, to October 1, 1900.

The Eighteenth Annual Report of the Harlem Eye, Ear, and Throat Infirmary of the City of New York. 1900.

Proceedings of the Washington Academy of Sciences. A Contribution to the Study of the Insect Fauna of Human Excrement. By L. O. Howard, Ph. D.

Neglected Clinical Opportunities in American Medical Centres. By S. A. Knopf, M. D. (Reprinted from the *Bulletin of the American Academy of Medicine.*)

Results of Five Years' Experience with Cooperation between State Hospitals for the Insane. By Peter M. Wise, M. D.

Injuries of the Eyelids and Eyeballs. By L. Webster Fox, M. D., of Philadelphia. (Reprinted from *International Clinics.*)

Indications for the Drainage in Diseases of the Biliary Passages and the Technic of Operation. By J. E. Summers, Jr., M. D., of Omaha. (Reprinted from the *Philadelphia Medical Journal.*)

Fibroma of the Ovary—Hernia or Diverticulum of the Chorion. By Leonidas N. Laidley, M. D., of St. Louis. (Reprinted from the *American Journal of Obstetrics.*)

A Cataract Knife of Excellent Shape and Proportion devised a Century and a Half ago, by Dr. Thomas Young, of Edinburgh, and the Knives which preceded it.

By Alvin A. Hubbell, M. D., of Buffalo. (Reprinted from the *Ophthalmic Record.*)

Abdominal *versus* Vaginal Hysterectomy. By Henry O. Walker, M. D., of Detroit. (Reprinted from the *Physician and Surgeon.*)

Is Internal Antisepsis Possible? By Thomas E. Satterthwaite, M. D. (Reprinted from the *Post-graduate.*)

A Clinical and Pathological Study of the Rash of Scarlet Fever. By Jay F. Schamberg, M. D., of Philadelphia. (Reprinted from the *Journal of the American Medical Association.*)

A Clinical Study of the Lymphatic Glands in One Hundred Cases of Scarlet Fever. By Jay F. Schamberg, M. D. (Reprinted from the *Annals of Gynæcology and Pædiatry.*)

Miscellany.

The Pan-American Medical Congress.—Below we give the names of the American physicians who have so far announced their intention of reading papers before the third Pan-American Medical Congress, which will convene at Havana, Cuba, on February 4th, together with the titles of the papers:

Section on Medicine.—Tuberculosis in Man and Beast, by Dr. John E. Kelley; Ætiology, by Dr. Elmer Lee; Physical Diagnosis, by Dr. W. H. Vandenburg; Remarks on Tuberculosis, by Dr. Liston H. Montgomery.

Section on General Surgery.—Operative Treatment of Prostatic Hypertrophy, by Dr. Ramon Guitéras, New York; The Bearing of Local Leucocytosis in Surgery, by Dr. R. T. Morris; Gangrenous Hernia, by Dr. T. H. Manley; Treatment of Varicose Ulcers, by Dr. J. L. Medina; Cocaine Spinal Anæsthesia, by Dr. G. R. Fowler; The Pronated Foot and its Effect upon the Knee Joint, by Dr. Michal Hope; Surgical Intervention in Uterine Fibroids, by Dr. A. Vander Veer; Remarks upon Post-operative Psychical Disturbances, by Dr. G. Tucker Harrison; Knee Joint Tuberculosis Differentiation in the Young and Adult, by Dr. J. D. Griffith; Operative Treatment of Inguinal Hernia, by Dr. A. M. Phelps; Some of the General Conditions and Features of Disability Attributable to Personal Accidental Injury, as well as Disability Due to Disease Following Bodily Injury, by Dr. L. H. Montgomery; Remarks on Inguinal Hernia, by Dr. Garmo. Papers, with titles to be announced, by Dr. E. G. Tuttle, Dr. J. W. Roberts, and Dr. W. P. Nicholson.

Section on Obstetrics.—The Toxicity of the Urine in Pregnancy and its Relation to Puerperal Convulsions, by Dr. Milton J. Duff; Face Presentation, by Dr. J. A. Lyons; The Management of a Myomatous Pregnant Uterus, by Dr. W. W. Wathens; Experimental Investigations on Puerperal Sepsis, by Dr. F. Gaertner; The Simultaneous Occurrence of Extra- and Intra-uterine Pregnancy and a Tabulated Record of 62 Cases Collected from 1708-1901, by Dr. E. Gustav Zinke; Cholæmia and Hæmorrhage, by Dr. D. T. Gilliam; Renal Insufficiency in Relation to Women, by Dr. J. T. Jelks; Clinical Considerations Relating to Cancer of the Uterus, by Dr. A. F. Currier; The Medication and Treatment of Uterine Fibroids, by Dr. W. B. Ghase.

Section on Gynæcology and Abdominal Surgery.—Cancer of the Fundus Uteri, by Dr. J. M. Baldy; Treatment of Prolapse of the Uterus, by Dr. H. T. Byford; Ureteral Implantation into the Intestines—A New Method with a Bacteriological and Histo-pathological Study of the Kidney, by Dr. Jacob Frank; Intestinal Sutures, All Knots Inside, by Dr. F. G. Connell; The Complications and Degenerations of Fibroid Tumors as Bearing upon the Treatment of these Growths, by Dr. Chas. P. Noble; Septic Peritonitis, by Dr. C. H. Anderson; The Angeiotribe, by Dr. H. P. Newman; Shock in Abdominal Surgery, by Dr. F. B. Turck; Some Points in the Technique of Hysterectomy, by both Infra- and Supra-pubic Methods, by Dr. W. H. Wathen; Cocaine Anæsthesia by Lumbar Puncture in Gynæcology, by Dr. J. Riddle Goffe; Combined or Multiple Surgical Operations at One Séance in Female Patients, by Dr. R. S. Sutton; When and How Should a Ruptured Ectopic Pregnancy be Operated Upon, by Dr. Paul F. Munde; The Author's Flap Operation for Atresia of the Vagina, with Demonstration, by Dr. Geo. H. Noble; Pelvic Suppuration, by Dr. Joseph Price; Water, its Uses Internally in Abdominal Surgery, by Dr. W. H. Humiston; Heptotomy for the Relief of some Conditions Produced by Biliary Obstruction, by Dr. W. E. B. Davis; Gangrenous Hernia and Intestinal Jointing, by Dr. Thomas H. Manley; Surgical Diagnosis of Abdominal Tumors, by Dr. W. H. Earles; The Technics of Appendicectomy *per se* and as Modified by Combination with Lumbar Appendicectomy and Lumbar Exploration of the Gall Bladder and Bile Ducts, by Dr. Geo. M. Edebohls; The Operative Treatment of Carcinoma Uteri, by Dr. E. E. Montgomery; The Pus Factor in Appendicitis, by Dr. Ramon Guitéras; Three Dangerous Operations—Repair of Lacerated Cervix, Rapid Dilatation of Cervix, and Curettement, by Dr. John B. Deavor; On the Desirability of Combined Operations in Pelvic and Abdominal Surgery, by Dr. W. P. Manton.

Section on Opthalmology.—A New Clinometer for Measuring the Torsional Deviation of the Eye and Estimating the Degree of Distortion Produced by Cylindrical Glasses, by Dr. Alex. A. Duane; Carcinoma of the Orbit, by Dr. Shumway; Report of a Case of Removal of the Superior Sympathetic Cervical Ganglion for non-Inflammatory Glaucoma, by Dr. Joseph Mullen; Case of Blindness from Sympathetic Ophthalmitis Complicated with Secondary Glaucoma—Restoration of Vision by Two Iridectomies, One with Extraction of Lens and Iridocystectomy, and Tynell's Operation of Drilling, by Dr. Chas. A. Oliver.

Section on Laryngology and Rhinology.—How to Prevent Stammering, by Dr. G. H. Makuen; The Tonsils as Ports of Entry for Pathogenic Organisms, by Dr. Irving Townsend; Injurious Effects of Forced Breathing upon Voice Speaking and Singing, by Dr. Carl Seiler; A Case of Sympathetic Cough Cured by Removal of Spur from the Nasal Sæptum, by Dr. E. F. Ingalls.

Section on Otology.—Remarks on Sinus Thrombosis, by Dr. T. Y. Sutphen; Symptomatology of Treatment of Sinus Thrombosis, by Dr. J. F. McKernon; A Critical Review of the Literature of Mastoid Disease—Its Complications, by Dr. S. Oppenheimer; A Brief Résumé of Experience with Carbolic Acid in the Treatment of Mastoid Wounds and Chronic Suppuration of Middle Ear, by Dr. Wendell Phillips; Report of Mastoid Cases, by Dr. J. O. W. Reynolds; Some Remarks on Mastoid Operations as Done in England, France, Germany, and America, by Dr. A. Hobbs; Importance of an Incision in the Inferior Posterior Portion of Canal in Acute Attical Diseases, by Dr. J. O. Tansley; Review of Otological Literature for Two Years, by Dr. Wilson; Use of Aqueous Extract of Suprarenal Capsule in Ear Diseases, by

Dr. W. A. Bates; Two Cases of Ligature of the Internal Jugular Vein for Infective Thrombosis of the Sigmoid Sinus, Due to Purulent Otitis Media—One Recovery and One Death, by Dr. Fred L. Jack; Artificial Aids to Hearing, by Dr. Ed. B. Dench; Acute Otitis Media and Acute Mastoiditis in Scarlatina, Measles, and Diphtheria—A Clinic Report of 5,000 Cases, by Dr. A. B. Duel.

Section on Marine Hygiene and Quarantine.—Need of a National Health Department, by Dr. Liston H. Montgomery; On the Agency of Parasitic Vermin and other Insect Pests in the Spread of Disease, by Dr. G. Homan; The Necessity for the Organization of Bacteriological Commissions for the Study and Investigation of Quarantinable Diseases under the Formation and Control of the Governing Authorities of the Countries Interested—An Absolute Requirement for the Scientific Management and Betterment of Maritime Hygiene and Quarantine, by Dr. Henry B. Horlbeck.

Section on Mental and Nervous Diseases.—Morphinism and Crime, by Dr. T. D. Crothers; Syphilis and Insanity, by Dr. H. Waldo Coe; Cerebral Neurasthenia—Observations on Diagnosis and Treatment, by Dr. D. R. Brower; Possible Cause of Insanity among Americans in the Orient, by Dr. A. J. Ashmead; Autopsychorrhythmia or the Repetition Psychoneurosis—An Inquiry into a Condition of Morbid Rhythmic Cerebral Automatism and its Rhythmic Forms of Mental Alienation, by Dr. C. H. Hughes. Subject for general discussion, Interrelation of the Nervous System and Female Genitals in the Neurotic Diseases of Women.

Section on Medical Pedagogy.—A Plea for Modern Methods of Teaching in Our Medical Colleges, by Dr. J. W. May; Hospital Service a Prerequisite for a License to Practise Medicine and Surgery, by Dr. G. W. Galvin; Some Observations Respecting the Value of the Present Methods of Medical Education, by Dr. A. P. Clarke; The Association of American Medical Colleges; Some of the Work it Has Accomplished, by Dr. D. S. Reynolds; The Next Educational Revolution—What Shall it Be? by Dr. D. B. Cornell; Remarks on the Method of Treating Mental Diseases, by Dr. Ira Van Gieson.

Section on Dental and Buccal Surgery.—Can Interstitial Gingivitis be Prevented and How? by Dr. M. H. Fletcher; Tuberculosis of the Alveolar Process and Surrounding Tissues and a Few Methods of Differential Diagnosis, by Dr. G. F. Eames; The Gingivea and Pericementum, by Dr. W. E. Walker; Irregularities of the Teeth and their Treatment, by Dr. A. E. Baldwin; Treatment of Interstitial Gingivitis, by Dr. Eugene S. Talbot; a paper, the title of which is to be announced, by Dr. G. V. I. Brown.

Section on General Hygiene and Demography.—Restrictions on Enteric Fever, by Dr. H. B. Baker; Problem of Infected Well Persons, by Dr. Chas. V. Chapin; papers, with titles to be announced, by Dr. Roger S. Tracy, and by Dr. Alvah H. Doty.

The Medical Society of the State of New York.—The ninety-fifth annual meeting will be held in Albany, on Tuesday, Wednesday, and Thursday, January 29th, 30th, and 31st, under the presidency of Dr. A. M. Phelps. In addition to the president's inaugural address, the programme contains the following titles: Recent Progress in the Treatment of Pneumonia, by Dr. James King Crook; Congenital Dislocation of the Shoulder, with a Report of Cases, by Dr. Daniel W. Marston; Appendicitis and Menstrual Irregularities, by Dr. A. L. Beahan, of Canandaigua; Small Hospitals and their Administration, by Dr. Louis Nott Lanehart, of Hempstead; The Necessity of Greater Conservatism in the Use of Vasodilators in Certain Cases of Cardiovascular Disease, by Dr. Louis Faugères Bishop; Hernia of the Urinary Bladder, by Dr. William S. Cheesman, of Auburn; The Treatment of Prostatic Hypertrophy, by Dr. Ramon Guitéras; The Medical Society of the State of New York—Its Past and Future, by Dr. Albert Vander Veer, of Albany; What Is Rodent Ulcer? by Dr. John A. Fordyce; Noma of the Genitalia, by Dr. Andrew McFarlane, of Albany; Esophoria, or Latent Squint, by Dr. Francis Balk; Changes in the Crystalline Lens during Accommodation, by Dr. Lucien Howe, of Buffalo; Tuberculosis of the Iris, by Dr. W. F. Mittendorf; Can Interstitial Keratitis be Prevented in the Offspring of Syphilitic Parents? by Dr. Peter A. Callan; The Treatment of Chronic Purulent Otitis Media, by Dr. James F. McKernon; Operations for Deformities Following Pott's Fracture, by Dr. W. O. Plimpton; Indications for Operations upon the Mastoid, by Dr. Wendell C. Phillips; Indications and Limitations of the Vaginal Route of Attack in Pelvic Diseases of Women, by Dr. J. Riddle Goffe; What Complications of Pregnancy, Labor, or the Puerperium Justify Abdominal Section? by Dr. William Warren Potter, of Buffalo; The Treatment of Persistent Suprapubic Fistula Resulting after Ovariotomy, by Dr. Willy Meyer; Results Following the Cure of Chronic Defects of the Vesical Function, by Dr. Eugene Fuller; Ectopic Pregnancy—Primary Rupture—the Opportune Time for Making a Diagnosis, by Dr. George McNaughton, of Brooklyn; An X-ray Study of the Cause of Disability Following Fractures Involving the Elbow Joint, by Dr. Samuel Lloyd; Contributions to Abdominal Surgery, by Dr. James E. Kelly; Loose Cartilage in the Knee Joint, by Dr. P. R. Furbeck, of Gloversville; Pus in the Peritoneal Cavity, by Dr. Robert T. Morris; The Indications for and Limitations of Spinal Cocainization in Surgery, by Dr. George R. Fowler, of Brooklyn; The Results of Nephropexy for Movable Kidney, by Dr. George M. Edebohls; The Relations between Certain Diseases of the Skin and the Menstrual Function, by Dr. L. Duncan Bulkley; Hysterical Anæsthesia and Analgesia, by Dr. B. C. Loveland, of Syracuse; Deep Breathing as a Curative and Preventive Measure, by Dr. John H. Pryor, of Buffalo: Belladonna *versus* Scopolia, by Dr. Reynold W. Wilcox; Disinfection within and without the Body in Diphtheria, by Dr. M. A. Veeder, of Lyons; Afterthoughts on Diphtheria, by Dr. I. N. Love; Fatty Degeneration of the Heart, by Dr. Thomas E. Satterthwaite; Recent Experiences with Erythromelalgia, by Dr. Henry L. Elsner, of Syracuse; A Simple and Accurate Method of Substitute Infant Feeding, by Dr. Henry Dwight Chapin; Leprosy in the Hawaiian Islands, by Dr. Charles E. Davis, of Albany; The Tonometer and its Value in Determining Arterial Tension, by Dr. Henry L. K. Shaw, of Albany; Pleuropericardial and Diaphragmatic Adhesions, by Dr. D. H. Goodwillie; Differential Diagnosis in Diseases of the Spinal Cord, by Dr. E. D. Fisher; Masturbational Neuroses, by Dr. William C. Krauss, of Buffalo; Arthritis Deformans, by Dr. Herman Mynter, of Buffalo; Tenosynovitis Calcarea, by Dr. Carl Beck; The Treatment of Puerperal Fever, by Dr. Herman J. Boldt; The Immunizing Effect of "Rag Weed" in Hay Fever, by Dr. H. Holbrook Curtis: Inguinal Hernia, by Dr. B. Merrill Ricketts, of Cincinnati; Gastrojejunostomy in Gastrectasis, by Dr. A. H. Cordier, of Kansas City: The Toxine of the Colon Bacillus, by Dr. Victor C. Vaughan, of Ann Arbor, Mich.; Tetanus Following Clean Operations, by Dr. Joseph W. Bissell; The Advances in State Medicine, by Dr. M. J. Lewi; Aseptic

and Antiseptic Precautions in Dental Surgery, by Dr. J. B. Ransom, of Dannemora; The Treatment of Delirium Tremens by the Intravenous Infusion of Saline Solution, by Dr. James P. Warbasse, of Brooklyn; and A Report of a Case of Brain Tumor—Operation—Improvement, by Dr. William M. Leszynsky and Dr. James H. Glass, of Utica.

The Japanese Red Cross Society.—The *Army and Navy Journal* states that Surgeon-General Van Reypen, U. S. N., has received from Medical Inspector Harmon, on duty at Yokohama, a recent letter to him from Count Sano, president of the Japanese Red Cross Society, which says: "The Japanese Red Cross Society is very active in its ministrations to their own soldiers and sailors returned from the China war, and it is equally kind and attentive to the sick and wounded in the foreign hospitals here. Count Sano is a member of the Imperial Privy Council, and a prominent man in Tokio."

A Baronetcy for the President of the Royal College of Physicians of London.—Among the honors granted for the new year by the Queen of England is a baronetcy for Dr. Church. Sir William Selby Church, Bart., is the president of the Royal College of Physicians of London. Other noted English medical men decorated, are Dr. Thomas Barlow, professor of clinical medicine of University College, who has been made a baronet; Dr. Hugh Adcock, consulting physician-in-chief to the Shah of Persia, who has been made a Companion of the Order of St. Michael and St. George; Sir William Turner, president of the General Medical Council, who has been created a Knight Commander of the Most Honorable Order of the Bath; and Major John Crimmin, V. C., of the Indian Medical Service, now a Companion of the Most Eminent Order of the Indian Empire.

The late Dr. Horace T. Hanks.—At the annual meeting of the Medical Association of the Greater City of New York, held at the New York Academy of Medicine on January 14, 1901, the following report was presented:

The committee appointed by the president, Dr. Weir, at the December meeting of this association, to prepare a suitable minute in regard to the death of Dr. Horace Tracy Hanks, begs leave to report as follows:

"It is with sorrow that we are called upon to report the death of Dr. Horace Tracy Hanks, one of the charter members of our association. Dr. Hanks died of Bright's disease at his home, in this city, on November 18, 1900. He was born in East Randolph, Vermont, on June 27, 1837. He graduated from the Albany Medical College in the class of 1861. After serving in the Union Army as an acting assistant surgeon for two years, he began the practice of medicine in Royalston, Massachusetts, where he remained, however, for a short time only, removing to New York City.

"He held many positions of responsibility, among which were the professorship of the diseases of women in the Post-graduate Medical School and attending surgeon to the Woman's Hospital in the State of New York. He was consulting gynæcologist to the Tarrytown, Mount Vernon, and St. Joseph's hospitals. He was a member of the New York Academy of Medicine, the Medical Society of the County of New York, the New York Obstetrical Society, and the American Medical Association, and was a fellow of the American Gynæcological Society and of the British Gynæcological Society.

(Signed) "Henry D. Nicoll,
Clement Cleveland,
Edward E. Tull, } Committee."

New Officers of the Medico-Legal Society.—The annual meeting for the election of officers of the Medico-Legal Society was held recently at the Hotel St. Andrew in this city. About forty members were present, and the following officers were elected: President, Clark Bell; first vice-president, George S. Porter; second vice-president, F. D. Crothers; secretary, H. G. Chapin; corresponding secretary, M. Ellinger; pathologist, F. B. Downes, M. D.; treasurer, Miss Caroline F. Taylor; chemist, Professor Charles H. Doremus; curator, Dr. J. Mount Bleyer; toxicologist, Professor W. B. McVey; librarian, F. L. Hoffman; assistant librarian, F. G. Frost; bacteriologist, B. G. Demoise; microscopist, Dr. E. J. Lederle; legal trustee, Judge A. J. Dittenhoefer; medical trustee, Dr. G. S. Heft; legal counselor, F. E. Crane; medical counselor, Dr. G. Chaffe; permanent commission, L. A. Emory (legal) and George L. Porter (medical). The chief paper of the evening was that read by Dr. Albert Bach on The Rehabilitation of the Medical Expert. At the conclusion of Dr. Bach's paper discussion on the subject was invited. Judge Daly, of Brooklyn, condemned the custom of large corporations retaining physicians as experts at a regular yearly salary, and said that such evidence should never be admitted in any court of justice. Mr. Henry Wollman said that he had noticed that in the testimony given in the Molineux case no two experts gave the same reason for arriving at a conclusion. Mr. Tucker said he thought that what was really needed was not better doctors, but better men. A memorial on the death of the late Cushman K. Davis was read by Mr. Bell, the president, after which the meeting adjourned.

The Sale of Absinthe Prohibited in France.—The Chamber of Deputies has adopted a resolution calling upon the government to prohibit the manufacture and sale of all alcoholic liquors pronounced dangerous by the Academy of Medicine. The resolution was aimed at absinthe, the consumption of which has nearly doubled in France since 1894, and now stands at 10,000,000 litres annually.

Medicine and Medical Journalism in Greece.—The *British Medical Journal* for January 5th says: "Dr. Foustanos gives, in a recent number of *La Grèce médicale*, a history of medical journalism in Greece, which virtually begins with the existence of that country as an independent State in 1830. Before that time medical science could hardly be said to exist in modern Greece. If now and then a scientific work was written in Greek, it was printed at great expense in Italy, mostly at Venice. After the emancipation of Greece, Greek physicians began to return to their country from Italy and other parts of Europe, and a new era in the scientific life of the nation began. A medical society was founded at Athens in 1836, and began to issue the first Greek medical review, which took its name from Asklepios, the god of medicine; its life was short, for it died in 1839. A *New Asklepios* was started in 1842 by G. Prinaris, and lived till 1847. Yet a third incarnation of *Asklepios* appeared in 1856. There have been at different times three journals bearing the name of Hippocrates, and two that of Galen, besides a *Medical Bee* and some dozen other variously named journals. These all have long had to be spoken of in the aorist tense. At the present time there are only two medical journals in Greece—*Ἰατρικὴ Πρόοδος* (*Medical Progress*), published in Greek, and *La Grèce médicale* in French. The editor of both these journals is Dr. J. Foustanos, of Syra."

Original Communications.

A PRELIMINARY COMMUNICATION, WITH PROJECTION-DRAWINGS, ILLUSTRATING THE TOPOGRAPHY OF THE PARACŒLES (LATERAL VENTRICLES) IN THEIR RELATIONS TO THE SURFACE OF THE CEREBRUM AND THE CRANIUM.*

By EDWARD A. SPITZKA,
NEW YORK,
STUDENT OF MEDICINE, COLLEGE OF PHYSICIANS AND SURGEONS.

TAPPING, draining, and injecting the paracœles (as the lateral ventricles are to be designated) have become recognized surgical procedures, both for diagnostic and for therapeutic purposes. The mode of procedure, however, is yet far from technical perfection and would be more often resorted to if the surgical risks and topographical uncertainty were removed.

Tapping of the paracœles was first proposed by Wernicke (1) in 1881, and later by Zenner (2) in 1886. W. W. Keen (3), of Philadelphia, in 1888, first formulated rules and a technique for puncturing the brain with the purpose of entering the cavity, and he has pointed out that the operation is justifiable, that it can be done, safely, and that it may be the means of saving life. A most important suggestion has recently been made, namely, the treatment of tetanus by the injection of antitetanic serum, either intracerebrally or directly into the paracœles. Without encroaching on a theme which, not being within my province, it is not my purpose to discuss, I may be allowed to assume as accepted that the operation has a future. Lewandowsky (4) and others have shown, in experimenting with drugs which were thrown into the cerebrospinal fluid, that these substances penetrated the nerve-substance through the lymph-channels, and without the intervention of the blood-vessels.

That the operating surgeon may feel reasonably confident of striking the paracœles presupposes accurate anatomical knowledge on his part; and I may say that nowhere in the human body does Holmes's aphorism apply so pointedly: "Let the eye go before the hand, and the mind before the eye." In the conception of the contour and depth of these hidden cavities the surgeon must rely chiefly upon his imagination and upon the most accurate knowledge of the correlations of the parts. Correct anatomical plates showing the relative topography may be of some service in the execution of such procedures. As in some other fields of operative surgery, reference plates which are both reliable and clear are a desideratum. The otherwise excellent plates of Fraser (5) lack the clearness so essential for busy practical men. Aside from these, I can find no correct representations of the cerebral and cranial relations of the paracœles. A search of the literature made by the writer reveals only three attempts essaying to depict such topography:

1. In France, Chipault (6), in an almost miniature reproduction from Poirier (7), shows a lateral view of the skull with an incorrect outline of the paracœle.

2. In England, Wilson (8), in 1894, published three projection-drawings of the brain which were primarily intended to show the relations of the internal capsule to the gyres of the surface, but in addition he outlined the paracœles. These drawings, however, fail to present a true contour of these cavities; in fact, it is evident from his "dorsal view" that he ignores the existence of an epithelial floor and wall of the paracœles, and, further, these structures are not brought into correlation with the cranium.

3. Quain (9) presents a figure which, not purporting to be aught but a schematic outline, is unavailable for surgical use.

The propositions presented herewith are offered as preliminary only. They are based upon dissections of two adult heads. It is the writer's purpose to utilize as large a number of heads as possible, of children as well as adults, and of different sex and race. A description of the two heads follows:

HEAD No. 1.

(See Figures 1, 2 and 3.)

J. L., native of United States, white, male; aged fifty-eight years; died March 30, 1900, of phthisis; height, 175 centimetres (68¾ inches).

Dimensions of the Skull.

Maximum anteroposterior diameter..	18.3	centimetres
Maximum lateral diameter.....	15.2	centimetres
(Cephalic index, 83°.)		
Minimum frontal diameter.....	10	centimetres
Maximum circumference (21¾ inches)	55.25	centimetres

HEAD No. 2.

(See Figures 4, 5 and 6.)

J. B., native of the United States (doubtless of Hibernian descent), white, male; aged sixty-nine years; died March 27th, of old age; height, 160 centimetres (63 inches).

Dimensions of the Skull.

Maximum anteroposterior diameter....	18.8	centimetres
Maximum lateral diameter.....	14	centimetres
(Cephalic index, 74.46°.)		
Minimum frontal diameter.....	10.1	centimetres
Maximum circumference (20⅞ inches) .	53	centimetres

*Read before the Association of American Anatomists, in Baltimore, December 28, 1900. The writer is indebted to Professor Huntington and Dr. Gallaudet, of the College of Physicians and Surgeons, Columbia University, for the anatomical material employed in the preparation of this report.

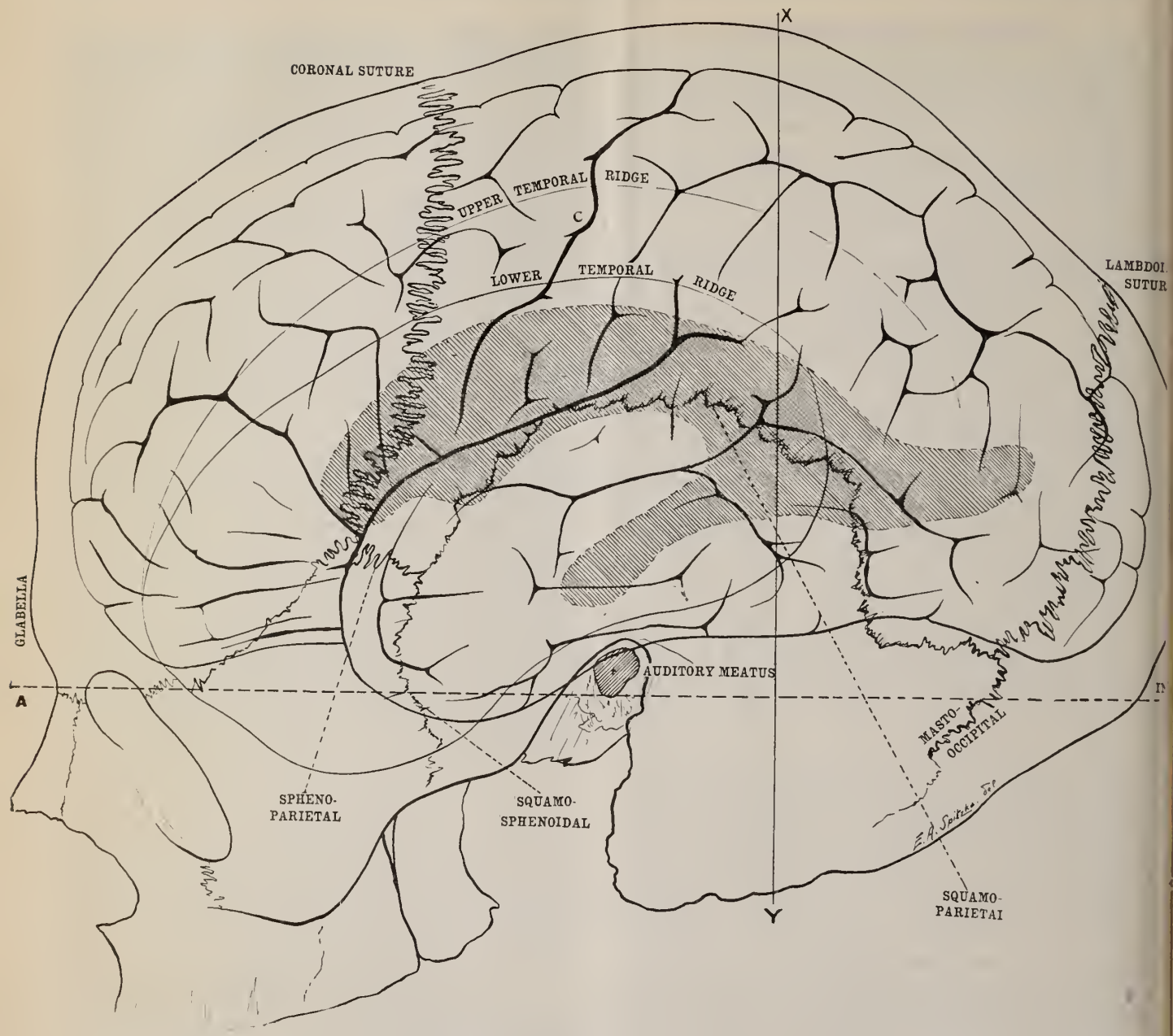

FIG. 1.—Lateral view of Head No. 1. The paracœle is shaded. C is the central fissure. Line AB passes through the inion and the external angular process of the frontal. Line XY indicates line of section illustrated in Fig. 3.

In each case, the head was removed from the cadaver after the usual sodium arsenite and red starch arterial injection. The scalp and superficial soft parts were dissected off to facilitate impregnation by the hardening fluid, the skull was trephined, and the paracœles were injected, following Keen's directions, with 60 cubic centimetres of the 10-per-cent solution of formaldehyde. This quantity, judging from my experience, seems to be about as much as the cœlian cavities may hold, from the fact that only a few drops escaped from the metapore and the myelocœle, where the myelon (spinal cord) was severed. The outline of the cavities on section sustained this view. The entire head was then immersed in formaldehyde solution of 5-per-cent. strength, care being taken to allow the fluid to gain free access to the entire brain surface through incisions in the dura at the site of the trephine openings. After one month's hardening the skull was thoroughly cleansed, and the drawings and measurements were made. The writer's purpose had been to decalcify the skull and make the sections through brain and skull in their natural relations. This was attempted on the second head, but, unfortunately, in that particular case the skull was so thick in parts that the method was temporarily abandoned, but is intended to be resumed. The skull was opened and the brain, which had hardened well in both cases, was carefully removed. The brain, with its fissures, gyres, and blood-vessels, was then measured and drawn, special attention being paid to their relations with the configurations of the cranium. It was next cut into sections, one fourth of an inch in thickness, in a sectioning-box contrived by the writer, the cuts being made coronally and perpendicular to the plane passing

through the external angular processes of the frontal and the inion. With a series of tracings made directly from the sections, and with the aid of simple draughtsman's appliances, the outlines of the paracœles were projected upon the surface of the cerebrum as well as the cranium, both laterally and dorsally. The accompanying figures show these relations in a way which may prove of some service to the practical surgeon. Such topographical plates cannot be expected to entirely set aside the value of measurements; indeed, a judicious combination of measurements with these figures is desirable. It is doubtful whether any system of mathematical measurements can be devised that will apply with mathematical accuracy to all heads. Cunningham, Horsley, Merkel, and others have shown that the craniocerebral relations vary with age, sex, race, pressure distortion, and cephalic index, and that the practical application of topographical procedures according to systems involving arbitrary lines, such as verticals raised from a base-line, and even measurements, are often misleading, and thus become sources of error and disastrous surgery.

The arguments of Hare, Chipault, and Merkel led me to adopt the plane, indicated by the line AB in Fig. 1, passing through the external angular frontal processes and the inion, as being the most constant plane in its relations to the cerebrum. The popular "Reid's base-line" has been shown by Merkel to be untrustworthy, because too variable, and it is therefore unavailable for these researches.

As in all experiments in craniocerebral topography, the following sources of uncertainty must be borne in mind:

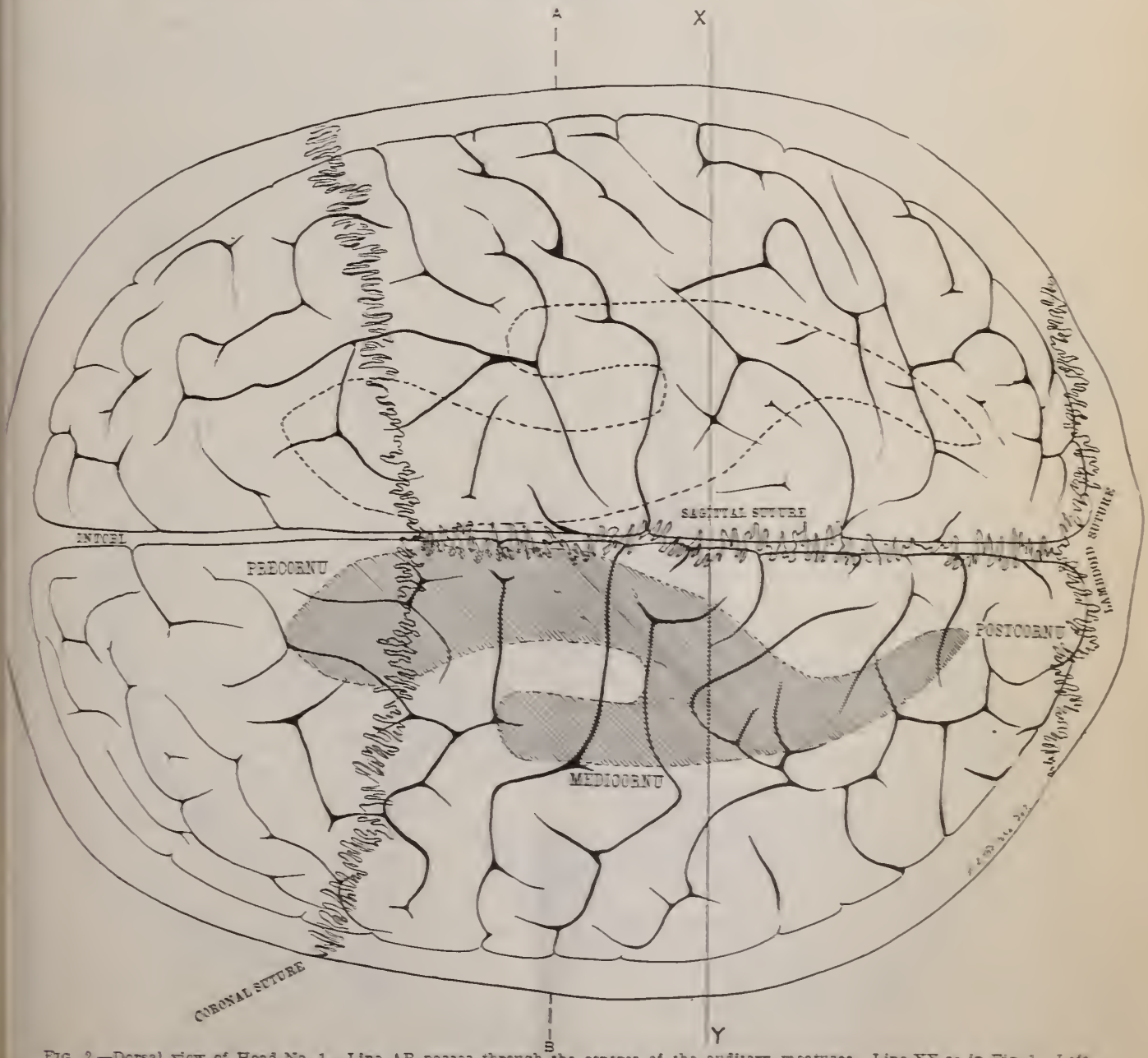

FIG. 2.—Dorsal view of Head No. 1. Line AB passes through the centres of the auditory meatuses. Line XY as in Fig. 1. Left paracœle is shaded, outlined on the right side by a broken line.

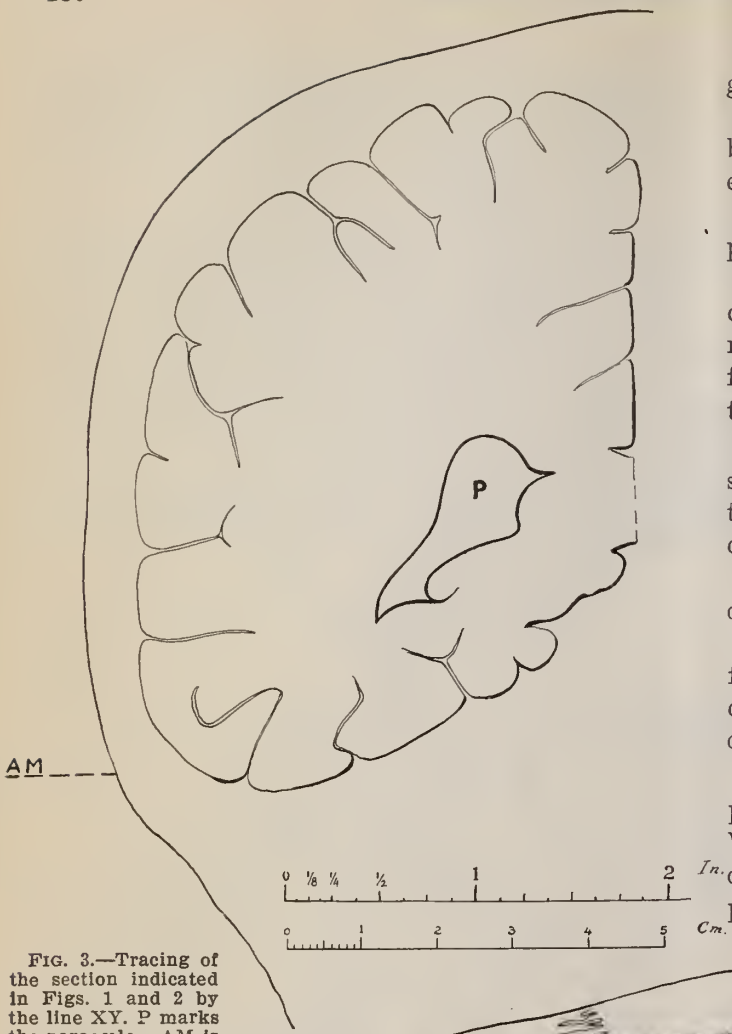

FIG. 3.—Tracing of the section indicated in Figs. 1 and 2 by the line XY. P marks the paracœle. AM is at the level of the auditory meatus.

1. Variability in the relations of the fissures and gyres to the sutures and other cranial landmarks.

2. The difference between the surface area of the brain and of the skull; this causes a difference in the exact correspondence of lines drawn upon them.

3. The intrinsic differences in the fissural and gyral patterns of different individuals.

To what extent these variations are to be recognized can only be determined by the examination of a large number of heads before I venture to offer any definite formulations. So far as the variations of the paracœles themselves are concerned, they are mainly these:

1. Variations in the greater or lesser cephalic extension of the præcornu and medicornu and the caudal extension of the postcornu, the third being particularly inconstant.

2. Variations in the contour of the curve of any part of the paracœle, notably in the medicornu and postcornu.

3. The existence of lacunæ or loculi of the cavity formed by the intervention of sæpta of pathological or congenital origin. Anomalies of this kind are most frequent, it seems, in the postcornu.

The reader will recognize the normal outline of the paracœles, as they have been made familiar to us by Welcker's plaster casts, in head No. 1, and in the left half of No. 2 (Figs. 1, 2, 4, and 6). The contour of the right paracœle in the second head is abnormal to a remarkable

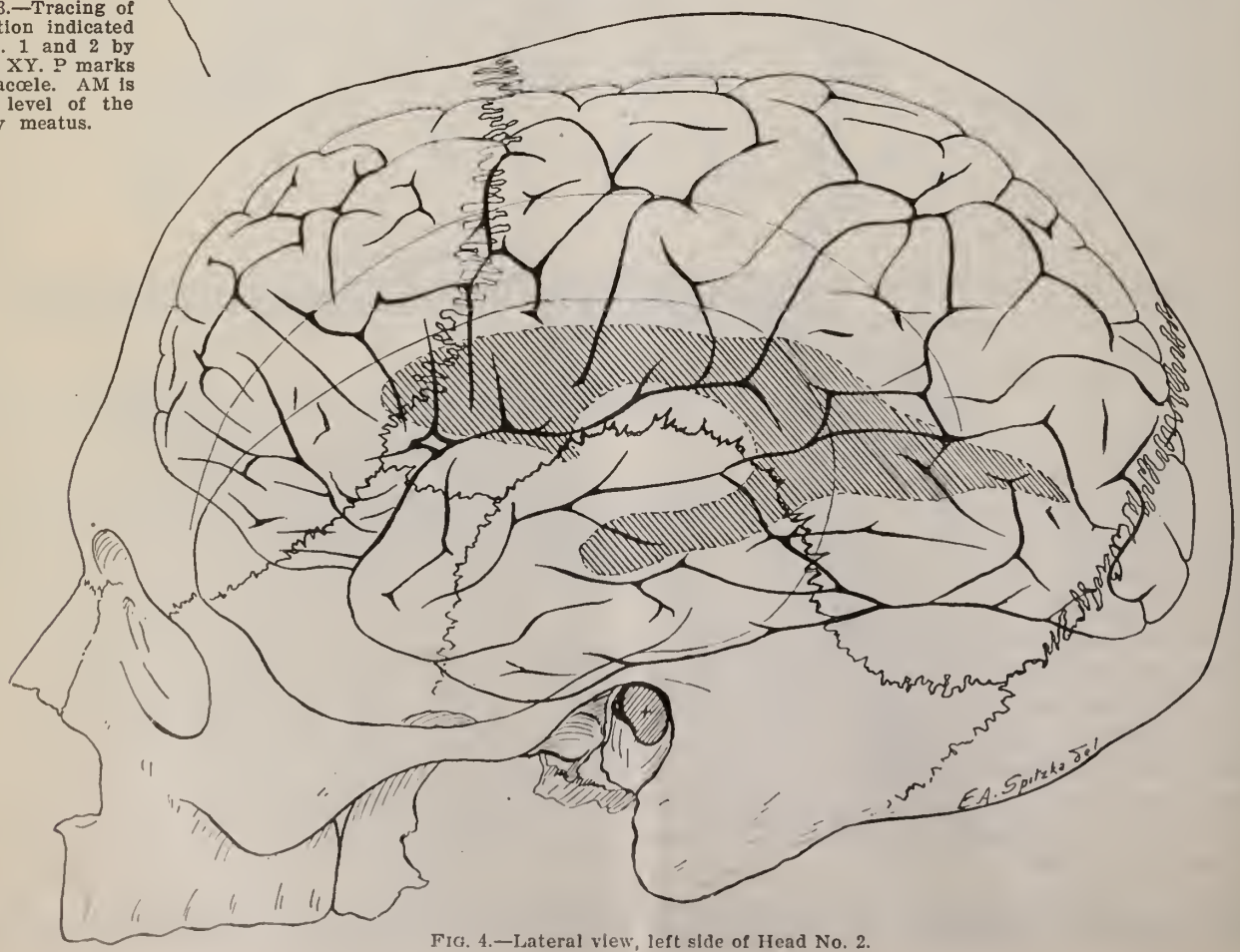

FIG. 4.—Lateral view, left side of Head No. 2.

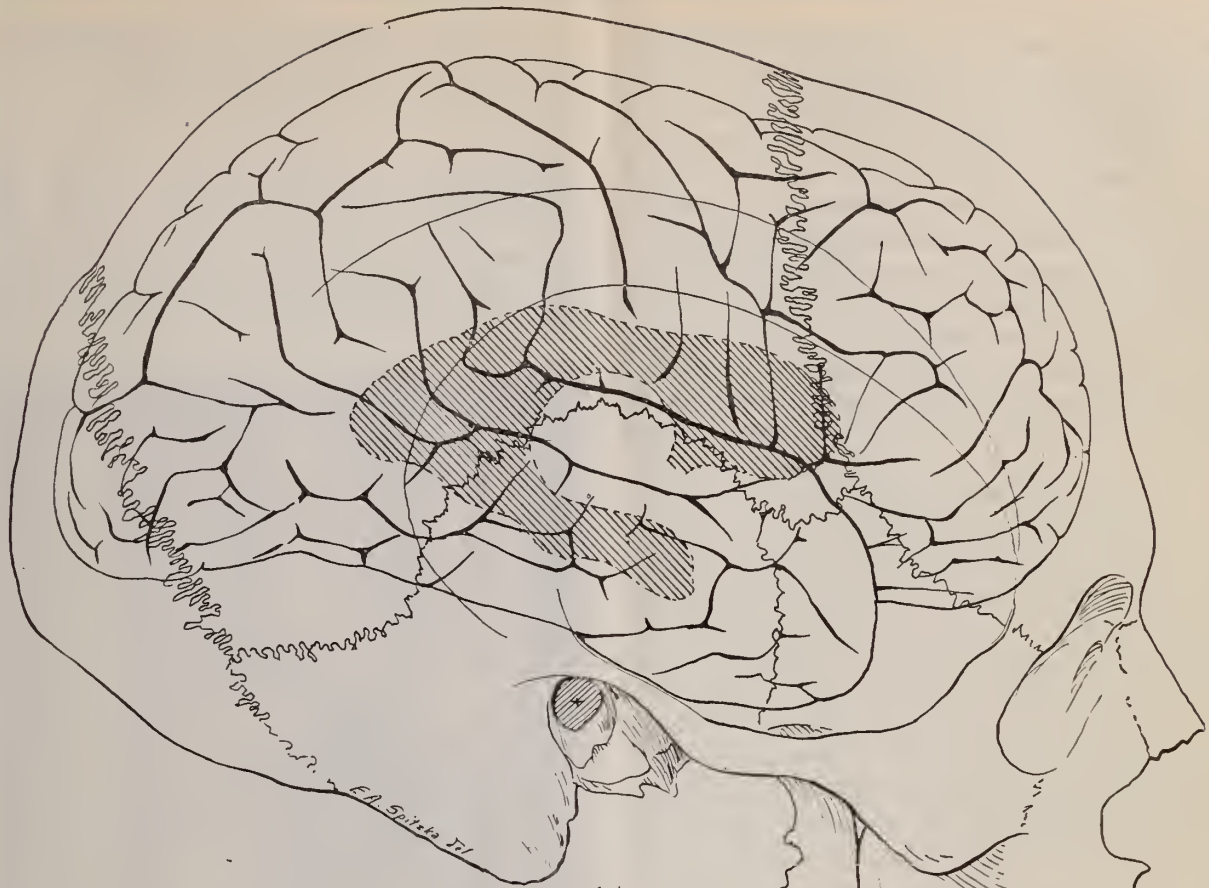

FIG. 5.—Lateral view, right side of Head No. 2.

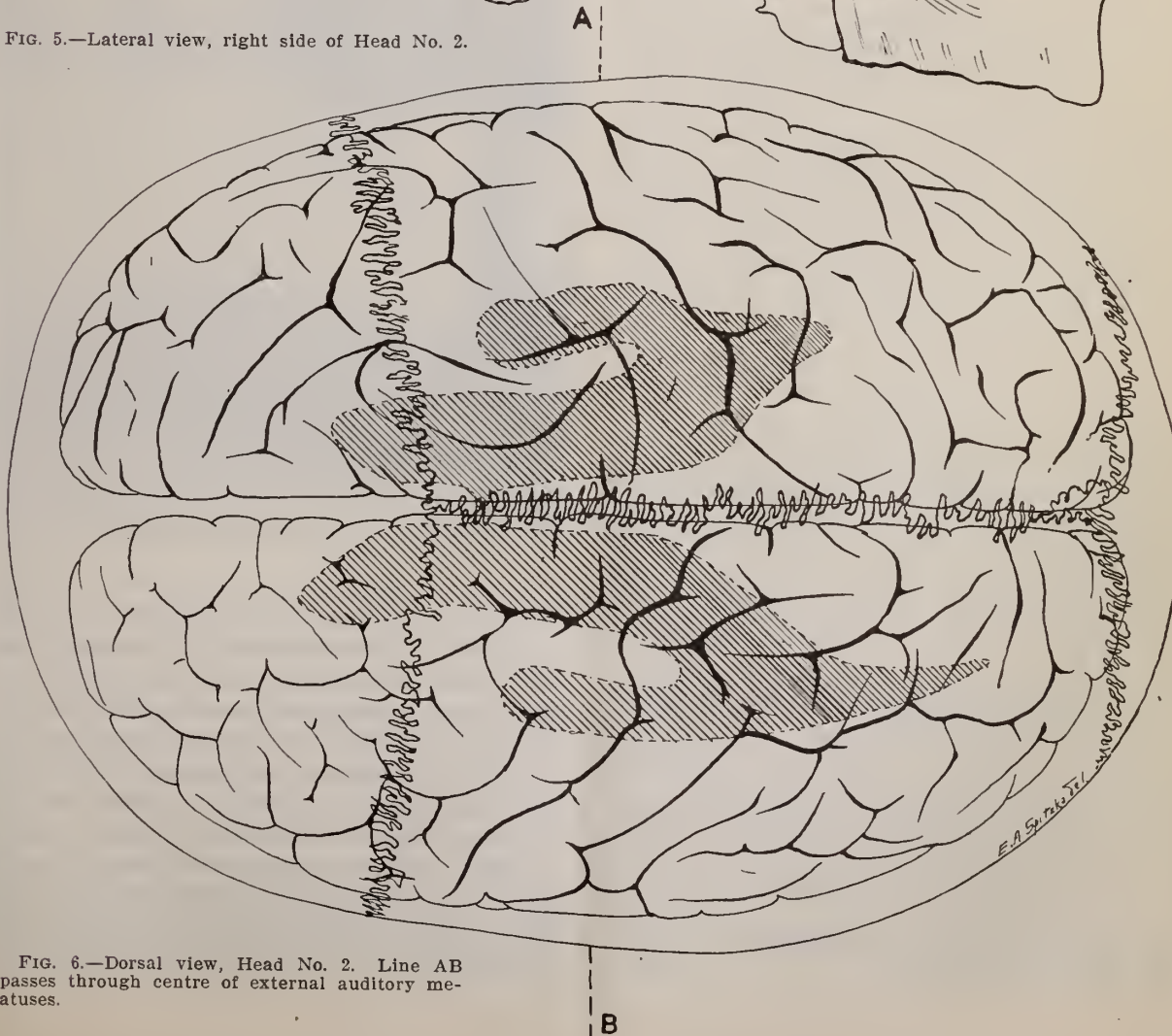

FIG. 6.—Dorsal view, Head No. 2. Line AB passes through centre of external auditory meatuses.

degree. The postcornu is over an inch shorter than in the left half, the medicornu is somewhat longer, and the præcornu is slightly shorter. The "trigonum ventriculi" is slightly displaced cephalad. A careful examination failed to reveal any lacuna that might have been cut off from the postcornu. It were interesting to determine the frequency and range of these and like variations, for in the absence of external indications of such asymmetry, the success of an operation in such a case as this would, to say the least, be problematical.

For the purpose of effecting an entrance into the cavity, the safest road would seem to be the one which is directed into the *"trigonum."* Keen (10) prefers to reach the cavity at the beginning or in the course of the medicornu. The *trigonum* is the roomiest part of the paracœle, and its dimensions permit of the choice of any of the several routes of approach, according to the judgment of the operator. It is the least variable portion of the paracœle, so far as its dimensions and topography are concerned, and it is never lacunated, or at least has never been so reported that I am aware of. The size of this part may be estimated in Fig. 3, which is a tracing of the section at the line XY in Figs. 1 and 2. The line AM marks the level of the auditory meatus. The variability of this level probably invalidates most systems of measurement concerning paracœlian relations. As stated before, it is only by means of averages based upon a large number of cases that we can obtain any reliable guides for an operation which, it seems, is acknowledged to have a fruitful future.

In the accompanying figures the writer has attempted to represent the cerebral and cranial relations of the paracœles as faithfully as the available material permitted. For present purposes it has been deemed best to omit the cerebral and dural blood-vessels, as well as the representations of cortical centres. These features may be supplied in a final report of the completed researches.

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10. Keen. Buck's *Reference Handbook of the Medical Sciences,* Vol. viii, p. 230.

A CASE OF ARSENICAL DERMATITIS.*

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While cases of dermatitis medicamentosa are not rare by any means, each one possesses a certain amount of interest, either on account of the poisoning agent, its dose or manner of ingestion, or on account of the peculiar changes that manifest themselves in the skin. Added to this are the varying degrees of susceptibility manifested

by individuals and the various subjective symptoms of which they complain, as well as the objective signs which they present to the observer. The eruptions presented in arsenical dermatitis are numerous, but their localizations vary in a great measure. Of course, it is not my purpose here to present a complete, or even a partial, account of these, for they may be easily found in textbooks. What I purpose doing is to relate a case and add thereto a few remarks bearing upon it.

Case.—S. K., a single woman, twenty-six years of age, of Polish origin, has always enjoyed the best of health. Being an orphan and without means, she en-

*Read before the St. Louis District Medical Society, December 19, 1900.

tered domestic service. In the course of time a man, whose name she refused to disclose, paid his attentions to her. This led to further intimacy and culminated in her pregnancy. She was safely delivered of a living child. On her insisting upon marriage to her lover, he refused and left the city. Racked by remorse and despondency, the girl saw but one escape from her troubles—suicide. In order to compass this end she retired to her bedroom and swallowed a heaping teaspoonful of "rough on rats." The pain produced was so excruciating that her cries drew the attention of the lady of the house. She immediately called in a policeman, who had the girl conveyed to the City Dispensary, where her stomach was washed out. Thence she was brought to the City Hospital and subjected to another washing out of the stomach. By this time she was nearly exhausted and was placed in bed, some diffusible stimulants being administered. When able to speak, she complained of intense burning pain in the mouth, stomach, and intestines.

When I saw her, two days later, she showed a decided eruption. On the face the principal lesions were vesicles, with some pustules. A glance at the annexed figure will give a general idea of the condition which existed. The lips and nose were swollen. On the left side of the forehead there were discrete vesicles and a few small pustules. At the root of the nose there was a pustule emptied of its contents. On either side of the nose were discrete vesicles, while the upper lip showed a confluent eruption of the same lesions. The lower lip presented the same lesions and also the chin. The vermilion of the lips did not present a single lesion, but was hot and dry.

Upon examining the woman, no other eruption was found, except on the buttocks. The right one had a patch of confluent vesicles of the size of a silver dollar. Here and there a small discrete vesicle could be seen. On the left buttock, which was the one on which she habitually slept, a patch of confluent vesicles existed. It extended forward and implicated partly the labium majus. This latter was much swollen and somewhat edematous.

So far as subjective symptoms were concerned, the patient complained of a burning sensation and of some itching, more particularly of the buttocks. Here, a number of vesicles, torn open by scratching, could be observed. She also scratched one open at the lower lip, and the blood which followed her finger as she rubbed her chin with it may be seen represented in the figure. She was intensely nervous, almost to the point of hysteria, and restless at night. She attempted to jump out of a window of the hospital and had to be restrained, this state of her nerves only serving to aggravate the eruption. No new crops appeared, however, and she made an uneventful recovery.

The interesting features in connection with this case are, in the first place, the fact that the cause of the eruption was a large dose of arsenic taken with suicidal intent. In the descriptions of arsenical dermatitis that have been published, as well as in the articles relating to it, we note that the arsenic has usually been taken continuously and in rather small doses. The patients have been either habitual arsenic-eaters or have taken the drug under the directions of physicians. No mention is made of the eruption following a large and poisonous dose in the classic work of Morrow on *Drug Eruptions*. This is probably due to the fact that, in cases of attempted suicide, one of two results follow: the subject dies or the stomach is so rapidly and completely emptied that there is no time afforded for the absorption of the arsenic and consequent non-fatal intoxication leading to a dermatitis. Another interesting point is that in connection with the localization of the eruption. In cases of arsenical dermatitis, the upper or lower limbs, or both, are liable to be affected and the region of the mouth is frequently the site of an eruption. The back is also not infrequently attacked. Again, a false herpes zoster follows the use of Fowler's solution, as I have had occasion to observe. But to see the patches of eruption limited to the face and buttocks is a rather unusual occurrence in my personal or reading experience.

It is most probable that the marked nervous excitement in the case I have described not only had some considerable influence in exhausting the patient, but also contributed to making the affected areas large and the individual lesions of greater size than those usually observed. There is no doubt in my mind that this was also a cause for the predominance of vesicles and the comparatively sparse number of pustules.

I offer this short contribution to the subject of arsenical dermatitis in the hope that it may elicit others observed in patients who have ingested lethal doses of arsenic and yet have escaped death.

ON THE STERILIZATION OF MILK; ITS ADVANTAGES AND LIMITATIONS.*

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In the infant, digestion appears to be in great part accomplished in the small intestine. There is no long delay in the stomach with prolonged exposure to an acid digestive medium as in the adult, but the milk, after an imperfect curdling, is quickly passed on to the duodenum. For this reason gastric digestion, the safeguard in older children and in adults against the entrance of disturbing micro-organisms into the alimentary tract, in infants affords but a feeble barrier. It is therefore conceded by all that one of the more important conditions in an infant's food is that it be perfectly sterile. The necessity for this is all the greater should the infant's food be more difficult of digestion, or involve a longer time in its digestion, than the natural aliment of the child.

Commercial cow's milk, acknowledged as our great substitute for maternal milk, is never absolutely sterile. In respect to the character and number of the micro-organisms it may contain, its condition is very variable. If carefully obtained under good hygienic conditions, filtered, aerated, and cooled rapidly, and afterward kept without much agitation at a temperature below 10° C.,

*Read before the New York Academy of Medicine, October 18, 1900.

it will contain comparatively few bacteria. But if any of these conditions be unfulfilled, milk will be found to be contaminated by micro-organisms, the variety and number of which will vary in proportion as any of these several conditions have been departed from.

Again, milk obtained under unhygienic conditions, and of which the temperature has been allowed to rise as high or higher than 16° C. for any prolonged period, differs from milk obtained with hygienic precautions and kept at a continuously low temperature, not only in containing numberless bacteria, but also in containing spores and toxines; an important fact, in that we cannot destroy either spores or toxines (using the term toxines in its broad sense) without destroying the quality of the milk as a food.

The number of the different species of bacteria which may be present in milk is very great. Professor Conn (*Annual Report of the Storrs Agricultural Experiment Station,* 1899), writing upon the bacteriology of milk, gives a list of some 200 different species which he has isolated and grown during the course of the past few years. The majority of these, it is true, have been met with seldom, but many are very common. Of only the few can it be said that we have any definite notion of their action when introduced into the alimentary tract of the infant. Several forms are known to produce changes in the milk of a more or less deleterious character; others have distinctly pathogenic or putrefactive properties. To the pathogenic forms, it is unnecessary to, in this assembly, more than simply refer. The occasional presence in milk of the tubercle bacillus, the typhoid bacillus, and diphtheria bacillus, of the germs of scarlet fever and of the various forms of streptococci, is well recognized by all of you as a possible source of danger to your patients.

In reference to those forms which produce deleterious changes in the milk itself, I would quote the statements of H. L. Russell (*Twelfth Annual Report of the Agricultural Experiment Station, University of Wisconsin*), who says that he has isolated and studied fifteen forms which were frequently present; six of which were almost invariably present. Of these fifteen, he found that three produced lactic acid changes; seven produced no recognizable change in the milk; while five, owing to the rennet ferment elaborated by them, produced in a few days a slow coagulation of the casein which was subsequently dissolved by a second tryptic enzyme.

In ordinary milk it is to be noted that while the majority of the individual micro-organisms present belong to the lactic-acid producing class, there are a number of forms which produce little or no acid change in the milk. Russell considers that the great majority of these gain access to the milk during milking, and are in great part derived from the excreta of the cow and stable filth. These extraneous species are either present in the form of spores, or in the form of bacteria apt to develop spores, and are thus liable to persist in sterilized milk. Among these forms Russell mentions the *Bacillus mesentericus vulgatus,* the common potato bacillus, as having been frequently isolated by him.

In an infant's food, with our present knowledge, all forms of bacteria are undesirable; many are poisonous. How shall we get rid of them? Bacteriologists have told us that almost all forms (the exceptions being forms not likely to appear in milk and cause trouble) are killed by raising the milk to a temperature of from 65° to 70° C. and maintaining it at this point for twenty minutes. When spores are developing, or have developed, however, this temperature will not destroy them, but neither are they killed by exposure to 100° C.

In the very admirable paper already referred to, Russell states that milk pasteurized at 70° C. contains so few bacteria that it may be said to be practically sterile. In 40 per cent. of samples he examined, the number of bacteria to the cubic centimetre after pasteurization at this temperature was less than 1,000. Cream, however, proved a more resistant medium, for in only 10 per cent. of the samples were the bacteria present in such small numbers. As the result of his experiments he concludes that an exposure of milk to a temperature of 70° C. for fifteen minutes, kills 99.83 per cent. of all the micro-organisms in full milk and 99.7 per cent. of the micro-organisms present in cream. The small percentage that remain represent the relative number of organisms that exist in a spore-bearing or latent stage and therefore are not killed by the heat used to effect the sterilization. This percentage, however, is subject to variation. If careless methods of milking prevail, and much foreign matter, such as dirt and particles of excreta, be allowed to gain access to the milk, the number of spores will be much increased and the percentage of bacteria remaining after pasteurization will be much larger. For a similar reason, namely, the development of spores, the older the milk the less successful is its pasteurization; a fact first observed by noting that the milk and cream pasteurized on a Monday, failed to keep as long as that prepared on other days in the week; a failure attributable to the milk pasteurized on that day being older by twenty-four or forty-eight hours than that used on other days.

From these carefully conducted experiments of Russell, we feel assured that pasteurization at 70° C. destroys all forms liable to produce extensive and rapid change in the composition of the milk. All the pathogenic and putrefactive germs are destroyed, as well as all the lactic-acid producing bacteria. And if milk thus pasteurized be immediately placed on ice, or kept at a temperature only slightly raised above 0° C., it will remain sweet and maintain its freedom for many days from bacteria.

Freeman, as the result of his experiments, tells us that a plate planted from milk thus pasteurized and kept at the temperature of the laboratory, usually shows no growth in twenty-four hours. If, however, a cool temperature be not maintained in such milk, bacteria may develop and fermentations other than the lactic acid fer-

mentation may take place, producing changes in the milk, in some cases with difficulty recognized, but which are liable to produce grave disturbances in the intestinal tract of the infant. The same, however, may also be said of milk sterilized at 100° C.

If milk subjected to a temperature of 70° C. is practically free from bacteria, is there any advantage in raising the milk to a higher temperature approaching or even quite up to that of the boiling point? One advantage there may be, that in careless or inexperienced hands the sterilization at 70° C. may be incomplete; but this appears to me the only one, and I think there are many disadvantages.

Russell in his report for this year has, however, gone still further. Finding that in the pasteurization of milk at 70° C. the milk acquires a more or less scalded taste, and undoubtedly undergoes some chemical change, he tested the results obtained by pasteurization at still lower temperatures, and found that on exposure of the milk to a temperature of 60° C. (140° F.) for ten to fifteen minutes, from 98 to 99 per cent. of the bacteria were killed; such pathogenic forms as the cholera spirillum and the diphtheria and typhoid bacillus cannot withstand this temperature, while the lactic-acid producing species for the most part readily succumb. There appeared to be some doubt, however, whether the destruction of the tubercle bacillus was insured by this temperature. De Man, working under Foster, on cheesy matter obtained from the udder of the cow, found that it required one hour at 140° F. and fifteen minutes at 155° F. to destroy this bacillus. On the basis of this work, the latter temperature (155° F.) has until recently been regarded as the lowest that can be employed with safety for the sterilization of milk.

Theobald Smith, however, after many carefully conducted experiments (*Journal of Experimental Medicine*, Vol. iv, 1899, p. 217) has found that the tubercle bacillus, derived from bovine sources, is invariably killed in from fifteen to twenty minutes at a temperature of 60° C. Even after ten minutes' exposure the bacilli were for the most part dead.

Russell applied the results obtained by Smith to further experiments on milk, and found that when he heated tuberculous milk in a test tube to a temperature of 60° C. a pellicle formed on the surface of the milk consisting of fat globules, and coagulated proteids, which protects the tubercle bacilli to such an extent that not infrequently an exposure in open vessels to this temperature for even an hour did not entirely destroy the germs. If, however, this pellicle as it forms, is broken up by stirring or agitation of the vessel, or if the sterilization is conducted in closed vessels, complete destruction of the bacillus quickly takes place at this temperature. Russell therefore very justly concludes that, as pasteurization at 60° C. kills from 98 to 99.8 per cent. of all the bacteria present in milk, including all pathogenic and putrefactive forms, a higher temperature is not desirable, if the slight increase in the efficiency of the sterilization is to be gained at the expense of other desirable qualities.

Milk raised to a temperature of 100° C. is markedly altered, both in taste and smell. Chemists inform us that definite chemical changes and modifications have occurred. The lactalbumin and globulin are to some extent coagulated, the lecithin, the nuclein, and the caseinogen are altered; the lactose is partially changed and the organic phosphorus is converted into an inorganic phosphate, which is probably without action in the system.

It would also appear that its digestibility by these changes is more or less interfered with, for, notwithstanding the general statement made by some writers that milk sterilized at 212° F. has appeared to be as digestible as milk pasteurized or unpasteurized, there is a very prevalent opinion among physicians to the contrary.

Among the more recent additions to our knowledge on the subject I would quote the statements of Wroblewski (*Oesterricher Chemiker-Zeitung*, 1898, No. 1), who points out that certain of the calcium salts, which in normal milk are in a soluble state, are made to enter into insoluble combinations by a high temperature. The part played by calcium salts in connection with those bodies, the ferments and their products, whose presence is a special feature of organic fluids, is being more and more fully recognized. As Duclaux (*Traité de microbiologie*, tome ii, 1899) has pointed out recently, ferments of many kinds are only effective in the presence of minute quantities of calcium magnesium or other mineral, the mineral varying with the special form of fermentation.

For the coagulation of blood, calcium must be present, and for the coagulation of milk in the stomach, calcium in a more or less free form must also be present. If the calcium salts in the stomach through heating undergo alteration so that they are rendered insoluble, then the coagulation of the caseinogen will be to that extent arrested or delayed. In corroboration of this it is found that outside of the body boiled milk undergoes coagulation by rennet only with much difficulty. Inasmuch as this primary coagulation in the stomach appears to be necessary for the normal digestion and absorption of milk into the system, it is certainly questionable whether boiled milk as a rule can be absorbed and assimilated as readily as milk which has not been brought to a temperature sufficient to change the condition of its calcium salts.

On the other hand, it is to be noted that this action may sometimes be of distinct advantage in those conditions of the infant's stomach where rennet action, either directly, or indirectly owing to the presence of fermenting bacteria, is so intense as to lead to the development of firm curds. Of the exact influence of this change in the milk on its digestibility in an infant's stomach, however, we must speak with hesitation. It is possible that the absorption of milk can occur without this preliminary curdling, but even if this be true, it is improbable that

the absorption is as rapid and complete as in the case of unaltered milk.*

Another important change which is said to take place in all milk heated over 60° C. is the destruction of probably existing ferment-like bodies. The recent observations of Hericourt and Richet upon the good effects of raw meat juice in the treatment of tuberculous cases, and yet other observations of recent date, would appear to indicate that natural fluids unacted upon by heat, have certain properties which are absent from the same fluids after exposure to heat, and it is probable that unheated milk contains ferment-like bodies which, when absorbed, are of distinct value to the economy.

This probability that such ferment-like bodies are present in fresh milk has been strengthened by the investigations of Babcock and Russell (*Fourteenth Annual Report of the Wisconsin Experimental Station*), who found that milk obtained in a condition of perfect sterility undergoes a self-digestion owing to the presence of a trypsine readily destroyed by heat.

There are also observations pointing to the fact that immunity to disease may be conveyed through the mother's milk, and it is a matter of general knowledge that these immunity-conferring substances are destroyed by a heat of 60° C. or over. It may be that the absence of such substances in milk sterilized at high temperature, may render children fed exclusively on such a diet more liable than others to certain infections, leading to disturbances in general nutrition.

In this connection I would also call attention to an explanation suggested by Dr. Corlette (*British Medical Journal,* September 1, 1900, p. 573) for the induction of scorbutus in the infant by a dietary of sterilized milk. Physiologists tell us that citric acid is a normal constituent of both human and cow's milk to the extent of about 1 gramme in every litre. Göldner (*Landw. Versuchs. Stat.,* xxxv) states that it is present in greatest amount as a calcium salt, and to a small extent only as a potassium and magnesium salt; and Vaudin (*Jour. of Pharmacology,* xxx, 1894, p. 464) states that the calcium phosphate in milk is held in solution by the influence of these citrates. Calcium citrate, the most important, is comparatively insoluble in water, is much less soluble in hot than in cold water; it is also readily changed by heating into a still more insoluble form. It can readily be imagined, interpreting these facts in the light of Bunge's and Wroblewski's experiments, that in many cases the sterilization of milk at a temperature of 100° C. by alteration and perhaps precipitation of the citric salts gives rise to a deficiency in this very important ingredient of the infant's food.

*Bunge quotes experiments showing that a mixture of the fats, sugars and proteids of milk, washed free of its salts, but to which salts are again artificially added, is incapable of supporting life in mice, which thrive on an unaltered milk—a fact which he thinks is attributable to this dissolution of the combination between the salts and the proteids interfering with the due assimilation of both. This assertion, however, has not yet been verified by other observers.

Milk, moreover, that has been pasteurized or sterilized cannot be kept long without undergoing changes of a more or less deleterious character. Russell, as I have already stated, recognizes the presence in pasteurized milk of bacteria which secrete rennet and subsequently a tryptic ferment. Lübbert (*Zeit. f. Hygiene,* Bd. xxi, p. 450), of Breslau, also states that among the most frequent of the spore-bearing forms found in milk is a group that may be termed the hay or potato bacillus. This form peptonizes milk without producing in it changes recognizable to the eye. In many specimens of milk obtained in his own city he found a short, thick, spore-bearing, motile bacillus liquefying blood serum. Even after twelve days this bacillus had no action on the fat or the sugar of milk, but reduced the proteids in milk from 3 to under 1 per cent., with the formation of peptones.

Milk in which this bacillus had grown for twenty-four hours had no effect on adult animals when given by the mouth, but acted fatally on young animals. Studying the milk apart from the bacteria to determine what the toxic substance might be which was present, he found that the filtrate was harmless, and therefore concluded that the toxic substance was contained in the bodies of the bacilli. Sterilization at 100° C. at once removed the poisonous properties, but, and this is a point of interest, the spores persisted, and if the milk was still further kept it rapidly regained its poisonous properties as it again became abundantly inhabited by the same species.

It is quite possible therefore that milk sterilized at 60° or even 100° C. may, through the germination of these spore-bearing forms, obtain toxic properties different from those of ordinary sour milk and may thus become a source of grave trouble, if fed to the infant after it has been kept for any prolonged period.

To sum up this hurriedly prepared presentation of the subject, it may be said that milk sterilized by heat is altered to an extent varying according to the elevation of the temperature used in the sterilization and the duration of its exposure, in the following respects:

1. Its proteids are modified, and rendered apparently less digestible; but our knowledge on this subject is still indefinite and dependent chiefly on clinical experience; nothing has yet been proved by laboratory experiment.

2. The combination of its saline ingredients with the proteids, a combination which we must admit is not absolutely proved, but which appears to be extremely probable, is more or less broken and the salts assume a condition in which they are less readily absorbed.

3. Natural ferments whose presence in milk may with much probability be inferred, and which may materially assist its digestion in the infant's stomach, are destroyed.

4. An alteration takes place in the emulsion, normal to milk, which may also have a distinct effect in lessening the digestibility of cow's milk by the infant.

Again, it is extremely important that milk after sterilization should be kept at a continuously low temperature, and it is to be remembered that the employment of

sterilized milk which has been kept for many days is not free from danger.

It appears to me therefore extremely desirable in infant feeding to use fresh milk drawn with such careful precautions as to be practically free from extraneous bacteria, and in which the lactic-acid producing bacteria are present in such small numbers as to induce no alterations of moment.

Such milk in my opinion is better not sterilized at all. But it is seldom our good fortune to be able to obtain such with the regularity necessary for the daily preparation of an infant's food. And when our supply cannot be depended upon, it appears the lesser of two evils to have the milk sterilized, but sterilized at the lowest efficient temperature, namely, 60° C., maintained for fifteen minutes.

Letters received from many of my friends in the American Pædiatric Society advise me that such is almost invariably the practice of the large majority of them.

GALL STONES AND EMPYEMATOUS GALL BLADDERS.

By EDWIN RICKETTS, M. D.,

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It is with no small degree of pride that we can refer to the recorded literature on the progress of surgery, with its ebbings and flowings, during its experimental stage and since it has been recognized as an established science. For the controlling of hæmorrhage, the hot iron, boiling oil, and clamp gave way to the ligature, the last-named being at the time one of surgery's greatest triumphs, as given us by the immortal Paré. For this the surgical and medical world stood in awe and rendered him due homage. Now modern special surgery gives us the absorbable ligature, which, having proved its greater superiority and having withstood the numerous crucial tests necessary for its perfecting, has been brought up to the desired standard. It has been accepted as a most worthy addition to our surgical armamentarium, and marks a great epoch in modern surgery that is to outlast tablets of bronze and shafts of granite.

The diagnosis and history of gall stones, with any possible complications, and their empirical treatment; how Bobbs, in 1868, accidentally performed cholecystotomy after the gall bladder had become attached to the adjacent peritonæum; how deliberate surgical intervention was planned and has been brought up to a high state approaching the ideal—these things need no detailed description.

It is important to consider the great secreting capacity of the liver, the product of which must pass through a very small tube or outlet, namely, the common duct. The fact that this same common duct, together with the remaining biliary passages, must, because of its daily tasks, be subjected to great risks—from infection that may come through its duodenal opening, through its walls, or through the portal circulation, thus causing stenosis, or from furnishing a receptacle for gall stones with infected media, thus often shutting off the bile exit—this is cause sufficient for urging most ardently the necessity of a better understanding of the very dangerous contingencies that present themselves. The ureters in the female are being successfully sounded through the endoscope, as a most valuable aid for the earlier diagnosis of certain of their diseases or of those of one or both kidneys, such as stone, cancer, hydronephrosis or pyonephrosis, etc. The Eustachian tubes, tear ducts, pharynx, larynx, œsophagus, stomach, rectum, male and female urethra, bladder, sigmoid colon, uterus and Falloppian tubes have all been successfully probed as an aid to diagnosis.

As to the causation of gall stones, there has been no definite and well-recognized explanation offered. We are told by men in medicine that they occur most frequently with high livers, those who are found in the higher walks of life, partaking freely of the hydrocarbons together with the free use of stimulants. The recorded observations of men doing gall bladder surgery do not bear out these statements, for the great majority of gall stone operations has been done on subjects found in the common walks of life.

When the presence of gall stones complicated by an empyematous condition of the gall bladder, has been promptly diagnosticated, the patient, being advised to rely on internal medication, in which there remains simply a fallacious hope for relief, cries out seriously for a better understanding of the subject at the hands of our profession.

Surgeons no longer poultice and poultice over any region of pus to promote the discharge, but so soon as they are satisfied of its formation and location they advise cutting down and letting it out. The x-ray is used for diagnosticating renal and ureteral stone, and when once it is located they incise and remove it.

Drainage of the infected gall bladder by means of a cholecystotomy, if done early, may be followed by brilliant and most satisfactory results and with a death rate of less than one per cent.; while late intervention causes us too often to be compelled to deal with complications that are serious in nature and that necessarily must be followed by a very high mortality. We need clearer and bolder teachings, laying stress on the folly of the internal administration of drugs, which delays and thereby complicate any effort in a surgical way. To let Nature attempt the doing of a successful cholecystotomy or a cholecystenterostomy, is fraught with many unnecessary and very dangerous risks to the patient, which otherwise could have been avoided by well-selected surgical measures.

Gall stones have been found in the hepatic tissue cells, ducts, and gall bladder, and in different portions of the intestinal canal, which is the strongest evidence to prove that they are foreign bodies, and that we should attempt to deal with them as we deal with calculi situated in the kidney, ureter, and urinary bladder.

The principal procedure in surgical intervention, more important than any one of the others named, is cholecystotomy, by which the gall bladder is brought up for stitching to the peritonæum after incision. Drainage through the abdominal and gall bladder incisions must be maintained for weeks or months, or until you are convinced that no stone remains in any biliary space that can be explored by a probe specially adapted to this work.

In a recent case, after removing a number of calculi following on a cholecystotomy in which I am certain that I did not permit any to remain in the common or cystic duct, I was rewarded six months later for having kept up drainage, by a calculus the size of a French pea rolling out on to the dressings. This must have made its post-operative escape from the hepatic duct, in due time escaping through the gall bladder and abdominal wall sinus. The patient was in the best of health.

There is one class of cases, those of empyema of the gall bladder due to infection, which may obstruct the bile flow, and if let alone, may cause secondary infection of the hepatic tissue, thus crippling it for any future function of a complete kind. On the other hand, when an hepatic abscess does result and its contents escape into the stomach, duodenum, or small intestines, it is doubtful if the affected liver tissue ever returns to its former activity. These are the cases demanding just as early drainage of the gall bladder as possible in order that an early convalescence may be established. A periodically over-distended urinary bladder that has not been promptly relieved is sure, in time, to have infection that may extend upward and along the walls of the ureters, affecting seriously one or both kidneys.

A similar condition may exist in the hepatic ducts, until the liver, like the kidneys, may drown itself in its own infected fluid.

To poultice over the region of an empyematous gall bladder, with or without gall stones, is just as futile as a curative measure as it would be to poultice over the region of a cerebral, cerebellar, or pontine abscess.

Nothing save a degree of misleading comfort can come from such a procrastinating effort, which from delay will undoubtedly complicate the situation by causing a possible constitutional metamorphosis that may eventually end in the death of the patient.

Much has been written as to the method of doing a cholecystotomy, by first opening the abdomen and stitching the gall bladder to the peritonæum, permitting it to remain thus for seventy-two hours or until it has adhered to the peritonæum, before incising for drainage or for the removal of calculi that may be present. This procedure should be roundly condemned, along with that of exploration of the gall bladder by introducing the exploring needle through the abdominal and gall bladder walls. The Murphy button for the doing of a cholecystenterostomy is a very ingenious device, and is specially applicable in intestinal anastomosis; but in cholecystenterostomy it has its limitations and objections. In cholecystenterostomy the risks to the bile ducts and liver, of infection coming from the intestine, are increased and should not be overlooked. The button *in situ* is a foreign body and has been found in the gall bladder any number of times on the postmortem table. In any case in which death does not take place and the button remains *in* the gall bladder, it must in time act as a nucleus for the possible formation of a gall stone. This is a feature that is as objectionable as the permitting of calculi to remain in the gall bladder after cholecystenterostomy has been done by button or suture. Should the gall bladder be contracted, it must rest with the operator, after the abdomen has been opened, to decide between cholecystectomy and intestinal anastomosis with the button; but in all cases where it is possible to do a cholecystotomy, I would surely advise doing it, for then the gall bladder wound is in hand for any desired length of time, for drainage and for the recognition of any calculi that may be overlooked at the time of operating, or for any stone that may roll out of the hepatic duct, days, weeks, or months afterward. If a cholecystectomy has to be considered, it is to be accomplished with greater ease than if it has to be done after a cholecystenterostomy; for then we are compelled to dissect the gall bladder from the intestine and from around the intestinal opening, after which this opening must be closed.

Cholangeiostomy has received but little attention at the hands of surgeons. It is seldom a justifiable procedure. In the doing of a cholecystotomy, a median incision, three or four inches in length, directly over the gall bladder, is large enough, in the majority of cases, to work through. It is difficult, after having resorted to the crescent-shaped incision, in which the muscular fibres have been deliberately cut in two, to be able to coapt the ends successfully in suturing, on account of the contractility of the longitudinal muscular fibres. This condition is not present in dealing with the ordinary longitudinal incision suggested. With the abdomen once opened and with all hæmorrhage controlled by means of the hæmostatic forceps, which, after they have effected this object, are to be removed with the index and middle fingers of one hand, generally the right—explore by sense of touch, locating any calculi that may be in the common or cystic duct or gall bladder. By the sense of touch alone you can ascertain if you have a distended or contracted gall bladder, and if you have single or multiple calculi, to deal with. You can decide if you have infection with calculi or not, and if your operation must be a cholecystectomy, cholecystotomy, or a cholecystenterostomy. Some livers are readily lifted toward the abdominal peritonæum by means of the index and middle fingers making upward pressure on the under surface of the liver from within the abdomen and through the abdominal incision, while some will not respond to this pressure. With a moderately distended gall bladder in which no stone can be located, first resort to massage, milking the gall bladder downward, for in some cases you can reestablish a patulous common duct by forcing out small calculi together with plugs of mucus through the

common duct into the duodenum. The writer has done this successfully in four cases.

If this fails in any case in which calculi are found and felt through any of the duct walls, then pack long and warm strips of carbolated gauze, from three to five per cent., around the gall bladder and well down into the abdominal cavity.

If calculi with a moderate amount of fluid are to be removed, the gauze will take up the fluid and prevent it from coming in contact with the field of operation after the gall bladder incision has been made.

When all the calculi are removed, the bladder can be syringed out freely with warm water, and in doing this you will frequently wash out small calculi. To me this has been an agreeable surprise, and I invariably make use of this measure until a quart or more of warm water has been used. After this, the gall bladder is mopped out with packings of carbolated gauze, preferably long, narrow strips, as the shorter pieces may be easily lost sight of. With this accomplished, the incised gall bladder is stitched with interrupted silkworm-gut sutures, one needle hole through the gall bladder, peritonæum, muscle and skin, tying the same gently so as to close the upper and lower angles of the abdominal incision to the upper and lower edges of the gall bladder, until that viscus is stitched into the abdominal incision similarly to the pocket in the garment. A good-sized glass tube for drainage is placed in the bladder, in similar manner to the placing of one in the abdominal cavity for drainage, so that the bladder can be flushed with the patient on his side. A long, olive-tipped, metal probe is always used through the drainage tube for probing the gall bladder and common duct, previous to, and following on any flushing of the gall bladder, in order that any calculi may possibly be disturbed and removed. If any calculi are impacted in the common duct and you are not able to dislodge them so as to push them up into the gall bladder or down through the common duct into the duodenum, you have the choice of one or two procedures: (1) You may break it up by the needling process, which consists in holding the walls of the duct containing the calculi firmly between the index finger and thumb of one hand, while, grasping a strong, straight needle with the fingers of the other hand, you force the point of the needle through the duct wall and into the stone, breaking it into as small fragments as possible; after which you may try to force the fragments up into the gall bladder; by this process they can be removed through the incision in the gall bladder. Or (2) if the stone is too hard for needling, you may incise longitudinally the common duct wall directly over the stone to be pressed out, after which the incision can be stitched up with fine silk or catgut, or you may let it remain open, packing the wound for drainage as suggested by Dr. W. E. B. Davis, of Birmingham, Alabama.

In stitching the gall bladder into the abdominal incision, the greatest care should be exercised in selecting suture material (silkworm-gut is preferable), for a knot or piece of silk or knot of catgut may drop or work its way into the gall bladder, and may act as a nucleus for the formation of gall stones.

So far, the death rate following incision of the common duct is high, some placing it at thirty-three per cent., while others place it at fifty per cent. The writer's experience in dealing with this class of cases is fifty per cent. With cancer of the liver, or common and hepatic ducts, recognized after the abdomen has been opened, we can do nothing more than close up the abdomen.

If the cancer is confined to the common duct, a cholecystotomy may be considered if the gall bladder can be brought up to the abdominal peritonæum; if not, a cholecystenterostomy by suture or Murphy's button is to be considered, with the hope of some degree of comfort and the possibility of prolonging life.

As to the possible recurrence of gall stones demanding secondary surgical intervention, not enough time has elapsed since the recognition of gall bladder surgery to make any definite and well-authenticated statements.

The few cases in which there has been a recurrence have been duly recorded and reported on; but they have been very few, so few that they may be cited as exceptions to the rule.

With a cholecystotomy as a primary operation for the removal of gall stones, I am quite sure that, in the few cases in which there may be a recurrence, they can be dealt with more successfully by a secondary cholecystotomy, if need be, than by any one of the procedures named for their primary removal.

APPENDICITIS IN THE FEMALE.

By FLOYD WILLCOX McRAE, M. D.,

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In a very exhaustive article, a review of the history and literature of appendicitis, published in the *Medical Record,* vol. lxi (1899), page 272, Dr. George Edebohls says: "The history of appendicitis, up to and including the year 1898, embraces more than 2,500 journal articles, dissertations, and books," all but a very small fractional part of which he had consulted in the original. "As regards both the frequency of appendicitis and its relative frequency in the two sexes, the most remarkable and apparently irreconcilable statements are made by various investigators. While the belief is current that appendicitis affects males in larger proportion than females, Einhorn, in 18,000 successive autopsies, found perforating appendicitis in 55 per cent. of males and 57 per cent. of females, and Robinson, in 128 autopsies as they came, found evidences of past peritonitis on and about the appendix in 68 per cent. of female, and 56 per cent. of male bodies. Witt quotes Taft as finding in 300 autopsies, 190 entirely normal appendices, and 110 appendices presenting more or less evidences of disease." Clinically, Edebohls finds that four per cent. of all wom-

en have appendicitis. On the contrary, Deaver says that eighty per cent. of all cases occur in males. The reasons for the relative exemption of females are found in their less frequent exposure to the inclemencies of the weather and other deleterious influences, and in the better blood supply of their appendices. Bland Sutton, in the *Clinical Record* of London, vol. 15, page 321, published in 1899-1900, in an article on Appendicitis, states that it was formerly believed that appendicitis was almost peculiar to males. The large number of accurate observations relating to diseases of the vermiform appendix now available makes it clear that appendicitis is three times more frequent in males than in females. He cites twenty cases in females in which he removed the appendix in a period of eighteen months; these patients all recovered, and were known to be alive and well two months after the operation. He says further: "It is a remarkable fact in connection with troubles on the right side of the abdomen, whether acute or chronic, especially in women, that there is often the greatest difficulty in deciding whether they have their origin in the gall-bladder, the kidney, the cæcum, vermiform appendix, ovary, or Falloppian tube. A careful study of appendicitis in women demonstrates that the clinical aspects of this disease are even more protean than in men. In those women vaguely classed as hysterical, neurotic, or neurasthenic, who complain of indefinite pain in the pelvis, often ascribed to ovarian trouble, the source of the misery, in a fair proportion of instances, is chronic appendicitis." In the *Medical Record,* vol. 51, page 422, Dr. Villar, of Bordeaux, insisted on the frequency of the relation in time between appendicular attacks and menstrual periods. Diagnosis, he said, was the important point. Appendicitis might be confounded with an inflammation of the annexa, and *vice versa,* or they might coexist. He reported several illustrative cases.

Dr. O. Hermes (*Deutsche Zeitschrift für Chirurgie*), in 671 cases gathered from the statistics of various authors, as Bamberge, Voltz, Marchall, Paulier, Martin and Fitts, Sonnenburg and Rotter, finds that of these 671 cases, 186 were in women, that is, 27 per cent. Sonnenburg calculates from his material, that 40 per cent. of subjects were women; Tallamon, 35 per cent. He calculates from the annual reports of the city hospitals of Berlin that of all cases of appendicitis, amounting to 1,577, 949 were in males, and 628 in females, a proportion of about 40 per cent. of females. He says, however: "But indeed it may be said against a purely statistical consideration of this question, with much reason, that a defect of its value consists above all in this: that in the female sex the appendicitis is frequently not recognized, and that so many of the cases of disease of the vermiform appendix go under the diagnosis of uterine or perimetric disease."

I have quoted quite liberally from these eminent authorities to show the divergence of opinion as to the relative frequency of appendicitis in the male and in the female. In practically all the cases that have come under my observation in the female, mistakes have been made in diagnosis by myself or by the family physician, or by both. Almost all the attacks have occurred at, or about, the menstrual time, and most of them have been diagnosticated as "inflammation of the tube or ovary." The appendix is frequently a pelvic organ in the female and is often not only closely attached to the ovary by the appendiculo-ovarian ligament, but, when either the appendix or the right ovary or tube has been the seat of inflammation, firmly bound to it by adhesions, making a diagnosis extremely difficult. In cases II, III and X, reported farther on, the appendix and the right tube and ovary were involved. In cases I and VI, the appendicular trouble was complicated with movable kidneys on the right side. The subjects in cases IV and XIV suffered with recurring appendicitis and attacks of renal colic before or after the removal of their appendices. I have records of forty-nine cases of appendicitis seen within the last sixteen months, twenty-nine occurring in males and twenty in females, or a little more than forty per cent. of women. During the same period I have operated for appendicitis thirty-two times, sixteen times in males and fifteen times in females, or nearly forty-seven per cent. of females. I have reported these cases, giving the important details, to emphasize the difficulties of diagnosis. In several of them, treatment directed to the genitalia had been carried on systematically without giving any relief, while the removal of the appendices brought about a cure. In others, the ovaries and tubes had been removed, and still the symptoms persisted until relieved by appendectomy. I feel sure that the great disparity in statistics as to the relative frequency of appendicitis in the male and in the female, is due, in large measure, to mistakes in diagnosis, *i. e.,* the disease is frequently overlooked in the female. It is very much more difficult to make a diagnosis of appendicitis in the female than in the male. I do not believe sufficient stress has been laid upon the fact that appendicitis in women usually occurs at or about the menstrual time. Many of us have been accustomed to attribute all abdominal or pelvic pain, occurring at this time, to some trouble with the genitalia; and this is the argument with which we are frequently confronted when the diagnosis of appendicitis is made in this class of cases.

The pain of appendicitis is more sudden in its onset, and very much more acute than that of pelvic disease. It is frequently accompanied with nausea and sometimes with vomiting; muscular spasm is usually marked in appendicitis, practically absent in beginning pelvic disease. The general disturbance is very much greater, and the progress more rapid in appendicitis than in pelvic disease. An intact hymen argues very strongly for appendicitis. When in doubt, and the symptoms are agressive, it is much safer to make a diagnosis of appendicitis and operate, than to delay until the case is hopeless.

Carstens, in the *New York Medical Journal,* vol. lxvi

page 17, says: "It is astonishing how frequently physicians will diagnose appendicitis if they are only on the lookout for it.' No matter what the abdominal trouble is, or whether your diagnosis is diseased tubes, or gall stones, or renal calculi, intussusception or invagination, or typhoid fever, I would reiterate what I have said so often: 'In every attack of abdominal trouble, no matter if it is in old or young, male or female, look again and see if it is not a case of appendicitis.'"

In cases I and VI, I did the combined operation of appendectomy and nephrorrhaphy through the same incision. Case I, I reported in detail at the meeting of this association in New Orleans last year. I had the opportunity of examining the patient a week ago; she was apparently in perfect health, the kidney was in good position, she is absolutely free from abdominal pain, and has gained from fifteen to twenty pounds in weight.

The patient in case VI was operated on four weeks ago, and made an uninterrupted recovery; she is now up, and is apparently in excellent condition. I have demonstrated, in these two cases, the feasibility of this procedure, and I believe it has a field of application in a certain limited number of cases.

Interval Operations.

Case I.—Miss J. M. L., aged twenty-nine years, Atlanta. Operation, Grady Hospital, October 17, 1900. For a number of years the patient has had a burning sensation in the epigastrium, and regurgitation of food after eating. Trouble with the right kidney (floating) since falling from a street car five years ago. Nephrorrhaphy three years ago; she fell down steps subsequently and broke it loose; since then the kidney has "felt large and in the way." Eleven months ago she was nauseated and vomited for five or six days; had severe pain in the right side of the abdomen, where there was a very tender mass; the abdomen was distended, and it was several days before the bowels moved. In bed two weeks. Had uneasiness and heavy feeling over appendiceal region until six months ago, when she had a similar attack. The ovaries and tubes were removed four years ago. Admitted October 12th for operation. Temperature 98° F., pulse 94. She was nauseated and complained of pain in the side at times until operation. Combined appendectomy and nephrorrhaphy. Recovery. The case has been previously reported. The patient was examined about a week ago; kidney in position; health apparently perfect; no pain or uneasiness. She had gained fifteen or twenty pounds in weight.

Case II.—Mrs. W. C. T., Isabella, Tenn. Operation, Dr. Stockard's Private Infirmary. First operation in October, 1899, for ruptured tubal pregnancy. Recovery with persistent fistula where drainage had been left. Second operation May 10th. Fistulous tract dissected out, cyst of the broad ligament removed, together with a chronically inflamed, and very much enlarged appendix, surrounded by dense adhesions and adherent to the broad ligament. The diagnosis in this case at the time of the first operation was "acute appendicitis with abscess," and the recovery from the first operation was exceedingly tedious; the patient, who was profoundly septic before the operation, recovered very slowly, with a septic temperature and pulse for several weeks. Whether appendicitis existed at this time or not, I am unable to say. Recovery from second operation was tedious, but uneventful and complete.

Case III.—Miss B. C., aged twenty-one years, Atlanta. Operation, "The Halycon." The patient was seen in consultation with Dr. Sommerfield. There was a history, extending over a period of two years, of indefinite abdominal pain, involving the whole right side from the liver to the pelvis. No definite diagnosis was made, and an exploratory operation was advised. This was done September 7, 1899, with the assistance of Dr. Sommerfield and Dr. Holmes. The appendix was chronically inflamed, surrounded by extensive adhesions extending from the cæcum to the liver upward, and downward into the pelvis, involving the right tube and ovary. The right ovary was as large as a lemon, and the right tube thickened and distended. The appendix, tube and ovary were removed, and the adhesions tied off. The patient made a tedious recovery, developing a left saphenous phlebitis about ten days after the operation.

Case IV.—Mrs. F. M. H., aged forty-two years. Operation, Grady Hospital. Eight or ten weeks prior to admission, the patient had some pain in the right side of the abdomen, the urine contained much sediment, and it was thought that she passed a small calculus from bladder. Last January she had an attack with pain in right iliac region, nausea, and vomiting, for two weeks. From this time on, she lost considerable flesh, had almost constant uneasiness in right side of the abdomen, and three slight attacks as in January, the pain being principally posterior. One week before admission the pain was more severe than ever before; some distention; general abdominal tenderness, more marked about McBurney's point; frequent nausea. The urine for a year contained much pus at times, but not especially so during attacks of abdominal pain. The temperature and pulse varied little from normal, being 98° and 88° F., respectively, on admission.

Operation, May 21st. The appendix was found bent upon itself, lying backward and outward, behind the cæcum; the mesoappendix was half an inch thick; there were varicose veins on the appendix, and recent adhesions between appendix and intestine. Appendix removed; gridiron operation. Recovery uneventful. The patient subsequently passed two small renal calculi, since which time she has been in excellent health.

Case V.—M. I. (colored), aged fifteen years, single; Atlanta. Operation, Grady Hospital. The patient had good health up to last Christmas, but has had attacks like present every month since December, 1899, always within a few days of the menstrual flow, either before or after. This is the worst attack she has had. She was taken sick three days before admission with faintness and pain in the abdomen below the umbilicus and in the right iliac region, which has not been general; has vomited once, after taking medicine on the night of onset. On admission, temperature 100.2° F., pulse 100, respiration 22. Slight tenderness in the right iliac region; no distention; a mass the size of index finger, running obliquely downward and inward from McBurney's point; slight thickening of the left tube; retroversion. The temperature and pulse remained normal, after the day following admission; the bowels were kept open by an occasional dose of salts; some tenderness remained in the side, with occasional pain. Operation, August 20th, with two-and-a-half-inch incision slightly to outer side of McBurney's point (gridiron). The appendix was found in the posi-

tion of the mass felt externally; the vessels of the appendix were congested, with two slight strictures and a small band of adhesions; the mesoappendix and adhesions were tied off with No. 1 catgut, and the peritoneal cuff dissected back; the appendix was tied off with kangaroo tendon, stump cauterized, etc. Kangaroo-tendon and catgut closure. Primary union. Temperature 99° to 100° F., and pulse 88 to 108, the first two days; thence both normal. Discharged cured September 8, 1900.

Case VI.—Mrs. J. D. P., Griffin, Georgia. Operation, St. Joseph's Infirmary, October 21, 1900. A large, chronically inflamed, and adherent appendix was removed and a floating kidney stitched back through the same incision; a stab wound in loin for drainage; incision closed in layers; recovery complete. The history of this case preceding the operation is exceedingly interesting. Mrs. P. had suffered for years with chronic indigestion and acute abdominal pain, but never associated with much elevation of temperature or other constitutional disturbance. A diagnosis of "kidney disease" had been made, and she had received local treatment without much benefit. The appendix was so enlarged that it could be readily felt through the abdominal wall, and the kidney was freely movable. I am inclined to think that the floating kidney preceded the appendicitis, perhaps bearing a causative relation thereto.

Case VII.—Miss I. H., Atlanta, Georgia. Operation at the patient's home. A history of attacks of pain coming on at each menstrual time for three or four years; sometimes so severe as to require morphine. The patient had had two attacks of abdominal pain, with nausea, vomiting and marked collapse, one of which was followed by a great deal of constitutional disturbance and fever for several days. The family physician made a diagnosis of "inflammation of the right ovary and tube." I saw the patient independently of the family physician, and made a diagnosis of chronic appendicitis, with probable involvement of the right tube and ovary, and advised operation. Operation was done November 1, 1900, and a small, but very much inflamed and extensively adherent, appendix was found low down in the pelvis, attached to the right ovary. Ovary and tube normal. Recovery uneventful. An unqualified diagnosis in this case was practically impossible.

Case VIII.—Miss A. K., aged thirty years. Operation, St. Joseph's Infirmary. A history of one moderately severe attack of appendicitis about nine months ago, and a mild attack two weeks ago. Operation, November 3, 1900. The appendix very much enlarged and distended, the mesoappendix much thickened, and extensive adhesions. Appendix removed. Tubes and ovaries normal. Recovery uneventful.

Operations during Acute Attacks.

Case IX.—Miss M. D., aged twenty-seven years, Abbeville, Georgia. Operation, May 19, 1900. No history of a previous attack; a history of pelvic trouble extending over a period of several months, for which the patient had had local treatment. On May 13th, she was taken with violent general abdominal pain, nausea and vomiting; pain soon became localized in right iliac fossa. The temperature ranged from 100° to 103° F. from the 13th to the 18th. I saw her on the afternoon of the 18th and found a tumor in the right iliac region. Diagnosis, "acute perforative appendicitis with abscess." Immediate operation was done, with the assistance of Dr. Moye, Dr. Googe and Dr. Maynard; incision into abscess containing from eight to twelve ounces of very foul pus; gangrenous appendix containing concretions; appendix removed, pus cavity cleansed, upper portion closed with through-and-through silkworm-gut sutures; cavity packed with iodoform gauze, which was brought out at lower end of wound. Recovery uneventful.

Case X.—Miss M., Charleston, S. C. Operation, St. Joseph's Infirmary. The patient was first seen in consultation with Dr. Clark and Dr. Smith about May 10th, at Jackson Hotel. History of an acute attack of abdominal pain, occurring about the menstrual time, five days previously. Temperature ranging from normal to 104° F. Great pain, marked abdominal tenderness, muscular spasm, greatest in the right iliac region. Diagnosis in doubt. On account of aggressive symptoms, the patient was removed to St. Joseph's Infirmary, where an operation revealed an inflamed appendix, surrounded by adhesions, and adherent to a large abscess involving the right ovary and tube. The appendix, ovary, and tube, were removed, the cavity cleansed thoroughly, and the wound closed without drainage. Recovery was very tedious. At the next menstrual time, the tube on the opposite side became enlarged, and the temperature ran up to 103° F., but under free purgation (saline) the inflammation subsided and the patient made a complete recovery.

Case XI.—Mrs. E. L. G., West End, Atlanta. Operation, St. Joseph's Infirmary. The patient was first seen in consultation with Dr. W. B. Parks, June 20th, on the fourth day of attack. A history of two mild colicky attacks, which were not diagnosticated as appendicitis. Temperature 103° F., pulse from 120 to 130. Abdomen tense and tympanitic. Diagnosis, "appendicitis with beginning general peritonitis." The patient was removed to St. Joseph's Infirmary, where an immediate operation was done. Appendix very long, acutely inflamed, with no macroscopic perforation. Acute fibrinoplastic peritonitis, involving the whole lower segment of the abdomen and pelvis; uterus, ovary and tubes, normal. Appendix removed; abscess cavity washed out with large quantity of hot normal salt solution; fibrinoplastic material wiped off with gauze sponges. Incision closed with through-and-through silkworm-gut sutures, without drainage. Recovery uneventful.

Case XII.—Mrs. R. I. A., West End, Atlanta. Operation, St. Joseph's Infirmary. The patient was seen in consultation with Dr. M. G. Campbell on the night of June 30th. A history of repeated attacks of recurring appendicitis, with more or less constant pain and disability. The abdomen exquisitely tender and tympanitic; the greatest tenderness in the right iliac fossa. Temperature 102° F., pulse 110. I decided on immediate operation, had the patient removed to St. Joseph's Infirmary, and operated at 4 A. M., July 1st. I found the appendix acutely inflamed behind and to the outer side of the cæcum, and imbedded in the mesocæcum. The appendix was removed with considerable difficulty. Local toilette of the peritonæum, the wound being closed in layers without drainage. Recovery uneventful.

Case XIII.—A. D. (colored), Atlanta, Georgia. Operation, Grady Hospital, August 17, 1900. The patient had malaria three months ago; dysmenorrhœa, frequent leucorrhœa for the last year; night sweats for the past month. No previous attack like present. A week previous to admission (August 17th), she drank a large quantity of ice water. This was followed by some general pain in the abdomen, the bowels moving freely, a few hours after which, pain in the abdomen became sev-

ere, and finally localized in the right iliac region; the pain was constant, with sharp exacerbations, up to admission; she has vomited daily since the onset; temperature, variable, not exceeding 102° F.; the bowels kept open by salts. On admission, 11.40 A. M., temperature 102.3° F., pulse 120, respiration 28. Pain and tenderness in right iliac region, muscles tense, slight distention. A mass, about 3 by 5 inches, in the right iliac region. On examination, the urine contained a very few granular casts; no albumin; on 3d, a trace of albumin, no casts. The temperature in the afternoon reached 103.4° F., pulse 112. An alum enema given at 7 P. M. was slightly effective, one at 8 P. M. effective; turpentine stupes were kept on constantly. The following morning the temperature was 103.4° F., the pulse 116. Operation at 9 A. M. Abscess cavity opened, with free discharge of foul-smelling pus. A necrosed appendix, which contained concretions, removed. Abscess cavity, thin-walled, connected freely with cæcum by appendix. Cavity sponged out with saline, and packed with iodoform gauze; drainage tube inserted, silkworm-gut sutures at each end of the wound, moist saline dressing.

Free discharge of pus at each dressing. On 9th the cavity was irrigated with hydrogen peroxide and saline solution; the tube left out, and a light iodoform packing of cavity made. On 10th the dressing was partly saturated with pus and slate-colored fæces; the wound was lightly irrigated with boric acid and repacked. On 11th, more fæcal matter in and around the wound, which was, however, cleaner; most necrotic tissue gone. No fæcal matter on the 13th. From this time on the discharge gradually diminished, the wound, closing to unhealthy granulations about one fourth inch deep, was curetted and sutured on September 10th, healing readily.

Afternoon of operation, temperature 103.2° F., pulse 120. The following day, temperature 101.4° F., pulse 116. Both remained normal after the third day. Discharged cured September 19th.

CASE XIV.—Mrs. P. H. C., Atlanta. Operation, St. Joseph's Infirmary. The patient was first seen in consultation with Dr. C. E. Boynton, September 11th. A history of one or two mild colicky attacks; temperature 101° F., pulse 100; general abdominal pain. A history of violent pain, with nausea, vomiting, and subnormal temperature, followed by a rise in temperature and increased pulse rate. The patient was moved to St. Joseph's Infirmary; operation September 12th. The appendix, bound by adhesions and acutely inflamed, was removed, and the wound closed in layers. Recovery uneventful; the patient has had an attack of renal colic since, passing three calculi.

CASE XV.—Miss I. D., aged twenty years, residence Atlanta. Operation, Dr. Stockard's private infirmary. The patient was first seen in consultation with Dr. Stockard and Dr. Lukens, November 1st. No history of previous attack. She was taken with violent abdominal pain, concurrent with the menstrual flow; pain and tenderness low down in the pelvis, just above, and to the right side of the pubis, but gradually extending upward into the loin. Diagnosis in doubt. Operation suggested, but delay insisted upon. Marked increase in all the symptoms. The patient was moved to Dr. Stockard's private infirmary; operation on the morning of November 4th. Large, gangrenous appendix, containing concretions and three perforations, surrounded by abscess containing about eight ounces of very foul pus; several large, dark spots on cæcum. Appendix removed; upper portion of the incision closed with through-and-through sutures, and drainage left at lower end.

The patient getting along well, with small fæcal fistula diminishing in size daily. (Fistula ultimately closed.)

PHARYNGEAL ADENOIDS, THEIR FREQUENCY AND SEQUELÆ.

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THE so-called pharyngeal tonsil is a physiological structure, and it is only when it becomes unduly enlarged, or hypertrophied, that its presence can be looked upon as a pathological condition.

Normally, it cannot be appreciated by inspection by reflected light, nor by the palpating finger, nor does it produce symptoms. When, however, either through engorgement of its vessels, or increase of its connective tissue, it becomes sufficiently enlarged to produce the smallest degree of obstruction to nasal respiration, it must be looked upon as an abnormal condition involving many dangers to the patient's future development and physical well-being.

In the present paper, the writer lays no claim to having any original matter to present, his purpose being rather to emphasize certain facts, well known to those who have given the subject special study, but which are, perhaps, not sufficiently recognized by the profession at large.

Cases in which the pharyngeal growths are of very large size may present objective symptoms so characteristic and familiar as to require no description. When a child habitually breathes through the mouth, wears a dull and rather vacant expression of countenance, is peevish or listless in manner, presents symptoms of nasal catarrh, where the general appearance is suggestive of anæmia or malnutrition—given such a picture, the physician's mind will at once revert to a nasopharyngeal growth as the most probable of underlying causes.

These are not the most dangerous cases, for in the multiplicity of symptoms there is safety to the patient, as they demand and insure prompt and decisive treatment. But, unfortunately, only a very small percentage of cases present this formidable and suggestive array of symptoms. In the great majority of cases, the growth in the pharynx produces only partial obstruction to the passage of air through the nasal cavities, and is accompanied by but few symptoms, and these the reverse of pathognomonic. That these cases are often presented to the family physician, and are treated unsuccessfully because the underlying cause has not been suspected, there can be no doubt.

Many of the sequelæ of this condition have been sketched so often in text-books and medical journals that their repetition would seem unnecessary. The arrest of

development that occasionally follows the development and neglect of these growths is such as may result from a more or less complete nasal obstruction due to any cause. The characteristic changes in the facial expression are supposed by some to be due in part to anatomical changes in the superior maxillary and palate bones; and these anatomical changes are supposed to be produced in the following manner: The exaggerated inspiratory efforts when the patient attempts to breathe through the nose, and the inadequate amount of air passing through the nares, cause rarefaction of the air in the pharynx, with the result that the alveolar arches are drawn inward toward each other, and the upward arch of the hard palate is increased. Should the adenoid growths be allowed to remain until after the second dentition, the above changes may be more pronounced, and the permanent teeth may be crowded together and protrude to a noticeable and disfiguring degree. As a result of the forcing upward of the hard palate, the floor of the nose is elevated, giving rise to a deviation of the nasal sæptum later in life. The narrow chests, delayed general growth, and the appearance of weakness, making the little sufferers appear younger than they are, are also well known as conditions characterizing extreme cases.

But while the above anatomical changes unquestionably do exist in certain cases as a result of naso-pharyngeal growths, they are probably exceptional rather than the rule; and it is undoubtedly true that pharyngeal adenoids of large size often exist for a considerable length of time without producing any such marked physical signs. To depend, therefore, upon any classical train of symptoms or group of physical signs for the diagnosis of these growths, would be to let many cases pass before our eyes unrecognized.

A class of symptoms well known to follow hypertrophy of the pharyngeal tonsil is that due to catarrhal inflammations in neighboring portions of the upper respiratory tract. Dr. Bosworth (1) has called attention to the fact that "*acute rhinitis* is comparatively rarely met with in a child, and that in such cases it is really suffering from a subacute inflammation of the pharyngeal tonsil." The secondary rhinitis is probably due to irritation from retained nasal secretions, and occurs whenever, from exposure, the pharyngeal growth becomes temporarily enlarged. The frequent attacks of epistaxis, which are thought by some to be characteristic of adenoids, probably occur as one of the symptoms of the secondary rhinitis before referred to. That *pharyngitis, laryngitis, tracheitis* and *bronchitis* should frequently occur intercurrently with pharyngeal adenoids is not surprising. Remembering that it is among the functions of the nose to filter, and add warmth and moisture to the inspired air before it reaches the pharynx, and that these patients are usually mouth-breathers, at least during a portion of the twenty-four hours, these conditions appear to be logical sequences. When, therefore, a child is more than usually prone to contract any of the above inflammatory conditions of the upper respiratory tract, an examination should always be made, which will enable us either to remove the pharyngeal growth or exclude it as an ætiological factor.

Pharyngeal adenoids are supposed to be the occasional cause of certain conditions usually classed as neuroses. They certainly predispose to such affections as pertussis, asthma and laryngismus stridulus. Eustace Smith (2), of London, is of this opinion, and cites the case of an infant treated by him in the East London Hospital, in whom laryngeal crowing of a type so distressing as to endanger life had persisted since birth. The symptoms completely disappeared within a few days after the removal of a postnasal growth.

That the presence of adenoids in the pharynx adds greatly to the individual's susceptibility to *the germs of tuberculosis and diphtheria* is a fact that has been emphasized by many observers, and if their conclusions are well founded, it would seem that an examination for adenoids, and their removal when found, should be as much a matter of routine as is vaccination as a prophylactic measure against small-pox.

Lewin (3), of Russia, has made two hundred careful microscopical examinations of adenoid growths removed from the pharynx, with reference to the presence of tuberculosis, evidences of the disease being found in nine out of the two hundred cases. Other observers in other parts of the world have made similar investigations with similar results, "the sum total of observations published being 905 cases with 45 tubercular findings," or about five per cent. of the cases examined. In many cases, the patients in whom these tuberculous deposits were found have been absolutely free from any other sign or symptom of the disease.

Plottiers (4), of France, has demonstrated the influence of adenoids in increasing the mortality among children suffering from *diphtheria*. He argues that the presence of a vascular growth at a point in the pharynx most infested with microbes, and the patient's diminished power of resistance, must necessarily increase the dangers of infection and diminish the chances of recovery. Following this line of thought, he held postmortems on thirty-eight cases of children dying of diphtheria in the Hôpital des enfants malades, Paris, and found well-developed adenoid growths in fifty per cent. of the cases examined. In one case, he found the diphtheritic membrane on the vegetations, while the mouth was completely free.

But perhaps the most important of the train of evils following adenoids are the ear complications, for in many cases it is only by an early recognition of these growths, and their prompt removal, that the little sufferers can be saved from permanent loss of hearing. All authorities agree as to the gravity of these dangers.

Dench (5) states that pharyngeal adenoids "are responsible for more than half the pathological conditions met with in the middle ear."

Bosworth (6) asserts that "the proportion of cases that escape ear trouble is small"; while Kyle (7) holds that at least ninety per cent. of cases of adenoid growths are accompanied by some degree of deafness. Yet, in spite of all that has been written on the subject, it is doubtful whether sufficient thought is given to the importance of guarding against these ear complications. Investigations instituted during the past few years in different parts of the world seem to prove that a very large proportion of existing deaf-mutism had its origin in adenoids during childhood. Jankelevitch (8), at Prague, Austria, examined 158 deaf mutes, and found adenoid vegetations of considerable size in over half (fifty-four per cent.) of them. Wroblewski, of Poland, found pharyngeal adenoids in fifty-seven per cent. of deaf mutes examined. James Kerr Love (9) "found that seventy per cent. of the deaf-mute children of Glasgow had adenoids." In our own country, C. R. Holmes (10), of Cincinnati, has "made a careful examination of 450 deaf mutes in the Illinois State Institute at Jacksonville, and found an abnormal development of the third tonsil in 231, or fifty per cent."

Sendziac (11), of Warsaw, Poland, gives the results of similar examinations by other investigators, the percentages varying from fifty to seventy-three per cent. He also relates the following case from his own practice: A child, five years old, was referred to him as a case of congenital deafness; a brother of the patient, twenty years old, was also a congenital deaf mute; a sister, also congenitally deaf, died in her fourth year. Careful functional examination showed that the child could neither hear nor speak. Palpation revealed the presence of enormous pharyngeal adenoids. The growths were removed under full anæsthesia. Three months later, the child was brought back with the hearing improving, and was rapidly learning to articulate. Arslan (12), of Turin, Italy, operated for the removal of adenoids in two cases of deaf-mutism, "relieving one and curing the other, both as to hearing and speech." In this country, Getchell (13), of Worcester, Mass., records three case of deaf-mutism, in which he removed adenoids, in one of which cases improvement followed the operation. Jankelevitch sums up the conclusions to be deduced from his investigations somewhat as follows: Without denying the existence of congenital deaf-mutism, he contends that it is much rarer than it is generally supposed to be, and that most cases should be regarded as acquired and due to the presence of adenoid vegetations during infancy.

But, if adenoids are the cause of many cases of deaf-mutism, how much greater is their weight of responsibility in the production of the lesser ear lesions with partial impairment of hearing! That it is great is evidenced by the frequency with which children, brought to the ear clinics with symptoms referable to the ear, have to be subjected to an operation for the removal of adenoids as a preliminary measure of treatment. Additional evidence that the adenoids and ear symptoms stand in these cases in the relation of cause and effect may be found in the recorded cases of Dr. Haight (14), in which the adenoid growths were confined to one side of the naso-pharynx; in these cases, functional examination revealed impairment of hearing on the side corresponding to that of the growth, the hearing in the opposite ear remaining normal.

The ear lesions first occurring as a result of adenoids are undoubtedly to be found in the conducting portion of the auditory apparatus; *e. g.*, tubal catarrh, tubo-tympanic congestion, acute otitis media, acute purulent otitis, etc., conditions often following each other in the order named. But where the adenoids are allowed to remain, evidence is not wanting of the fact that in many cases the labyrinth also soon becomes involved. Dr. Dench (15) has pointed out that many cases of tubal catarrh accompanying adenoids present, upon functional examination, not the characteristic reactions of that affection, but diminished bone conduction, and sometimes a hyperæsthetic condition of the auditory nerve, "which phenomena indicate an irritative lesion of the labyrinth." The influence of adenoids in the causation of the ear lesions occurring in adult life is not so easy to determine, for by this time all traces of such a growth have usually disappeared. But one cannot avoid the belief that many of the adult patients applying for treatment for some form of chronic otitis are in reality experiencing the results of lesions which have existed from childhood, but which have been so gradual in their development that only in adult life have the symptoms become sufficiently pronounced to attract the patient's attention.

Before leaving the subject, I should remind the reader that adenoids may occur in adults as well as in children. While they are usually developed during childhood, and tend to disappear spontaneously after the thirteenth year, there are many exceptions to that rule, and it is by no means uncommon to find well-developed adenoids in people of adult and even middle life. One of many such cases on record is that recently reported by Dr. Potter (16), where the patient was a woman of forty-seven, and the symptoms complained of were those of impaired hearing and difficult nasal respiration. Examination revealed the presence of a large postnasal growth, which was removed under ether, and proved under the microscope to consist of adenoid tissue. The hearing improved greatly within two weeks after the operation.

As to the treatment, experience has shown that adenoid vegetations, when thoroughly removed, do not as a rule recur, but that when any part of the growth is allowed to remain, the tendency to recurrence is marked. The treatment, therefore, resolves itself into any method accomplishing thorough ablation, or removal. This is best accomplished by the use of the Brandegee, or other suitably constructed, adenoid forceps, which grasps and removes the growth piecemeal or in bulk; the site of the removed growth being then curetted with a Gottstein

curette, which removes any remaining shreds of adenoid tissue. In this operation, thoroughness is of paramount importance, and this is best attained with the patient under the influence of a general anæsthetic.

In conclusion, the writer feels justified from the facts adduced in basing thereon the following conclusions:

1. That pharyngeal adenoids in children are very much more common than they are generally supposed to be.

2. That cases of moderate development are often not recognized.

3. That adenoid growths of moderate size, though not necessarily accompanied by marked symptoms at the time of their development, are often responsible for grave conditions felt during adolescence and adult life.

4. That, unless removed, pharyngeal adenoids are in nearly all cases accompanied by more or less impairment of hearing.

5. That the presence of adenoids adds greatly to the gravity of intercurrent diseases, and increases the patient's receptivity to the germs of tuberculosis and diphtheria; and, therefore,

6. That the periodical examination of children for the presence of adenoids should become a routine measure of prophylaxis.

7. That cases of moderate development, no less than those in which the growths are of large size, demand prompt surgical treatment.

8. That the treatment should aim at complete ablation or removal of the growth, which in most cases is best accomplished with the patient under the influence of a general anæsthetic.

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772 PARK AVENUE.

Therapeutical Notes.

A Resolvent for Tuberculous Glands.—The *Journal de médecine de Paris* for December 23, 1900, gives, on the authority of Descroizilles, the following resolvent solution:

℞ Distilled water.....150 parts;
Chloride of sodium..... 40 "
Sulphate of magnesium..... 15 "
Tincture of iodine..... 1 part.
M.
To be applied on compresses.

Ichthyol in Erythema Nodosum.—In the *British Medical Journal* for January 5th Dr. Alexander Brownlie, of Edinburgh, gives this formula:

℞ Ichthyol. ..... 2 drachms;
Alcohol, } each. ..... 3 "
Ether, }
M. S. To be painted on. It is important, he says, that the alcohol and ether be mixed, and then the ichthyol added. He adds that the formula is similar to Boulland's, as given in the *Therapeutische Monatshefte* for January, 1899.

An Enema for Chronic Dysentery.—Delioux de Savignac (*Journal des praticiens*, January 12th) recommends the following formula:

℞ Tincture of iodine..... 10 to 20 drops;
Potassium iodide. ..... 7½ grains;
Water. ..... 8 ounces.
M.

A Lotion for the Night-sweats of Phthisis.—The *Journal des praticiens* for January 12th cites Hirschfeld as having observed excellent results from sponging the body with the following mixture:

℞ Balsam of Peru..... 1 part;
Formic acid, } each. ..... 5 parts;
Chloral hydrate, }
Strong alcohol. .....100 "
M. It is said that the efficiency of the lotion may be heightened by adding to it one part of trichloracetic acid.

The Treatment of Sore Nipples.—Dr. Oui (*Medical Press and Circular*, November 28, 1900), at a meeting of the Medical Society of Paris, recommends the prophylactic use of astringent lotions to the nipples during pregnancy. During the nursing period, it is recommended to wash the nipple before and after lactation with a lotion of boric acid. Dr. Oui applies a 1 in 4,000 bichloride solution in the intervals of rest. This should, of course, be removed before the child is put to the breast, and the nipple washed with the boric-acid lotion. When there is much pain, a saturated alcoholic solution of orthoform is recommended in preference to cocaine, which is dangerous.

Treatment of Lupus by Permanganate of Potassium.—M. Butté (*Indépendance médicale; International Medical Magazine*, January) recommends applications of solutions of permanganate of potassium to the affected parts. After ten days an amelioration is observed; the tubercles have flattened, and the disease does not progress. After two or three months nothing remains to be seen but the cicatrix.

Resorcin in Rodent Ulcer.—Williams (*British Medical Journal*, December 1, 1900) has used pure resorcin applications successfully in a rebellious case of rodent ulcer. The treatment extended over two months.

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A BRITISH CONGRESS ON TUBERCULOSIS.

It is announced that such a congress will be held in the Queen's Hall, London, on July 22d, 23d, 24th, 25th, and 26th. The announcement was issued before the accession of Edward VII to the throne, and the Prince of Wales was mentioned as the president of the congress. Perhaps it is hardly to be expected that the King himself will preside throughout the congress, but, in view of the immense importance of its purpose, the prevention of consumption, it may, we presume, be confidently hoped that he will open it in person. Among the vice-presidents are Lord Lister, Sir John Burdon Sanderson, Sir Hermann Weber, the director-general of the Medical Department of the Navy, the deputy director-general of the Army Medical Department, the president of the Royal College of Physicians, London; the president of the Royal College of Surgeons, England; the president of the Royal College of Physicians, Edinburgh; the president of the Royal College of Surgeons, Edinburgh; the president of the Royal College of Physicians, Ireland; the president of the Royal College of Veterinary Surgeons, the president of the British Medical Association, the president of the Royal Medical and Chirurgical Society, the president of the Society of Apothecaries of London, and the president of the Faculty of Physicians and Surgeons of Glasgow. Among the executive officers are Sir William Broadbent, Mr. W. Jobson Horne, M. B.; Mr. Malcolm Morris, Dr. Clifford Allbutt, and Dr. Alfred Hillier.

Every British colony and dependency is invited to participate in sending delegates, and the various governments of Europe, Asia, and America are invited to send representative men of science and others, who will be the distinguished guests of the congress. The object of the congress is to exchange the information and experience gained throughout the world as to methods available for stamping out consumption, a disease declared to be the cause of some 60,000 recorded deaths annually in the United Kingdom alone. The work of the congress is to be carried on in four sections, namely, State and Municipal (Sir Herbert Maxwell, president; Dr. Bulstrode, of London, and Dr. James Niven, of Manchester, secretaries); Medical, including climatology and sanatoria (Sir R. Douglas Powell, president; Sir Hugh Beevor, of London; Dr. Hector Mackenzie, of London; Dr. R. W. Philip, of Edinburgh, and Dr. William Calwell, of Belfast, secretaries); Pathological, including bacteriology (Dr. Sims Woodhead, of Cambridge, president; Dr. Wethered, of London; Professor Rubert Boyce, of Liverpool; Dr. E. J. McWeeney, of Dublin, and Dr. Perkins, of London, secretaries); and Veterinary—Tuberculosis in Animals—(Sir George Brown, of Harrow, president; Professor Hobday, of London; Professor Bradley, of Edinburgh, and Professor H. Woodruff, of London, secretaries). In addition, there will be a museum of pathology, bacteriology, and public health, under the charge of a committee of which Dr. Woodhead is chairman, and Mr. Horne secretary. The honorary secretary-general is Mr. Malcolm Morris.

The congress method of dealing with the study of tuberculous disease has already been productive of much good on the continent of Europe, and we look confidently for valuable results from the deliberations of the British gathering. It comes at a time of the year when many Americans are likely to be in Europe, and it may be expected that the medical profession of our country will be amply represented. Nowhere else than here has the struggle against consumption been more vigorously or more successfully carried on, and the physicians of the United States ought to take a prominent part in such a congress as is to be held in London.

CRIMINAL HYPNOTISM.

The Section in Legal Medicine of the Thirteenth International Medical Congress passed resolutions to the effect that hypnotism and "magnetism" were true therapeutic agents, that their ill-considered employment was capable of leading to serious consequences, that their practice should be restricted to persons possessed of the diploma of doctor of medicine, and that in all countries legislation ought to be so amended or extended as to suppress this illegal practice of medicine, under whatever form or title such psychotherapeutical practices might

be masked. These resolutions were passed at the close of the debate that followed the reading of a report by M. Dupré, who handled the medical aspect of the subject, and M. Rocher, who dealt with it from the legal point of view.

The Criminal Branch of the French Court of Cassation has recently condemned certain hypnotizing charlatans, and *Progrès médical,* in its issue for January 12th, expresses well-grounded satisfaction that the decision of the court was in no small degree influenced by Dupré and Rocher's report. The report was, indeed, a most important and cogent review of hypnotism in its medico-legal aspects. Its teachings are to be borne in mind from several points of view, chief among which are that of the physical and psychical injury done to degenerate, ill-balanced, and feeble persons by repeated hypnotization, that of the parody of justice enacted when credence is given in court to an accused person's plea that his offense was committed under the influence of hypnotism, and that of the infraction of the regulations governing medical practice by hynotizing charlatans. It was shown in the report that serious physical and psychical conditions might be brought about in certain persons by hypnotizing them, conditions directly dependent on the degree of repetition of the process, on the nervous predisposition of the person, and on the publicity of the sittings.

It was further shown, what has long been well established, that no well-ordered person could be induced by hypnotism to commit a manifest crime. Well recognized as this fact is, it may not be unprofitable to repeat the substance of this portion of Dupré and Rocher's report. It is possible, says M. Dupré, to suggest (in the hypnotist's sense of the word) to certain persons the idea and even the accomplishment of such a crime as robbery, incendiarism, or assassination, but many conditions are required for the success of the experiment. The first of these is that the person shall already have been hypnotized frequently and by the same hypnotizer, so that his "suggestibility" shall have been cultivated, developed, and rendered tractable. The second is that the criminal act shall constitute only a simple offense, such as larceny, lying, etc., or a "laboratory crime." In either case the moral resistance of the hypnotized person remains dormant and the act is committed. When, however, the act suggested is grossly criminal, the hypnotized person resists, and no grave crime has been proved to have been the result of hypnotic suggestion.

There is, of course, an apparent inconsistency when it is declared possible to suggest to a hypnotized person the actual accomplishment of assassination, and then the additional statement is made that "no grave crime has been proved to have been the result of hypnotic suggestion"; but the inconsistency is not real. The "accomplishment of assassination" may be suggested, but the suggestion will not be carried out; possibly the criminal intention may be entertained up to a certain point, but at last conscience gains the victory. Thus is explained the willingness of a hypnotized person to stab another with a dagger made of paper, whereas he flatly refuses when a real dagger is put into his hand. This form of criminal hypnotism has no existence in the sense that would justify a court in exculpating a person who had committed a felony; the real criminal hypnotism—real when it is not pretended—is that of the charlatan, the *soi-disant* "professor," the "lecturer," the "curer." No civilized community can afford to tolerate this pseudo-science-mongering; still less can it afford to accept hypnotism as a scapegoat for crime.

TRACHEAL INSUFFLATION OF AIR AND MANUAL COMPRESSION OF THE HEART IN SUSPENDED ANIMATION.

PRUS'S method of resuscitation by insufflations of air into the trachea and rhythmical squeezing of the exposed heart may certainly be said to be a formidable procedure. It seems that it was originally described in the *Wiener klinische Wochenschrift,* 1900, Nos. 20 and 21. Prus experimented on a hundred dogs which he had killed, or apparently killed, by chloroformization, electricity, or strangulation. His chloroform experiments were twenty-one in number, and in sixteen of them he succeeded in recalling the animals to life. Maag, a Danish physician, has recently tried the method on the human subject (*Centralblatt für Chirurgie,* January 5th).

Maag had occasion to resort to nerve-stretching in a case of sciatica in a young man whose heart was sound, whose urine contained neither sugar nor albumin, and who showed no contraindication to the induction of chloroform anæsthesia. The man had been a hard drinker, but for a year preceding the operation he had wholly abstained from alcohol. The anæsthetization was begun at 8 o'clock in the morning. At the end of ten minutes, during which time the chloroform had been given drop by drop by means of an Esmarch inhaler, the patient was sufficiently narcotized to admit of his being laid on his side and the site of the operation sterilized,

This procedure occupied about five minutes, and the patient was quiet, his respiration and pulse were of good quality, and his pupils were contracted. When the skin was incised, he reacted vigorously, and the anæsthetist was called to give him more chloroform. Only a few drops were given, however, because the man soon became asphyxiated; in all, he had received three drachms and three quarters.

The ordinary means of resuscitation were resorted to, he was soon perfectly restored, and, without any further administration of chloroform, the operation was completed. Again the man was asphyxiated, and traction on the tongue, artificial respiration, blows on the præcordial region, etc., were employed energetically, but without result. After ten or fifteen minutes tracheotomy was performed and air forced into the trachea through a cannula, but in vain; the patient was pulseless, cold, and cyanotic, and he was not breathing. Resection of the third and fourth costal cartilages and of a portion of the ribs was performed, and the flap of skin, muscle, and ribs was turned to one side, when it was perceived that the left pleural sac had been opened. Through this opening the hand was immediately inserted and the heart grasped, together with the pericardium. There was no cardiac action. After a few rhythmical squeezings of the heart, it began to beat, very feebly at first, then stronger and stronger. The squeezings of the heart and the insufflations of air were continued. As the tracheotomy tube did not pass deep into the trachea, some of the air escaped by the nose and mouth, so that these had to be compressed.

After the lapse of about half an hour the first gasping respiration occurred, and it became deeper and deeper, but constant insufflations were required to keep it up. After a time, however, two inspirations followed an insufflation, then three, and so on. At about 11 o'clock the man was able to breathe ten times in succession without assistance, and in half an hour more his breathing was deep and regular, while the heart beat vigorously at the rate of about 70 to the minute, compression being required only now and then. Thereupon the vessels in the wounds began to bleed, and were tied. The pupils were contracted, the color of the face had for some time been natural, and the patient kept his jaws so firmly closed that it was almost impossible to open his mouth. The wounds were now sutured, but that of the thorax was closed only partially, for it was judged that it might be necessary to reopen it for renewed compression of the heart. All danger seemed to be over, but the patient did not regain consciousness and showed no evidence of pain from the treatment of the wounds. At about 12 o'clock the breathing suddenly grew more feeble and in the course of a few minutes ceased entirely. Again insufflation was resorted to, but in vain. The ordinary expedients, such as artificial respiration, faradization of the phrenic nerve, etc., were employed. Until 8 o'clock in the evening the heart kept on beating powerfully, when it suddenly stopped, and not till then was the insufflation discontinued: the patient was then dead.

Such formidable procedures may seem like training a park of artillery to kill a fly, but this was surely an extraordinary case of chloroform poisoning. The author clings to the idea that Prus's plan of resuscitation is the correct one, and imputed his patient's final death, after apparent recovery, to unfortunate accidental features. To us the case seems an added warning not to use chloroform save in the presence of some positive indication against ether.

THE PUBLIC SPITTING NUISANCE.

It is a source of gratification that at last some steps have been taken, by the arrest and fining of one offender, to show that the ordinances of the health board of the city of New York are meant to be complied with, and are not merely the vaporings of a few harmless enthusiasts. Let the duty of taking steps to prevent the nuisance be responsibly imposed upon officials, and the filthy practice will soon be checked. It is scarcely fair to expect the private individual, however disgusted he may feel at the habits of his hoggish fellow passengers, to risk the unpleasant notoriety of creating "a scene"; though the same individual would doubtless experience no difficulty in carrying out his express orders were he in an official position. It might be a good plan to have a number of small cards printed with the legend, "You are required, under penalty of a fine, to abstain from expectorating in public vehicles or in public buildings," or some other suitable formula. One of these cards might be unobtrusively handed by the official in charge as a reminder whenever he observed the commission of the offense, thus sparing the feelings of the possibly thoughtless offender, and at the same time placing him in the position of a deliberate recalcitrant deserving of no consideration should he repeat it.

THE *NEW ZEALAND MEDICAL JOURNAL.*

We have received the second number, dated November, 1900, of this handsome new octavo journal of fifty-eight pages of reading matter, edited by Dr. J. Malcolm Mason, of Otaki, and published in Wellington by the New Zealand branch of the British Medical Association. We find the matter contained in it interesting and well presented.

SUGGESTIVE IMITATION IN NEWSPAPER REPORTING.

It is somewhat interesting to note the wave of hospital scandals which is now breaking, doubtless in consequence of the Bellevue investigation. From Newark, Buffalo, and other places we note that the local newspapers, not to be outdone by New York, have evolved hospital scandals of their own. Much space is covered by good printing ink, but a perusal and collation of the various papers, while it discloses vehement assertion and black headlines, affords singularly little valuable information. It seems as though the occurrence of the Bellevue affair turned the ingenious reporters' attention to that field as one in which some local counterpart ought to be forthcoming, and hey, presto! there it is.

EXCESSIVE VOMITING DUE TO A PESSARY.

Apart from the condition of pregnancy, it is seldom that so striking an example of hyperemesis due to uterine irritation is encountered as in a case reported by Wichert (*Deutsche medicinische Wochenschrift,* 1900, No. 47; *Deutsche Medizinal-Zeitung,* December 17th). The patient, thirty-two years old, had worn a Mayer's rubber pessary in her vagina for a long time. The stinking instrument was removed, the vagina was disinfected, tincture of iodine was given internally, and in two days the vomiting had subsided.

SPONTANEOUS RUPTURE OF THE ŒSOPHAGUS.

Among the rarest of pathological occurrences must be included spontaneous rupture of the œsophagus. In a case reported by Heintze at a meeting of a Berlin (ember 13th) the accident befell a healthy man, forty-three years old, immediately after a meal. He had severe pains in the stomach, went into collapse, and died in seven hours. The rupture, half an inch long, ran lengthwise of the œsophagus, near the stomach. No cause for the accident appeared on gross examination, and the microscope showed only signs of fresh inflammation.

THE EIFFEL TOWER AND THE REDUCTION OF OXYHÆMOGLOBIN.

The influence of changes of altitude on the economy is well known to vary in proportion to the suddenness of the change. If we except Pike's Peak, perhaps nowhere else can the effects of an abrupt change be better studied than in the Eiffel tower. At a recent meeting of the Paris Society of Biology (*Progrès médical,* December 22d) M. Hénocque reported the results of sixty observations, showing an almost constant augmentation of the reduction of oxyhæmoglobin, whether the ascent was made by the elevator or by the stairs. In exceptional instances it was diminished, and then there was panting or dyspnœa. The descent on foot was also accompanied by the augmentation noted in the ascent.

News Items.

Society Meetings for the Coming Week:

Monday, *February 4th:* New York Academy of Sciences (Section in Biology) German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, New York, Academy of Medicine; Utica, New York, Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association; Hartford, Connecticut, Medical Society; Providence, Rhode Island, Medical Association; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society.

Tuesday, *February 5th:* New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, New York Academy of Medicine; Ogdensburgh, New York, Medical Association; Syracuse, New York, Academy of Medicine; Hampden, Massachusetts, District Medical Society (Springfield); Hudson, New Jersey, County Medical Society (Jersey City); Androscoggin, Maine, County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

Wednesday, *February 6th:* New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, New York (New Brighton); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

Thursday, *February 7th:* New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, New York; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

Friday, *February 8th:* Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, New York.

Saturday, *February 9th:* Obstetrical Society of Boston (private).

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the week ending January 26, 1901:

Diseases.	Week end'g Jan. 26	
	Cases.	Deaths.
Typhoid fever	33	12
Scarlet fever	329	22
Cerebro-spinal meningitis	0	0
Measles	110	2
Diphtheria	332	52
Small-pox	11	1
Tuberculosis	331	185

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the two weeks ending January 26, 1901:

Bertolette, D. N., Medical Inspector. Detached from duty as a member of the medical examining board and ordered home.

Fiske, C. N., Assistant Surgeon. Detached from the *Wheeling* and ordered to the *Mohican* when the former vessel goes out of commission.

Hass, H. H., Assistant Surgeon. Detached from the *Isla de Luzon* and ordered to the *Solace.*

Rush, R. K., Surgeon. Ordered to the Pensacola Naval Station, Florida, for recruiting and other duty.

Russell, A. C. H., Surgeon. Ordered to Washington for duty as a member of the medical examining board.

Shiffert, H. O., Assistant Surgeon. Appointed assistant surgeon from December 26, 1900.

Smith, R. K., Passed Assistant Surgeon. Detached from the *Pensacola* and ordered to the *Wisconsin.*

STONE, M. V., Assistant Surgeon. Detached from the *Solace* and ordered to the *Isla de Luzon.*

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 12 to January 26, 1901:

BISPHAM, WILLIAM N., First Lieutenant and Assistant Surgeon, United States Army, is relieved from duty at Columbia Barracks, Cuba, and will proceed to Vedado, Havana, for duty with Batteries Nos. 3 and 4, and the regimental hospital, relieving P. C. FIELD, Acting Assistant Surgeon, who will proceed to Columbia Barracks, Cuba, for duty.

BUCK, CARROLL D., Acting Assistant Surgeon, United States Army, will proceed to the Presidio of San Francisco for temporary duty, awaiting transportation to the Philippine Islands.

CARR, LAWRENCE C., Major and Surgeon, United States Volunteers, will, upon the expiration of the leave of absence granted him, proceed to Havana for duty.

REED, WALTER, Major and Surgeon, United States Army, will, upon the adjournment of the Pan-American Medical Congress at Havana, proceed to Washington for the purpose of continuing his investigation at the Army Medical Museum, with reference to the cause and prevention of yellow fever.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague, were reported to the surgeon-general during the week ending January 26, 1901:

Small-pox—United States.

Washington, District of Columbia	Jan. 12-19	2 cases.	
Jacksonville, Florida	Jan. 12-19	7 cases.	
Cairo, Illinois	Jan. 5-19	5 cases.	
Chicago, Illinois	Jan. 12-19	12 cases.	
Wichita, Kansas	Jan. 12-19	6 cases.	
Lexington, Kentucky	Jan. 12-19	2 cases.	
Louisville, Kentucky	Jan. 4-18	1 case.	1 death.
New Orleans, Louisiana	Jan. 12-19	7 cases.	2 deaths.
Shreveport, Louisiana	Jan. 12-19	5 cases.	
Lawrence, Massachusetts	Jan. 12-19	1 case.	
Minneapolis, Minnesota	Jan. 12-19	11 cases.	
St. Paul, Minnesota	Jan. 5-12	8 cases.	
Omaha, Nebraska	Jan. 8-15	7 cases.	
Manchester, New Hampshire	Jan. 12-19	39 cases.	
Fort Stanton, New Mexico	Jan. 14	1 case.	
New York, New York	Jan. 12-19	9 cases.	5 deaths.
Utica, New York	Jan. 12-19	1 case.	
Cincinnati, Ohio	Jan. 12-18	3 cases.	
Cleveland, Ohio	Jan. 12-19	57 cases.	1 death.
Sixteen Counties, Oklahoma	Jan. 11	289 cases.	
Erie, Pennsylvania	Jan. 12-19	1 case.	
Pittsburgh, Pennsylvania	Jan. 12-19	3 cases.	
Memphis, Tennessee	Jan. 12-19	6 cases.	
Houston, Texas	Jan. 12-19	44 cases.	
Salt Lake City, Utah	Jan. 12-19	32 cases.	
Green Bay, Wisconsin	Jan. 13-20	1 case.	

Small-pox—Foreign.

Liege, Belgium	Dec. 15-22	1 case.	
Pernambuco, Brazil	Dec. 8-15		34 deaths.
Alexandria, Egypt	Dec. 17-24	2 cases.	2 deaths.
Leeds, England	Jan. 5-12	1 case.	
London, England	Dec. 29-Jan. 5	1 case.	
Paris, France	Dec. 29-Jan. 5	6 cases.	
Bombay, India	Dec. 18-25		1 death.
Vera Cruz, Mexico	Dec. 29-Jan. 5		3 deaths.
Edinburgh, Scotland	Dec. 29-Jan. 5	1 case.	
Glasgow, Scotland	Jan. 4-11	66 cases.	3 deaths.
Leith, Scotland	Dec. 29-Jan. 5	1 case.	
Singapore, Straits Settlements	Dec. 1-18		2 deaths.

Yellow Fever.

Cartagena, Colombia	Jan. 1-7	2 cases.	
Cienfuegos, Cuba	Jan. 14	1 case.	
Havana, Cuba	Jan. 5-12		2 deaths.
Vera Cruz, Mexico	Dec. 29-Jan. 5		1 death.

Cholera.

Bombay, India	Dec. 18-25		4 deaths.
Singapore, Straits Settlements	Dec. 1-18		58 deaths.

Plague.

Bombay, India	Dec. 18-25		118 deaths.
Hull, England	Jan. 19	5 deaths on ss. Friary.	
Tsarevsk District, Russia	Jan. 5	19 cases.	15 deaths.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine Hospital Service for the Seven Days ending January 24, 1901:

BEAN, L. C., Acting Assistant Surgeon. Granted leave of absence for two days from January 18th.

CRAIG, R. C., Acting Assistant Surgeon. Granted seven days' extension of leave of absence.

PURVIANCE, GEORGE, Surgeon. Granted leave of absence for two days.

WILLIAMS, L. L., Surgeon. Granted leave of absence for three days.

Changes of Address.—Dr. Alfred W. Herzog, to No. 154 East Thirtieth street, New York; Dr. Charles E. Perkins, to Chicago, Ohio.

Illegal Medical Practice.—Louis Grojinsky and Gustav Greenbaum were held in bail of $200 each on January 28th at the Essex Market Police Court for practising as physicians at 5 Willet Street without being licensed.

The Young Men's Christian Association as a Hospital Organizer.—The West Albany railroad branch of this institution has established at Albany an emergency hospital fitted with all necessary appliances for prompt treatment of injuries.

Omega Upsilon Phi Fraternity.—This fraternity has just organized two new chapters, one at the University of Colorado and the other a graduate chapter in New York City, under the name of the Henry C. Coe chapter, in honor of Professor Coe.

Registrations in Wisconsin.—The report of the Wisconsin board of medical examiners for the past two years shows that the total receipts of the board for that period were $8,772, and the expenses $7,909. There were 1,260 registrations during that period.

A Universal Practice Law.—Among the bills recently introduced into the assembly at Albany was one by Mr. Adler, authorizing the regents to admit to practice physicians heretofore admitted by State examining boards in other States of the United States.

Decrease in the Number of Medical Students in Europe.—The number of medical students in the universities has been decreasing, not only in Russia, but also in France and Germany. Instead of the usual total of from 8,000 to 8,500 students in the German medical schools, the total number of medical students in Germany this year is 7,518.

The New York State Medical Society, at the meeting held this week in Albany, elected the following officers: President, Dr. Henry M. Elsner, of Syracuse; vice-president, Dr. Louis L. Lovehart, of Hempstead; secretary, Dr. C. F. Cuirts, of Albany; treasurer, Dr. O. D. Bull, of Albany.

The Grand Jury Presentment Regarding Bellevue.—The grand jury made a presentment on Thursday recommending the discharge of Dr. J. W. Moore, Superintendent O'Rourke, and his assistant, M. J. Reckard, from Bellevue Hospital, declaring that the medical board had encroached upon the prerogatives of the commissioner of charities, and that the medical board is directly and absolutely responsible for the administration of Bellevue.

An X-ray Apparatus for Bellevue.—A lady, whose name is not made public, has presented the New York University and Bellevue Hospital Medical School with an x-ray apparatus of the value of $1,500.

Medical Students to be Furnished with Cadavers.—A bill has been introduced by Senator Stewart into the senate allowing the Cornell medical colleges at Ithaca and New York City to have the unclaimed cadavers in public institutions in the counties where located and immediately adjoining.

The Mortality of San Francisco.—Six hundred and eight deaths occurred in San Francisco during December last, a greater number, it is said, than in any previous month since health records have been kept. Three quarters of the deaths are said to have been due to grippe and its complications.

Fifty Years an Alumnus.—Dr. Henry M. Baird, of Yonkers, will be the guest of honor at the annual dinner of the Alumni Association of the New York University, at the Hotel Savoy, February 7th. A loving cup will be given to Dr. Baird to commemorate his fifty years as an alumnus. Dr. Baird has been for many years a professor of the New York University.

School Vaccination in Buffalo.—Dr. Walter D. Greene, the assistant health officer of Buffalo, has arranged a tour of the parochial schools to vaccinate all scholars who cannot show a certificate of vaccination within the preceding five years. Time to comply with this requirement by those desirous of choosing their own physician will be given up to February 11th.

A Proposed "Elective Course" for Medical Schools.—President William R. Harper, of the University of Chicago, at the quarterly convocation of Rush Medical College, recently proposed a new method of instruction in medical and other professional schools. The plan suggests an "elective course" in which the students choose not alone their subjects, but their professors.

The Division of Fees Discussed in Chicago.—At a recent meeting of the Chicago Medical Society resolutions were offered condemning the giving of commissions or a part of the fees by physicians or surgeons to any other person. The resolutions were referred to a committee consisting of Dr. James H. Stowell, Dr. N. S. Davis, Sr., Dr. Frank Billings, and Dr. John B. Murphy.

To Stop the Spread of Bubonic Plague.—State Health Officer W. F. Blunt, of Austin, Texas, has instructed the quarantine inspectors at all western border places of the State to exercise extra vigilance against the admission of all persons from San Francisco and Bakersfield, Cal. This order is due to the alleged appearance of additional cases of bubonic plague in those places.

Two Members of a Yellow Fever Commission Contract the Disease.—Dr. Meyers, a member of the British commission sent from Liverpool to study yellow fever at Para, Brazil, died on January 21st as a result of yellow fever contracted while making an autopsy on a yellow fever victim. Dr. Duerhase, another member of the commission, is also reported as being seriously ill with the disease.

Dr. Novy to Study the Plague Situation at San Francisco.—Dr. Frederick G. Novy, of the University of Michigan, has been commissioned by the United States government to make a thorough study of the conditions existing at San Francisco with a view to determining as to the possibility of the introduction of the bubonic plague through that port.

Hazing at a Medical College.—A complaint has been lodged by a Turkish student of the Philadelphia Medico-Chirurgical College that he had been hazed and, among other indignities, shorn of his moustache. The case will be inquired into by the faculty and, if substantiated, the offenders will be punished. This course will, we think, undoubtedly meet with the general approval of the medical profession.

Clinical Lectures on Orthopædic Surgery.—The trustees of the New York Orthopædic Dispensary and Hospital announce that the surgeon-in-chief, Dr. Russell A. Hibbs, will give a course of clinical lectures on orthopædic surgery at the institution, on Monday and Thursday afternoons, at five o'clock, from January 28th to February 28th (both inclusive). The course will be free to the medical profession and students.

A Sanitarium for Consumptives.—The Mercer County (N. J.) Medical Society has prepared a bill, which will be introduced by Senator Hutchinson in the Trenton legislature, providing for the establishment of a sanitarium for persons afflicted with consumption. An appropriation of $50,000 for that purpose will be asked from the State. The bill specifies that no person shall be refused admission to the sanitarium because of his inability to pay.

A Physician's License Revoked for Advertising.—A physician of St. Paul, Minn., has had his license revoked by the State board of medical examiners as a penalty for unprofessional advertising. The courts being without jurisdiction, an attempt is to be made to obtain the Governor's interference. It would be a good thing if medical boards throughout the country would exercise themselves in repressing unprofessional conduct to the fullest extent of their powers.

Exterminating the Cuban Mosquito.—A war of extermination has been declared on the Cuban mosquito, which is charged with conveying yellow fever germs. Forty sanitary inspectors will make a thorough inspection of their districts and report all stagnant waters where mosquitoes might breed. Twice a month petroleum will be thrown upon the water which cannot be drained off, in order to kill the embryo mosquitoes. The department will also attempt to kill all mosquitoes in houses where cases of yellow fever appear.

Not Recognized as a Physician, "Dr." Cleveland Loses his Suit.—Dr. A. B. Cleveland, of Anthony, Kan., who recently sued the estate of A. R. Morrison for $3,050 for services rendered before the death of the deceased, lost his case in the probate court recently. Judge Musser rendered his decision on the fact that Mr. Cleveland has no diploma from a medical school, nor is a member of any medical society. Under the laws of the State he is not recognized as a physician, and is therefore not entitled to collect any amount for services rendered.

Aged Doctor Acquitted of Murder.—Dr. W. W. Dickey, of Bluefield, W. Va., has been acquitted of the murder of Miss Maggie Calfree. Dr. Dickey is nearing his sixtieth year and is one of the most prominent physicians in the southern portion of the State. The trial lasted for a week and more than forty witnesses were examined on each side. When the verdict was rendered, cheers went up in the court room and the aged doctor broke down and wept like a child.

Active Steps Taken toward Abating the Spitting Nuisance.—The board of health of the city of New York has directed notices to be posted in all public places to the effect that spitting on the floors of cars and ferry-boats is punishable by a fine of $500 or imprisonment, or both, and it is asserted that the law against the spitting nuisance will be vigorously enforced. This action, following as it does closely upon the conviction and punishment of a man for spitting on the floor of an elevated car, will probably be received with some respect by the traveling public.

A Royal Commission on the Beer Poisoning Epidemic has been appointed in England to collate data bearing upon the widespread occurrence of arsenical poisoning that has recently come to light. The commission is instructed to inquire as to whether any exceptional number of cases of illness and death observed has been due to arsenic in beer or in other articles of food or drink. In commenting upon this, the *Lancet* says that the appointment of the commission is wholly unnecessary, and is calculated to defeat the object aimed at, for the reason that the government already has ample evidence upon which to act, and act promptly; whereas the commission will require a long time for the collation of testimony and the preparation of a report, thus entailing great and unnecessary delay in action.

The Late Dr. Frank C. Merriam.—The Society of the Alumni of the City Hospital at their last meeting adopted the following preamble and resolutions on the death of their fellow member, Dr. Frank C. Merriam:

In the death of Dr. Merriam we lose an esteemed and valued friend, associated with us in the membership of our society for nearly its entire existence; and we desire to acknowledge the mutual friendship and helpfulness we have enjoyed from these years of association. It is, therefore,

Resolved, That we express our sincere and heartfelt sorrow at his death, and that our deepest sympathy be tendered to the doctor's bereaved family. Further be it

Resolved, That a copy of these resolutions be sent to the family and to the medical journals, and be entered upon the minutes of our society.

Adolph Rupp, M. D.,
A. T. Muzzy, M. D.,
Wm. L. Stowell, M. D.

Medical Supplies for the Philippines.—Arrangements have been made at the war department to send the transport *Wright* from New York to the Philippines by the Suez canal route, with a corps of officers of the medical department and a cargo of medicines and medical supplies for the benefit of the troops in the Philippines. First Lieutenant Henry A. Webber, assistant surgeon, has been detailed as acting assistant quartermaster and as acting commissary of subsistence on the *Wright*. Orders have been issued for the following-named assistant surgeons to proceed to the Philippines by that transport for assignment to duty: H. D. Belt, at New York City; T. F. Goulding, at Boston, Mass.; F. E. Thompson, at Cleveland, Ohio, and A. N. Wilkins, at Delta, Ohio.

The Rome Medical Society held its annual meeting at Rome, N. Y., on January 15th, when the following officers were elected: President, Dr. A. A. Gillette; vice-president, Dr. H. J. Teller; secretary, Dr. T. P. Scully; treasurer, Dr. G. N. Lehr.

Georgia Medical Society.—The Georgia Medical Society held its annual meeting at Savannah, Ga., on January 9th, and elected the following officers: President, Dr. T. P. Waring; vice-president, Dr. J. A. Crowther; recording secretary, Dr. C. B. Lanneau; corresponding secretary, Dr. A. A. Morrison; librarian, Dr. J. G. VanMarter, Jr.; treasurer, Dr. J. S. Howkins.

The Society of Medical Jurisprudence.—The one hundred and fifty-fifth regular meeting was held on Monday evening, January 14, 1901, at 8 P. M., at the Academy of Medicine, in New York City. The paper of the evening was on The Legal and Medical Aspect of Food Adulteration, by Professor H. W. Wiley, chief of the division of chemistry, U. S. Department of Agriculture, Washington, D. C.

The Toledo Medical Association has elected the following officers for the ensuing year: President, Dr. W. H. Fisher; vice-president, Dr. John North; recording secretary, Dr. Charles P. Wagar; corresponding secretary, Dr. A. C. Schnetzler; treasurer, Dr. F. E. Klauser. The election, which was held on January 11th, was followed by a banquet at the St. Charles Hotel.

Kings County Medical Society.—At the recent annual meeting of the Kings County Medical Society the following officers for the year were elected: Dr. William Browning, president; Dr. Henry A. Fairbain, vice-president; Dr. David A. Myerle, secretary; Dr. William Hubbard, associate secretary; Dr. O. A. Gordon, treasurer; Dr. John R. Steivers, associate treasurer; Dr. J. M. Winfield, librarian. Dr. George R. Fowler was elected a member of the board of trustees.

Albany Medical Society.—At the regular meeting of the Medical Society of the County of Albany, on January 16th, the following papers were read: The Intestinal Form of Influenza, by Dr. S. B. Ward; The Pulmonary Form of Influenza, by Dr. Howard Van Rensselaer. The next meeting will be held on February 13th, when the following papers will be presented: The Diagnosis of Cancer of the Stomach, by Dr. Andrew MacFarlane; Surgical Intervention in Cancer of the Stomach, by Dr. Willis G. MacDonald.

Foreign Association Notes.—The German Society of Physicians, which has a membership of about 16,000, contemplates making some radical changes in its organization. One of these is to pay a salary to the president, and to make him at the same time editor of the official organ of the society, the *Aerztische vereinsblatt.*——The British congress on tuberculosis will be opened on July 22d by the Prince of Wales. The congress will be divided into four sections: Pathology, medicine, public medicine, and veterinary medicine. The address of the general secretary is 20 Hanover Square, London, W.

A Pacific Medical Association.—According to press dispatches a Pacific medical association is to be organized, with San Francisco as the centre of a western medical field embracing Washington, Oregon, Idaho, Montana, Utah, Nevada, Arizona, California, Alaska, British Columbia, the Hawaiian Islands, the Philippines and other islands of the Pacific, the western part of Mexico and of the Central American republics, and possibly the empire of Japan. A preliminary meeting of prominent physicians interested was held recently.

The Medical Society of City Hospital Alumni, St. Louis.—At the annual meeting, on December 20, 1900, the following officers were elected for the ensuing year: President, Dr. Norvelle Wallace Sharpe; vice-president, Dr. Francis L. Reder; secretary, Dr. John Green, Jr.; treasurer, Dr. Horace W. Soper.

At a special meeting, on Thursday evening, the 31st ult., Mr. Charles F. Longfellow, superintendent of public buildings, exhibited the plans for the buildings of the new City Hospital.

The New York Academy of Medicine.—At the next stated meeting, on Thursday, February 7th, the order for the evening is as follows: Presentation of a bust of the late Dr. Horace Green; the reading of the following papers on conservative operations upon the uterine appendages: Their Technique, by Dr. J. Riddle Goffe; The Significance and Importance of such Conservative Operations, by Dr. William M. Polk; The Immediate and Remote Results in One Hundred Cases of these Operations, by Dr. W. L. Burrage, of Boston; and An Experience in One Hundred and Twenty-five Similar Cases, by Dr. A. P. Dudley. Dr. Coe, Dr. Boldt, Dr. Wiggin, and Dr. Grandin will take part.

A Hospital Wins a Damage Case.—In the Supreme Court at Buffalo recently Justice Childs directed a nonsuit in the action brought by Mrs. Catherine K. Wiles against the German Deaconesses' Home and Hospital to recover $20,000 damages. The defendant corporation showed that the hospital attendants were not responsible in any way for burns received by Mrs. Wiles in taking a steam bath.

The Bell Bill Arouses Opposition.—The measure introduced in the assembly of the State of New York by Mr. Bell with a view to preventing the practice of Christian Science is arousing very active opposition on the part of a variety of interests which would be affected, though the bill may not have been intended to do so. The proprietary medicine interests would be seriously affected, as would also the retail drug trade and dealers in orthopædic supplies. All three of these interests actively oppose the passage of the measure. Dr. Frank Van Fleet, chairman of the committee on legislation of the Medical Society of the State of New York, which has drafted the proposed amendment to the Public Health law, said recently, in speaking of the amendment: "The object of the proposed amendment is to compel every physician to comply with the laws. If educated men are compelled to comply with the laws, and if uneducated men can evade them by posing as Christian Scientists, osteopaths, hydropaths, etc., then the present law is not an incentive for men to make themselves competent. Yet the medical laws are enacted to protect people from incompetent practitioners. Any one who is registered in the county clerk's office is competent, and the fact that he is allowed to register is a guarantee of his competency by the State. The object of the present amendment is not to discriminate, but to compel every one who wishes to treat disease to register. The present law does not protect the community."

Foreign News Notes.—The Eighth International Congress on Inebriety will be held in Vienna from the 9th to the 14th of April. The chairman of the committee on organization is Professor Max Gruber. Full information concerning the programme can be obtained from the secretary at No. 17 Schwartz-spanier Strasse IX, Vienna.——The essay upon tuberculosis by Dr. S. A. Knopf, of New York City, which was awarded the prize of 4,000 marks at the recent Congress on Tuberculosis, has been printed in pamphlet form by the central committee for the erection of sanitariums for consumptives in Germany, and will be furnished by this committee at a very low rate to encourage its general distribution. With a view to encouraging the wider dissemination of the essay, full permission is given to any one to reprint or to translate the essay.——The Spanish pathologist, Dr. Ramon y Cajal, whose original work upon the anatomy of the nervous system has attracted the attention of the whole world, has heretofore received but very little attention in his native land. It was not until after he had been awarded the prize of 5,000 francs by the City of Moscow at the recent International Medical Congress at Paris for his work upon the neurone that the government gave him a salaried appointment. Now a subscription is being taken up in Spain with the purpose of founding a laboratory in which he can prosecute his studies.——Professor Ernst Haeckel has received from the Royal Society of London the Darwin Medal for his long and valuable labors in the field of zoology. ——A young Italian physician of Rio Grande du Sol, by the name of Angelio Bellinghazi, has been awarded a portion of the $100,000 prize offered by the Mexican government for the discovery of a remedy for yellow fever.——The law regarding tuberculosis which went into effect in Norway on January 1st is so stringent that it has aroused a most vigorous and general protest. Under the law all persons affected with tuberculosis are required to take up their residence in a sanitarium devoted to the treatment of this disease. This is impracticable, since there are not enough institutions of this character in the kingdom to furnish the necessary accommodations.——The physicians of Vienna have become very much exercised over the growth of the illegitimate practice of medicine by charlatans of various kinds, and active steps are being taken to diminish the evil. ——The twenty-second congress of balneology will be held in Berlin from the 7th to the 12th of March. Dr. Liebreich is president of the congress, and thirty-seven essays have already been promised from leading specialists in Germany.——In Budapesth a decree has been issued requiring the disinfection of rooms in which tuberculosis patients have died.——A chair of colonial medicine has recently been established in the University of Paris which will give particular attention to the study of tropical diseases.

Typhoid Fever.—The statistics recently presented by the annual report of Dr. Matson, bacteriologist of the Pittsburgh board of health, show that one per cent. of the population of that city suffered from typhoid during the year 1900. The deaths from typhoid numbered 465, the largest number ever recorded in a single year.

Diphtheria.—According to the annual report of Dr. Matson, of the Pittsburgh health board, the mortality from diphtheria in that city has largely diminished. The reduction is attributed to the use of antitoxine.——Diphtheria has been reported at East Tawas, Mich., and one family quarantined.

Small-pox.—Reports from most of the districts afflicted are to the effect that the disease is gradually subsiding in virulence. In this city, President Murphy, of the Health Department, has appointed fifty additional deputy sanitary inspectors to assist in the work of vaccination.——A bill is to be introduced in the Colorado legislature to provide for a $4,000 appropriation with an emergency clause attached, the amount to be expended by the State board of health in paying for the employment of small-pox inspectors to aid in suppressing the spread of the disease.——Dr. M. J. Rodermund, of Appleton, Wis., who smeared himself with small-pox virus and then rubbed against and touched as many persons as possible to prove his theory that no disease is contagious, was quarantined in his house, with his family, by two policemen, at latest accounts. He tried to retain a lawyer, but no lawyer would take his case. If other cases of small-pox break out it is feared violence will be done him. Dr. Rodermund made this statement: "I shall exhaust every legal means to obtain my release from quarantine. Such means failing, I shall free myself at any cost. It was not my intention to alarm the public. I would have kept silence until a month from now, when I would have made known my experiment." Later he escaped, and was arrested at Terre Haute, Ind. His sanity will be inquired into.——Frank Lemlich, a resident of the Bronx, was recently held in $500 for concealing the fact that his child had small-pox. The mother has fled with the infant and has not been apprehended. ——Small-pox has been reported at Houston, Wis., where the health officers stopped a dance that was in progress and placed the residents of the hotel where the case was discovered in quarantine.——At Angus, Neb., three families have provided ten cases of small-pox.——Bellevue, Neb., is now said to be free from the disease. ——Twelve cases have been reported at Crestline, O., but owing to trouble between the members of the health board no quarantine had been established up to January 24th.——Among other places reporting the disease are Chagrin Falls, O.; Oshkosh, Wis.; Minnesota City, Minn.; Lansing, Mich.; Albany, N. Y.; Bryant, Mich., in a lumber camp (eleven cases); White River, Ontario; Austin, Ill., and Columbus, Miss.

A Marine Hospital for New York.—Secretary Gage has sent to Congress a request by the supervising architect of the Treasury Department that three acres of flats in New York harbor adjacent to Ellis Island be reclaimed, at a cost of $100,000, the material excavated from the new Custom House site to be utilized for the purpose. The reclaimed land is to be used for a marine hospital.

Visiting Staff of Cooper Hospital at Camden, N. J.—At the annual meeting of the board of managers of Cooper Hospital, Camden, N. J., the following-named were elected as the visiting staff of physicians and surgeons of that institution for the ensuing year: Medical, Dr. H. Genet Taylor, chairman and secretary; Dr. W. A. Davis, Dr. E. L. B. Godfrey, Dr. W. R. Powell; surgical, Dr. Daniel Strock, Dr. Joseph L. Nicholson, Dr. Paul M. Meeray, Dr. E. A. Y. Schellenger; opthalmologist, Dr. William R. Powell; gynæcologists, Dr. Dowling Benjamin and Dr. J. S. Baer; laryngologist, Dr. Ernest S. Ramsdell; pathologist, Dr. Walter S. Bray.

The President of the New York State Medical Society on Hospitals and Malpractice.—Dr. A. M. Phelps, in his presidential address at the ninety-fifth annual meeting of the society, at Albany, on January 29th, attacked the bill of Senator Grady which provides that hospitals shall not be liable for malpractice cases. He said:

"Recent decisions in cases of malpractice suits brought against hospitals have been decided against the latter on the ground that any hospital that treats patients for pay and has private rooms where private patients are treated, is the principal defendant. This is right. The surgeon is simply the agent of the hospital, and very grave injustice has been done to faithful surgeons and doctors on account of the neglect of some of the internes or nurses, and to my knowledge such men have been prosecuted for malpractice. The hospitals have turned their backs on them, and they have been mulcted in large sums. Now, this bill introduced by Senator Grady is vicious and should be defeated, and the chair recommends that this society should pass a resolution asking the legislature to defeat it, and that, in the event of its passage, the Governor veto it. It is to be hoped that the legislative committee will take the matter in hand and see that this piece of vicious legislation is defeated."

The following resolution was adopted:

Resolved, That the Medical Society of the State of New York heartily indorses the report of the tenement house committee appointed by Governor Roosevelt, and urgently requests the legislature to adopt its recommendations regarding the improved housing of the poor and the further control of the spread of infectious diseases.

Hospital Buildings and Endowments.—The new annex to St. Mary's Hospital, Philadelphia, which has cost $75,000, is almost ready for occupancy. It has a frontage of ninety feet and a depth of one hundred feet. The building is four stories in height and is of brick, faced with drab Pompeiian brick, with trimmings of Indiana limestone. It is of fireproof construction, with steel beams and tiled floors. There is an electric elevator, and three separate stairways from the first floor to the fourth. ——By the will of the late Albert E. Kent, of Chicago, the sum of $50,000 is bequeathed toward the completion and equipment of the Kent Laboratory, which was established by the testator.——The following officers and directors were elected at the annual meeting of the Mount Sinai Hospital, New York, on January 27th: President, Isaac Wallach; vice-president, Isaac Stern; treasurer, E. Asiel; secretary, Louis M. Josephthal; directors, for the term of four years, Isaac Blumenthal, Louis Stix, Isaac N. Heidelberg, Adolph Herrmann, and David Wile. A supplementary report presented by the building committee announced that the awards for the new buildings at One Hundred and First Street and Madison Avenue had been made, and that the work would go on speedily. Of the $1,650,000 required, all but $300,000 had been secured up to two weeks ago. Since that time the board of directors has subscribed $75,000, leaving only $225,000 lacking, which, it is thought, will be readily secured. The total number of patients treated

during the year was 3,352. Of that number 1,963 were discharged cured. Accident cases treated, not included in the above, were 592. The percentage of patients treated gratuitously was 80.60. In the dispensary there were 86,431 consultations, and 77,663 prescriptions were filled. Two hundred and fifty-three patients were treated in the outdoor department. The total expenses of the hospital and dispensary were $136,271.31.——At the recent annual meeting of the Willard Hospital of Bedford, Mass., the former board of officers was re-elected, as follows: President, Rev. Edward E. Hale; vice-presidents, John Gilchrist and Myron T. Pritchard; treasurer, Edward May; secretary, Dr. S. B. Eliot.——At the annual meeting of the Salem, Mass., hospital corporation, the old board of trustees was re-elected. During the past year 411 patients were admitted to the hospital (a falling off in the total number), of whom 200 were medical and 211 surgical cases.——The Freedmen's Hospital at Washington, D. C., has become so crowded that it has become necessary to deny admission to applicants.——At the request of the Michigan board of health, a bill has been introduced in the legislature appropriating $60,000 for the establishment of the Michigan State Hospital for Consumptives, and $4,000, or a sufficient amount, to pay the running expenses. The establishment of the institution is intrusted to the State board of health, after which it passes to the control of the regents of the University of Michigan. The board of health is empowered to select a site, appoint an architect, and superintend the erection of the building. Briefly stated, the bill gives the object of the institution as the treatment of consumption and the proper training of medical students. The regents are empowered to appoint a medical and surgical staff of five members, one of whom shall be a professor of hygiene and bacteriology, and to fix their salaries. Residents of the State will be received free of charge, and poor persons will be supplied with clothing, etc., by the county in which they reside. Provision is also made for receiving non-residents, the charges to be fixed by the regents.——At the recent annual meeting of the Pacific Christian Hospital, of San Francisco, a building committee was appointed with a view to building during the year. The expenses of the institution for the past year amounted to just $12,000.——The Navy Department has proposed that the city permit the department to use the northern end of the island as a parade ground and park. The insane pavilion is to be vacated. The project has not met with the approval of the local authorities.

Births, Marriages, and Deaths.

Born.

McCULLOCK.—In Waco, Texas, on Sunday, December 23, 1900, to Dr. C. C. McCullock, United States Army, and Mrs. McCullock, a son.

Married.

COOLIDGE—REYNOLDS.—In Boston, on Wednesday, January 17th, Mr. Julian Lowell Coolidge and Miss Theresa Reynolds, daughter of Dr. John Phillips Reynolds.

DUFFY—NOLAN.—In Washington, on Wednesday, January 23d, Dr. William F. Duffy, of Bristol, Rhode Island, and Miss Rose H. Nolan.

FISHER—SWOPE.—In Lebanon, Pennsylvania, on Thursday, January 24th, Dr. George S. Fisher and Miss Anna A. Swope.

GOLDSTEIN—SCHWARZSCHIELD.—In New York, on Sunday, January 20th, Dr. Aaronson Goldstein and Miss Jeannette Schwarzschield.

KETCHUM—MYERS.—In Lonaconing, Maryland, on Wednesday, January 23d, Dr. Frank Gray Ketchum, of New York, and Miss May Myers.

McNAMARA—GALLAGHER.—In New York, on Wednesday, January 23d, Dr. Thomas C. McNamara, of Hoboken, New Jersey, and Miss Minnie Eloise Gallagher.

RAMSEY—BALL.—In Waco, Texas, on Wednesday, January 16th, Dr. W. H. Ramsey, of St. Louis, and Miss Edna Ball.

WISTER—DUNN.—In Germantown, Pennsylvania, on Wednesday, January 23d, Dr. James Wilson Wister and Miss Elizabeth Bayard Dunn.

Died.

BURDEN.—In New York, on Sunday, January 26th, Dr. Charles Burden.

CHRISTOPHER.—In St. Joseph, Missouri, on Monday, January 21st, Dr. Herman Christopher, aged eighty-five years.

HERRICK.—In Cleveland, on Monday, January 28th, Dr. Henry J. Herrick.

McCARTHY.—In Boston, on Monday, January 21st, Dr. Frederick J. McCarthy, of Malden, Massachusetts, in the twenty-fifth year of his age.

NELSON.—In Newmarket, New Jersey, on Sunday, January 27th, Dr. Frederick S. Nelson, aged twenty-seven years.

NOTT.—In Rexford Flats, Saratoga County, New York, on Tuesday, January 22d, Dr. Eliphalet Nott, aged sixty-seven years.

PARKER.—In Richmond, Virginia, on Thursday, January 24th, Dr. William W. Parker, in the twenty-fourth year of his age.

PARKHURST.—In Frankfort, New York, on Tuesday, January 22d, Dr. William H. H. Parkhurst, aged eighty-eight years.

PURDY.—In Chicago, on Sunday, January 20th, Dr. Charles Wesley Purdy, in the fifty-fifth year of his age.

RUNDLE.—In Passaic, New Jersey, on Monday, January 21st, Dr. George L. Rundle, in the thirty-first year of his age.

SCHUPPERT.—In New Orleans, on Wednesday, January 16th, Dr. Charles E. Schuppert, in the forty-fourth year of his age.

STICKEL.—In Harrisburg, Pennsylvania, on Thursday, January 24th, Dr. Henry L. Stickel, formerly of the United States Army, in the forty-eighth year of his age.

STRONACH.—In Belleville, New Jersey, on Tuesday, January 22d, Dr. James Watson Stronach, of New York, in the sixty-first year of his age.

THOMPSON.—In Amherst, Virginia, on Wednesday, January 23d, Dr. John Thompson, aged sixty-two years.

Obituaries.

CHARLES WESLEY PURDY, M. D., LL. D.

DR. PURDY died at his home in Chicago on January 20th. He was born in 1846 at Kingston, Ontario, and received his medical education at the Queen's University, where he graduated with high honors. For a short time he practised in his native town, and then came to Chicago, in which city he was actively engaged in practice up to the time of his recent illness, which terminated fatally. He made a close study of renal diseases, upon which subject he published, among other things, a work on Bright's Disease and Allied Affections of the Kidneys, one on Practical Uranalysis and Urinary Diagnosis, the fifth edition of which was reviewed in the *New York Medical Journal* for November 24, 1900, as well as numerous contributions to the medical journals, including one in this journal so late as June, 1899. Dr. Purdy was also the recipient of honors from the Royal College of Physicians and Surgeons of Canada, and a year or two ago was honored by his Alma Mater with the degree of LL. D. (*honoris causa*). He will be much missed by many friends, both in and out of the medical profession.

Pith of Current Literature.

Boston Medical and Surgical Journal, January 24, 1901.

A Short Abstract of the Early History of Medicine in Massachusetts to the Year 1800. By Dr. Elbridge G. Cutler.—This article points out: (1) the prominent position which Massachusetts held in the advancement of medicine in the early days, and (2) the close relation between the physician and the clergyman, the two professions being often united in one individual.

The Great Toe (Babinski) Phenomenon: A Contribution to the Study of the Normal Plantar Reflex Based on the Observation of One Hundred and Fifty-six Healthy Individuals. By Dr. Morton Prince.—The author's belief is that the frequency of the plantar (spinal) reflex, so far as it concerns the toes, has been exaggerated owing to several sources of fallacy being overlooked, namely: (1) mistaking the cerebral for the spinal reflex; (2) in stroking the sole it is not difficult by moderate pressure over the first phalanges to cause a purely mechanical flexion of the toe; (3) if the stroke is made from the toe toward the heel, pulling on the skin, when inelastic, will do the same.

A Case of Obliteration of the Right Ureter by a Calcified Fibroid; Removal of Fibroid and Implantation of the Ureter into the Bladder; Recovery. By Dr. Maurice H. Richardson.—The author recommends that the dissection of the deep pelvis—like that of the deep neck—should be made in the full light of day, where every structure can be recognized as the dissection proceeds. The cases in which this deliberate dissection cannot be made, or in which the structures are too changed for recognition, are extremely infrequent.

A Case of Vesical Implantation of the Ureter by Dudley's Forceps Method after the Failure of Several Plastics. By Dr. Edward Reynolds.—The chief risk of failure in ureterovesical implantation is always from the slipping away of the ureter, owing to the thinness of its walls and the consequent difficulty in its being securely sutured to the bladder. This danger is entirely obviated by the Dudley method of securing the ureter and bladder together by forceps. The presence of the forceps must at the same time direct the stream of urine into the bladder, and in the author's case its presence in the bladder caused no discomfort.

Pregnancy Following the Removal of Both Ovaries and Tubes. By Dr. M. A. Morris.—The author regrets that the parts removed had not been subjected to a microscopic examination. He believes that there may have been a third ovary, as supernumary ovaries have been found twenty-three times in five hundred bodies by Biegel, or that there must have been a scrap of ovarian tissue left behind.

Philadelphia Medical Journal, January 26, 1901.

Two Cases of Epiplopexy in Cirrhosis of the Liver. By Dr. John B. Roberts.—Though it is too early to reach a definite conclusion as to the clinical value of epiplopexy in cirrhotic liver, the author believes that, as the operation is so comparatively trivial and the disease so intractable, a comparatively early resort to it seems justifiable. The incision should be made above the umbilicus under local anæsthesia, and the sutures should be carried through the external skin by means of a curved needle, while the forefinger of one hand within the abdomen holds the omentum against the anterior abdominal wall.

The Surgery of the Stomach. By Dr. Albert I. Bouffleur.—An interesting epitome of the characteristics, clinical history, diagnosis, and treatment of the surgical diseases of the stomach. In regard to ulcer of the stomach, the author quotes Ewald and Welch, to the effect that it occurs in fully five per cent. of mankind. He believes that gastro-enterostomy is the elective operation for ulcers with chronic hæmatemesis. In cases of acute perforation, immediate gastrorrhaphy is unquestionably demanded. The investigations of Greenough and Joslyn revealed the fact that only one half of the eighty per cent. of ulcer patients discharged from the Massachusetts General Hospital as relieved, remained well at the end of five years, which would show that permanent relief failed in sixty per cent., and that twenty per cent. of the whole number died. As an essential to successful operating, the stomach should be both empty and clean. Preliminary lavage with warm water and boric-acid solution is emphasized, and it is good practice to utilize rectal feeding *before operation* in order to accustom the rectum to its new duties and to derive the benefit of increased nourishment.

A Case of Ligature of the Innominate Artery for Aneurysm. By Dr. S. P. Delaup.—Though death occurred on the twenty-third day in this case, the author asserts that, under favorable circumstances, the operation by ligature is in certain conditions justifiable and advisable, and that, with the improvements in the physical characteristics of the ligature and in the method of its application, and also with modern aseptic methods, it may yet be followed by favorable results.

Branchial Cysts and Fistulæ. By Dr. W. M. L. Coplin.—With regard to treatment, total ablation, where possible, is the only commendable plan. Pockets that cannot be excised may be cauterized.

Retardation of Growth as a Cause of Shortening after Coxitis. By Dr. Henry Ling Taylor.—This retardation of growth is the rule after coxitis and other affections causing long periods of lameness or disability in childhood, and the amount of retardation bears a distinct relation to the amount and duration of the restraint or disability. This inhibitory effect of restraint should be considered in selecting treatment for disabling affections of the lower limbs.

A Report of a Case of Rabies. By Dr. Frederick Krauss.

Journal of the American Medical Association, January 26, 1901.

The Diagnosis of Diabetes Mellitus. By Dr. James B. Herrick.—The author calls attention to the importance, not only of diagnosticating the diabetes, but also of recognizing the variety of the disease. Though the classifications are all more or less artificial, they are valuable, and if we make no sharper distinction than between mild, moderately severe, and severe types, our treatment will be far more rational and effectual, and our prognosis far nearer the truth, than if we make merely one large class including all cases of diabetes. Due consideration of the age, tendency to obesity, heredity, and of organic disease of the pancreas or nervous system as an ætiologic factor enables one to recognize the type. It is especially valuable to note the effect of the withdrawal of carbohydrates. It is not always the amount of sugar that determines the severity of the case; it is rather the amount in comparison with the amount of carbohydrates in the diet.

Diabetes Mellitus. The Mortality therefrom in the City of New York during the Period from 1889 till 1899; from the Official Records. Comments. By Dr. Heinrich Stein.

Cutaneous Diseases Accompanying Diabetes. By Dr. M. B. Hartzell.—The greater number of these diseases are of an inflammatory character, resembling in a general way the inflammatory diseases of the skin due to other causes, but also presenting certain peculiarities as to location and course, which suggest their ætiology. The local treatment is largely that of similar diseases occurring in the nondiabetic. In the inflammations so common about the genitalia, scrupulous cleanliness will go far toward a cure, or if not a cure, relief. If the parts are frequently bathed before inflammatory symptoms have actually appeared, they may be entirely prevented. However, the treatment of the underlying cause, the diabetes, is of far more importance than any local remedies.

Post-anæsthetic Paralyses. By Dr. C. C. Hersman.—Paralyses following an anæsthetic are more imagined than real, and the author has seldom seen a case of post-anæsthetic paralysis that did not clear up rapidly. Reflex paralysis may be looked upon, in this connection, as purely accidental. The peripheral palsy is the only one of importance to the anæsthetist. It is avoidable. All faulty positions should be guarded against and no long-continued pressure of any nature should be allowed. Massage, passive motion, and injections of strychnine in the region of the nerve trunk have done good. The fallacy among medical men is the belief that peripheral palsies recover soon, and, on that account, these accidents do not receive proper attention.

The Treatment of Neurasthenia. By Dr. Daniel R. Brower.—Neurasthenia is a pathological fatigue arising most frequently from gastro-intestinal intoxication. The vasomotor mechanism is the first to show the effect, and the degree of disturbance in vascular tension is a great aid in prognosis. Partial rest is necessary, and recuperation must come through digestible and assimilable diet. Electricity is of value, and sponge baths—gradually lowered to 50° F., prolonged for about one hour—are a necessary part of the treatment proposed by Dr. Weir Mitchell. The European trip has been very detrimental to several of the author's patients. No matter what special line of treatment is adopted, however, it is very important to keep the patient busy in his efforts at cure, and a daily schedule of therapeutic work should be furnished to him.

Intubation in Private Practice and its Perfection. By Dr. J. Trumpp.—Intubation is by no means more dangerous than tracheotomy and ought not be confined to hospital practice. A physician should not proceed to the operation, however, until he has had sufficient previous practice on cadavers and animals. Tubes of that size are preferable which can just pass the larynx without being forcibly pushed in. The rubber tubes of O'Dwyer are to be preferred.

Traumatism during Intubation—Its Prevention and Treatment. By Dr. Johann von Bokay.

Fracture of the Patella. By Dr. James M. Barton.—All methods of external treatment have failed. The risks of the operation are slight. Surgeons are constantly shortening the period of rest after the operation, and one of the possibilities of the future is that the patient will be permitted to move his leg as soon as the external wound has healed. It is best to wait for eight or ten days before operating.

Growths in the Frontal Sinus. Two Cases; Operation; Recovery. By Dr. W. D. Hamilton.

Treatment of the Gastro-intestinal Symptoms in Typhoid Fever. By Dr. J. H. Anders.

The Unbroken Skin as an Absorbing Medium. By Dr. Thomas F. Reilly.—A medicinal agent, to be absorbed by the unbroken skin, must either become volatile during its application, or be incorporated in a fatty base and applied with friction. Occlusion is an absolute requirement in the case of volatile substances. Most of the absorption occurs in the crypts of the sebaceous glands. The effect is much slower, about one fourth as intense, and longer continued than when the same agent is administered by the mouth.

Idiosyncrasy as to Mercury. A Case of Erythema Mercuriale. By Dr. Albert Bernheim.

A New Objective Test for Mastoiditis, with Report of a Case. By Dr. Albert H. Andrews.

Ocular Manifestations of Diabetes Mellitus. By Dr. L. A. W. Alleman.

Some Remarks on the Plantar Reflex, with Especial Reference to the Babinski Phenomenon. By Dr. J. T. Eskridge.

Medical Record, January 26, 1901.

Early Diagnosis of Mammary Tumors. By Dr. George F. Shrady.—The strongest side of the argument for safety is the removal of all growths, whether in young or old. It is only a question of saving the breast in benign tumors, and of sacrificing the entire organ and its varied lymphatic connections in malignant ones. Even in adenomata there are the best of reasons for this course. No tumor of the breast can be considered a trivial affair. A mammary neoplasm is bad company, no matter how we argue to the contrary. There is hardly a "simple tumor," socalled, which, when discovered in the breast, may not eventually become malignant, and to take the chance of an exception to this rule one must be very sure of his ground.

Some Further Work on the Mosquito-malaria Theory, with Special Reference to Conditions around New York. By Dr. William N. Berkeley.—Of the three species of anopheles native to North America, the author has found two around New York: *Anopheles quadrimaculatus* (Wiedemann) and *Anopheles punctiformis* (Say). The anopheles was found always in buildings, oftenest on the walls and ceilings of recently used bedrooms, and far more abundantly in the foul and ill-ventilated bedrooms of the poor. The house females were usually gorged with blood, and sluggish enough to be easily caught. The author believes that the health department should require malarial cases to be reported. "It is at least as dangerous as scarlet fever, and far more of a scourge. An inspector should be sent to every infected house to instruct the people to kill all the anopheles in the house, to provide the doors and windows with screens, to isolate the patient with particular care from mosquitoes, and to cause all the standing water in the vicinity to be drained or heavily petrolized." The author believes that, by these measures, the number of local cases could be reduced by more than ninety per cent. in a year or two. The work of the Italians in this connection is referred to.

The Causation, Prevention, and Treatment of Gout. By Dr. Alexander Haig.—As regards causation, the au-

thor's position is that gout is due to poisoning by flesh and tea and similar substances, which introduce uric acid into the body in very considerable quantities. This uric acid may not only remain in the body, but may prevent the excretion of the uric acid formed in the body, and, as a result, the body becomes more or less saturated with uric acid, which may irritate its fibrous tissues or may obstruct its capillaries, causing high blood pressure and defective capillary circulation and their results. Prevention consists in removing from the diet of the young all substances which contain a notable quantity of uric acid. For treatment, two things are necessary: (1) to cut off the poisons that have been the cause of the trouble, so that introduction shall as far as possible cease; (2) to provide for the elimination of the poison already in the body. Diet meets the first indication, and one result of altering the diet will be that the body will gradually clear itself of the accumulated uric acid it contains. It is only in a few special cases that we need to use drugs at all.

The Non-myxomatous Character of Nasal Polypi. By Dr. Jonathan Wright.

Medical News, January 26, 1901.

Lakewood as a Winter Resort. By Dr. William Gray Schauffler.—Lakewood does not pretend to the dignity of a European spa. It is simply a nearby country village, pretty and attractive, dry and sunshiny, free from malaria and infections of all kinds, and so situated that outdoor life is possible nearly every day during the winter.

The Climatic Treatment of Chronic Bright's Disease. By Dr. James Tyson and Dr. T. Mellor Tyson.—Equality of temperament and diminished wind force are important factors in the climatic treatment. A hot, dry climate is more beneficial than a cold, dry climate. The direct tendency of altitude in chronic nephritis is toward its cure, but it must be remembered that most of these patients have either a failing heart or one that has already lost compensatory power. For such cases great altitudes are harmful.

Treatment of Syphilis at Hot Springs, Ark. By Dr. James T. Jelks.—Strict hygienic treatment is supplemented by the baths and drinking of the hot water. By reason of the very rapid elimination of medicines produced by the drinking and bathing, much larger doses of the required remedies may be given than are usually tolerated by the patients in their homes. Instead of twenty grains of iodide salts, three times daily, it is a common thing to give from fifty to one hundred grains at a dose. Mercury is used in such doses as the patient may need. The results of treatment are encouraging in the extreme.

Some Topographical and Climatic Features of the Florida Peninsula; with Special Reference to its Adaptiveness as a Winter Health Resort. By Dr. James K. Crook.—In cases of recurring bronchitis or winter cough, a sojourn of two or three months in Florida during the depth of the northern winter usually results in material improvement, often in a permanent removal of the *materies morbi.* A majority of cases of early phthisis prior to the formation of cavities are greatly benefited, though patients showing great debility or a severe degree of anæmia should not be sent to a southern climate. Cases of socalled fibrous phthisis or chronic interstitial pneumonia will be improved by a visit of several months. There is also a very large valetudinarian class.

The Climatology of Neurasthenia. By Dr. F. Savary Pearce.—An altitude of over two thousand feet is unsuitable for the neurasthenically disposed or convalescent patient. Any very "stimulating" climate should be avoided. Other conditions to be avoided are as follows: Districts menaced by high winds and frequent fogs; cloudy, saturated atmospheres with but slight movements of air currents, low country (sea level) with continuous, non-varying, although moderate heat, as where the effects of the Gulf Stream are strongly felt. Ideal conditions for the neurasthenic include sea air in a well-wooded country, far enough from the coast to avoid its fogs. A sea voyage is, as a rule, an excellent preliminary to other climatic measures. Provided the voyage is not stormy, it acts both psychically and physically in soothing the nervous system. The patient must have good food; without this, the desirable climatic change may be entirely defeated in its effect on the patient.

The Tonsils as Portals of Infection. By Dr. Julius Ullmann.—In an excellent article the author endeavors to show that the normal tonsil has a physiological function, probably protective to the organism. When this function is impaired, as it often is, the tonsil becomes the nidus for the growth of pathogenic organisms and the distribution of their poisonous products into the system. If the exanthemata, especially scarlatina, are of bacterial origin, the tonsil acts in part as port of entry. Acute articular rheumatism and the diseases often associated with it, are, in a great majority of cases, due to the action of attenuated bacteria, their toxines, or both, entering the general system through a diseased tonsil. Scrofulosis and tuberculosis are often connected with diseased tonsillar tissue. The tonsil is too little examined at necropsy, and much light might be shed on fevers of uncertain origins by bacteriological and histological examination of them.

Lancet, January 19, 1901.

Enlargement of the Prostate. By Dr. P. J. Freyer (*continued*).—In certain selected cases of enlargement of the prostate an operation of some kind is advisable, and in a small minority of cases it is imperative, to save the patient's life or to ameliorate his sufferings. But in the vast majority of cases the only admissible treatment is judicious and cleanly catheterism combined with careful hygienic treatment.

Where the affection is unattended by symptoms no treatment is necessary. Where decided symptoms of obstruction are present but the bladder contains no "residual" urine, the author advises the passing of a large steel dilator as far as the bladder once a week, leaving it in position for ten minutes, beginning with a No. 11, English scale, and gradually advancing to No. 15 or No. 16. This simple procedure is often most beneficial, staving off for an indefinite period the necessity for habitual catheterism. The internal administration of liquid extract of ergot at the same time is often beneficial; it seems to act by relieving congestion. When the "residual" urine amounts to three or four ounces, and there is frequent nocturnal micturition, it will be necessary to resort to the habitual use of the catheter. When the "residual" urine amounts to four ounces or less, the catheter need only be passed once a day, preferably at bedtime. If six ounces are retained the catheter should be employed twice daily; if eight or ten ounces, three or four times daily. But there should be no limitation to any specific hour; the urine should be drawn off before

marked discomfort is felt. The patient should never be without a catheter, and the sooner he recognizes that the primary duty of his life is the employment of his catheter the better. A soft *coudé* catheter, No. 7 to 9 E, is the best for habitual employment. Thorough instruction in the passage of the catheter will give the patient the confidence necessary for its use. It is useless to lay down an elaborate ritual of urinary asepsis; in soap and water we have an efficient, convenient, and practical method for cleansing catheters. After cleansing, they should be kept in a corked glass tube.

The most important part of the general treatment is the regulation of the bowels; constipation aggravates the urinary symptoms. For this purpose nothing is better than confection of sulphur or senna, or equal parts of both. Opium may be given for pain, but never with belladonna, as the latter paralyzes the muscles of the bladder.

Urinary Fever in Connection with Catheterism.—This complication may occur under the strictest antiseptic precautions, and with the utmost skill in passing the catheter. A rigor will probably occur and the temperature may rise to 103° F., to fall again rapidly. Or the fever may be of a continuous character for some days. The general treatment is the same as that following instrumentation of the urethra.

Cystitis.—This is a common complication, and the best drug to administer is boric acid in ten-grain doses four times daily. When pus forms, the bladder must be washed out once or twice daily with disinfectants or astringent lotions. Permanganate of potassium (1 in 5,000) and perchloride of mercury (1 in 10,000) make excellent injections, but the best is nitrate of silver, beginning with a strength of 1 in 4,000 and gradually increasing to 1 in 750. Great pain and scalding at the neck of the bladder is best treated by "instillations" of strong solutions of nitrate of silver (one to three per cent.) All lotions should be warmed to 100° F.

Complete Retention of Urine.—This complication, which is liable to occur suddenly at any time, should be relieved immediately. A soft catheter should be first tried, followed in succession by a *coudé* catheter, a gum-elastic catheter, first alone and then mounted on a stylet, and finally a metal catheter. Should these all fail, suprapubic aspiration should be performed, when a catheter can probably be introduced. If not, the bladder must be tapped suprapubically with a trocar and cannula, and drained for some days.

Præ-prostatic Pouch.—A good-sized pouch may form in front of the middle lobe of the prostate, which may contain "residual" urine, and lead to confusion. A stone may form in this position.

Hæmorrhage from the Prostate.—When the disease is well advanced, this complication is always liable to occur. As a rule, the blood is mixed with urine, but it may be pure. The treatment consists in perfect rest in bed and the administration of opium. Styptic drugs are of no avail.

Operative Treatment of Enlarged Prostate.—The various recognized surgical procedures employed for this disorder may be briefly classified as follows: 1. Radical operations, which aim at removing the obstructing portion of the glands. 2. Operations undertaken for the purpose of inducing atrophy of the prostate—(*a*) castration; and (*b*) excision of the vasa deferentia. 3. Palliative operations—(*a*) drainage of the bladder through the perinæum; and (*b*) drainage of the bladder above the pubes.

The author discusses these various procedures, their methods of performance, and their advantages and disadvantages. The most valuable of the radical procedures for the removal of prostatic outgrowths is suprapubic prostatectomy. Vasectomy is preferable to castration, as being practically unattended by danger to life and free from the sentimental objections incidental to castration. But it is not quite so effectual in inducing atrophy of the prostate.

Some Cases of Head Injury, Including One in which there was Lesion of the Occipital Lobe. By H. W. Page, F. R. C. S.—When there has been no obvious injury to the scalp or the skull, and the injury is of parts within the closed cavity of the cranium, there may be great difficulty in diagnosis and decision as to treatment. The following should be looked for most carefully: hæmatoma in the occipital region, bleeding or escape of cerebrospinal fluid from the ear, bleeding from the mouth or nose, subconjunctival hæmorrhage, vomiting of blood, signs of paralysis, however trifling, in the face or limbs, inequality of the pupils, changes in the character of the unconsciousness, and convulsive seizures. The author reports three cases of head injury.

In the first case, that of a boy aged fifteen years, who had been struck in the occipital region, there was temporary blindness in the left side of both visual fields, implying a loss of function in the right half of each retina. This blindness disappeared within four months after the injury. In the second case, a large hæmatoma in the right frontotemporal region was incised, in the belief that the skull was fractured beneath it. But the supposed fracture was found to be the normal depression of the bone immediately behind the anterior part of the temporal crest. The third case was an example of socalled uncomplicated concussion, which the author cites to show that after all injuries of the kind the brain itself almost certainly suffers lesion. In fatal cases there are hæmorrhages, minute or large, in some part of the brain substance, and very commonly there is extravasation of blood into the arachnoid cavity.

A Series of Ten Successful Cases of Cæsarean Section. By Dr. W. J. Sinclair.—The author's article is based upon a series of ten cases of Cæsarean section, all resulting successfully for both mothers and children. He gives details of all the cases, reserving to the end some criticisms and remarks on indications and technique. The incision of the uterus is invariably to be postponed until the uterus can be drawn forward out of the abdominal wound, and an elastic tube should always be put round so as to be ready to compress the uterine vessels in case of emergency. The incision in the uterus should be sufficiently large; an added half inch or more of a clean incision is a small matter compared with laceration of the uterus or asphyxia of the fœtus. Wherever the uterine incision is made, the fundus uteri should be left free. In the author's cases the incision was made in the most obvious position; viz., the middle third in front and in the median line. A month after operation the uterus will be found to be just exactly in the position where it remains after a successful ventrofixation operation. If another pregnancy should occur, the fundus is free to rise and develop.

An Account of the Epidemic Outbreak of Arsenical Poisoning Occurring in Beer Drinkers in the North of England and the Midland Counties in 1900. By Dr. E. S. Reynolds.—The author's attention was first drawn to the subject in June, 1899, when he noticed an unusual number of cases of various skin eruptions, and later of

peripheral neuritis. Observing that the skin eruptions (herpes) occurred in the patients suffering from neuritis, he suspected arsenical poisoning, due to the beer which was the apparent cause of the multiple neuritis. Analysis of the beer confirmed this view. It is estimated that at least 2,000 persons have suffered from arsenical poisoning. The patients usually complain of burning and tingling of the hands or feet, and general malaise. Their faces are puffy and dusky, their eyes suffused and watery, and the walk is that of a patient with very sore feet. The skin lesions may be classified as follows: (*a*) Erythromelalgia. (*b*) Keratosis. (*c*) Erythemata. (*d*) Pigmentation. (*e*) Herpes zoster. (*f*) Nutritional disorders of the nails. (*g*) Loss of hair.

Sensory affections are present in all cases, varying from paræsthesia and tingling to numbness and anæsthesia, which last is, however, never complete. The motor symptoms are similar to those ordinarily found in so-called alcoholic neuritis. In many of the cases of advanced paralysis there is the peculiar mental condition commonly found in alcoholic paralysis. It may be described as a total loss of memory of time, and then of place. Any suggestion is at once accepted, however absurd. In the majority of cases there is some heart failure, limited to irritability or extending to acute dilatation. Œdema is present in about twenty-five per cent. of the cases. Just as the skin is irritated by the arsenic so the respiratory mucous membrane seems to be in its whole course; laryngitis and bronchitis are very common. In many cases digestive disturbance is the first sign of trouble.

Arsenic is almost certainly a cumulative poison, and affects the skin, the respiratory, and the digestive mucous membranes, the nerve trunks, both sensory and motor, the muscles (including the heart muscle), and the liver. The sequence of the symptoms is: (1) digestive symptoms; (2) laryngeal catarrh, bronchitis and acute skin symptoms; (3) disturbances of sensibility; and (4) motor paralysis (with pigmentation and keratosis). The course of the disease is slow; recovery does not take place for from eighteen months to two years. In most cases where death takes place, it is due to cardiac failure. The cases may be roughly divided into groups: (1) those with all symptoms fairly well marked; (2) those principally with skin lesions; (3) those principally with cardiac and hepatic lesions; and (4) those principally with paralytic lesions. The article closes with a statistical summary of all the cases personally seen by the author. Because of the affection of the heart muscle, the use of all depressing drugs (phenacetin, etc.) must be carefully avoided.

Cases of Arsenical Peripheral Neuritis. By Dr. R. J. M. Buchanan.—The author reports a series of sixteen cases of arsenical peripheral neuritis seen by him during the recent epidemic in Liverpool, and describes briefly some of the characteristic features noted in each case. He has no doubt that these cases were the outcome of arsenic in the beer used by the patients.

The Röntgen Rays and the Diagnosis of Urinary Calculi. By Dr. C. M. Mouillin.—The results obtained by Röntgen photographs may, so far as calculi are concerned, be regarded as final and conclusive for all ordinary cases. The Röntgen rays give definite and accurate information, not only as to the existence of a calculus, but as to its size, its exact position, and, what is even more important, whether there are other calculi present. There need now be no fear of operating upon the wrong organ or upon the wrong side. The best results are obtained with calculi composed of oxalate of lime. In many instances Röntgen photography is the only method by which the presence of a fixed calculus can be ascertained. When the stone has left the kidney and is passing down the ureter the condition of the patient is, as a rule, such that quiet examination is not possible. Under ordinary circumstances, the Röntgen rays are not required in cases of vesical calculus. But the only indication of a calculus may be an obstinate cystitis, and whenever this persistence is a prominent feature in association with enlargement of the prostate, a special examination should be made without further delay. And with the Röntgen rays the question can be settled without difficulty. There is no need for any exceptional apparatus. As a rule, the patient should be placed in a recumbent position, with the plate supported by a stout board beneath him, and an aluminum screen between the body and the tube. One of the chief difficulties is the patient's breathing, as the kidneys move up and down during even tranquil respiration. A firm abdominal bandage will often remedy this. Unless everything is certain a second examination should be made after a few days' interval.

Urotropine as a Urinary Antiseptic. By P. J. Cammidge, M. R. C. S.—Urotropine, when administered to healthy individuals, has no diuretic action nor does it cause any appreciable change in the chemical constituents of the urine. A curious effect produced is the sensation of formication, appearing on the fourth day, and followed in two days by an intense, red, measly rash. Both quickly disappear when the administration of the drug is stopped. Urotropine appears in the urine within ten minutes after the first dose is taken.

The author has investigated its action, both bacteriologically and chemically, and has reached the following conclusions: 1. Urotropine alone may, by prolonged heating, be made to yield formaldehyde, but this decomposition does not take place at body temperature. 2. An alkaline solution of urotropine may be similarly decomposed, but the body temperature is not sufficient to cause the change. 3. Dilute acids quickly decompose urotropine. 4. Acid salts—*e. g.*, of the urine—liberate formaldehyde from urotropine on boiling but not at 37° C. 5. The acid urine of a person taking thirty grains of urotropine a day does not contain formaldehyde.

As a urinary antiseptic, urotropine appears to be much superior to those usually employed, when the acidity of the urine is insured. By the systematic use of urotropine in all cases of typhoid fever the great danger of the spread of the infection from the urine may be entirely avoided.

Infective Parotiditis after Abdominal Section. By Dr. W. Elder.—The author reports a case of double infective parotiditis following an operation for appendicitis. Such cases have been known to occur, but in this instance there was a complicating circumstance in that the patient's brother had mumps forty-nine days previously.

A Case of Gangrene of the Penis. By G. A. Clarkson, F. R. C. S.—The author reports a case of gangrene of the penis occurring in a man aged fifty-one years, in which the determining factors were a feeble and dilated heart, extensive atheroma of the arteries, and possibly inoculation of some part of the urethra with infective organisms. The whole organ appeared to be in a condition of ordinary moist gangrene. Owing to the patient's general condition no operation was possible, and he died

three days after the first appearance of the gangrene. It seems hardly credible that an organ with the anatomical peculiarities of the penis could be the subject of dry gangrene, yet such has occurred.

British Medical Journal, January 19, 1901.

Malignant Diseases of the Female Genitalia. By Dr. T. Oliver.—*Malignant Disease of the Vulva.*—This may be epithelioma or sarcoma. It takes the form of ulceration or flattened nodular growths. It is to be distinguished from caruncle of the meatus urinarius, hard chancre, and soft venereal sore. The prognosis is bad and the author has never seen removal of the growth by surgical procedure do any good.

Malignant Disease of the Vagina.—Usually this canal is implicated secondarily through extension of the disease from the rectum, the bladder, or the uterus. It may be primary, in which case there will be felt an irregularly ulcerated and thickened mass in either the anterior or posterior wall of the vagina. Any surgical treatment of the nature of excision would be so severe that the result of the operation would probably be worse than the disease.

Malignant Disease of the Uterus.—Carcinomata originate under the flattened epithelium lining the vaginal face of the cervix, or in the columnar epithelial cells of the tubular glands of the cervical canal. Cancer of the uterus is conveniently divided into cancer of the cervix and of the body. Once the disease has taken a thorough hold upon the tissues of the cervix these may ulcerate. Ulceration and growth usually go on together, accompanied by considerable hardening and thickening around the margins; or the growth may sprout and form a cauliflower excrescence. In the cervical canal the disease proceeds stealthily and may remain undetected for a time. As the disease progresses, the canal widens, the rim of the os becoming thick, hard, and irregular. In cancer of the body of the uterus, the disease originates either in the ordinary epithelial cells or in the cells of the tubular glands (adenoma malignum).

There is no one symptom that is pathognomic of cancer. Irregular hæmorrhage or a thin, offensive, watery discharge are very frequent. The bleeding may appear only after coitus. The recurrence of bleeding in women who have passed the climacteric is most suggestive, and a thorough examination is imperatively called for. The treatment resolves itself into cases that are (1) unsuited, and (2) suitable, for operation. Where the disease is so far advanced that the uterus is fixed, where hæmorrhage is profuse and the discharges foul, scraping the ulcer and breaking down the brittle tissue and the application of a fairly strong solution of zinc chloride will relieve the symptoms. The author has tried Coley's coccal injections, but has never seen them cure a case.

Cases where the disease is limited to a very small part of the cervix, or if in the uterus where the womb is freely movable, with no indication in either instance of the disease having extended beyond the organ itself, are those suitable for operation. All things considered, the author is disposed to recommend total extirpation as against amputation.

Diagnosis in Cancer of the Body of the Womb. By Dr. M. Handfield-Jones.—Hæmorrhage is always the first symptom of cancer of the body of the uterus, but bleeding may also be due to some menopausal irregularity, to socalled senile endometritis, or to commencing adenoma. Apart from the consideration of the degree of malignancy in any given case, there is at the same time the important question whether the growth, originally benign in character, has become affected with malignant degeneration.

The author concludes: 1. That in cases of corporeal cancer there is a stage of benign adenoma. 2. Uterine scrapings are not perfectly reliable, owing to the tissue being only superficial, and the deep part of the gland not being obtained. Later scrapings, when the disease is more advanced, are therefore more reliable. 3. Clinical signs are more valuable than microscopical evidence. 4. The degree of malignancy varies much, and the disease may run a very slow course. 5. Rapid increase in the size of the body of the womb is the most valuable sign in determining need for extirpation of the whole organ.

Spoon-shaped Indentations in the Skulls of the Newborn. By J. M. M. Kerr, M. B.—Indentations of the fœtal skull may be either spoon-shaped or furrow-shaped. The two varieties occur with about equal frequency. The furrow-shaped variety is much less serious, and seldom gives rise to much immediate trouble. The spoon-shaped indentations are situated usually on one or other of the parietal or frontal bones in the neighborhood of the anterior fontanelle. The accident, with few exceptions, occurs where there is a deformity of the maternal pelvis—generally the flat rhachitic pelvis. In the majority of the cases, extraction has been completed by traction on the head or breech. The indentation is usually caused by the head being pressed against the projecting sacral promontory. Defective ossification of the fœtal skull certainly predisposes to the accident. It is very doubtful if spoon-shaped depressions are ever due to forceps. The prognosis is not unfavorable. In the majority of cases the indentations disappear within a week and produce no ill-effects later. In other cases, although the child lives for days, weeks, or even months, there are very marked local and general disturbances. Such cases usually terminate fatally. And there is yet another group of cases where the child is born dead, or so deeply asphyxiated that if the indentation is not immediately relieved, death will certainly result. For the immediate relief of depressions of the fœtal skull many devices have been tried and various operations performed. The author cites three cases where spoon-shaped depressions in the fœtal skull were immediately relieved by forcible antero-posterior compression of the head, the depressions springing out with a snap in two of the cases.

Impacted and Displaced Gravid Uterus with Fibroid. By Dr. N. MacLeod.—An impacted, retroverted, or retroflexed gravid uterus, in which gestation is prolonged to term, is certainly an uncommon occurrence. The author reports the case of a woman aged thirty-four years, where gestation had taken place in a retroverted uterus with a large intramural fibroid, and had proceeded to term. A Cæsarean section was performed and the child removed alive, but it died five hours later. That part of the uterine wall containing the fibroid tumor was removed, and the patient made a good recovery. The uterus was so far retroverted that the cervix could not be felt at all, it being some three inches above the pubes. The case recorded in this paper differs from the seven cases previously reported, in the following points: (1) the nonobliteration of the cervix; (2) the impossibility of bringing the cervix into such a position as would enable delivery to take place through the vagina, and this even after control of the uterine body had been obtained through an abdominal incision; (3) delivery by Cæsarean section; (4) the presence of an intramural

fibroid, and (5) removal of the anterior uterine wall with the fibroid.

A Second Successful Case of Cæsarean Hysterectomy. By C. Campbell, M. R. C. S.—The author reports a successful case of Cæsarean section performed upon a woman aged twenty-four years. The operation chosen was a modified Porro, in which both child and uterus were removed and further pregnancies (and operations) thus prevented. In conclusion, the author expresses the hope that two successes so easily obtained may help to relegate craniotomy, the induction of premature labor, and symphysiotomy alike to the past.

Gazette hebdomadaire de médecine et de chirurgie, January 6, 1901.

Generalized, Acquired Telangeiectasis.—M. Léopold Lévi and M. Louis Delherm report such a case in a woman of thirty-three years of age, who suffered from obesity, chronic nephritis, and myocarditis. The disease is more common in women than in men, and may appear at any age. The infectious diseases, including syphilis, as well as the chronic diseases, may be forerunners, and persons who are "nervous" or suffering from nervous diseases seem to be subject to it. The telangeiectatic spots may appear as macules or in maculopapular form, discrete or confluent; they may be of reticular form or pseudo-erythematous. The areas may be few or many. The spots disappear upon pressure—a pathognomic sign.

Lyon médical, December 30, 1900.

Acute Tuberculous Appendicitis.—M. Maurice Patel reports the case of a man thirty-six years of age who was suddenly seized with great abdominal pain without assignable cause, which immediately became general. He manifested all the symptoms of an acute appendicular inflammation, with a general peritonitis. The appendix was found with difficulty at the time of operation, and foul-smelling pus was simultaneously evacuated. Microscopic examination of the appendix disclosed the undoubted tuberculous infection. The author reports a second case of recurrent appendicitis in a woman who gave a history of a former pleurisy and former hæmoptyses. Macroscopically, the appendix appeared to be tuberculous, but microscopic examination showed it to be the seat of a simple inflammatory process. The author lays stress upon the fact that microscopic examination alone can determine the nature of an appendicular inflammation. He says that a form of acute tuberculous appendicular inflammation exists which is a localization of a general infection, and which can be accompanied by peritoneal irritation as severe as that seen in perforating appendicitis. Surgical measures are indicated for the relief of the condition.

Physiological Action, Bacteriology and Therapeutics of Ozone. By M. H. Bordier.

Choice of Accumulators in Electrotherapy. By M. Chanoz.

Presse médicale, December 29, 1900.

Vincent's Angina.—M. Maurice Letulle reviews the bacteriological findings in cases of Vincent's angina (also described as "ulcerative chancriform amygdalitis," "acute ulcero-membranous angina," and "acute ulcerative lacuna amygdalitis"). The fusiform spirilla found in these cases are also present in other diseases of the mouth and tonsil, and the spirochætæ described as causative agents, are sometimes absent. While the author agrees that the condition is one which must be regarded as a pathological entity, he does not believe its causative factor has yet been demonstrated.

Calcified Subcutaneous Hygromata and Granulomata.—M. G. Milian says that these growths appear insidiously as painful swellings slowly increasing in size. The tumor is soft, fluctuating, and does not involve the skin. A yellowish discoloration can sometimes be seen through the skin above the tumor which is movable upon the underlying tissues, and is not adherent to the tendons or muscles. If the muscle is involved, it often becomes painfully contracted. The degree of consistence varies with the amount of calcareous matter contained. If the tumor is opened, a viscid fluid escapes, of whitish or yellowish color or of chocolate color if blood is mixed with the fluid. The fluid holds in suspension granules of yellowish calcareous substance. The process may remain localized or become general. The tumors may become spontaneously healed or may ulcerate, or they may produce trophic changes in the skin and may cause muscular atrophy. The author goes minutely into the pathological changes involved by these growths. The only treatment consists in extirpation.

Centralblatt für Gynäkologie, December 29, 1900.

Abdominal Total Extirpation of the Vagina.—Dr. Ernst Wertheim reports two cases in which the vagina was totally removed by the abdominal route, in the first instance because of carcinomatous involvement with the uterus, in the second because of a very friable epithelioma of the cervix, which had also involved the vagina. The author recommends the procedure because the field of operation is completely visible, and because the parametric connective tissue may be simultaneously removed. The ureters are exposed and thus prevented from being injured. Hæmostasis is easy with good assistance. The operation also permits complete abdominal closure of the peritonæum.

Total Abdominal Hysterectomy for Fibroids. By Dr. H. A. von Guérard.

Lactosalpinx with Twisted Pedicle. By Dr. J. Harpöth.

Centralblatt für Chirurgie, January 5, 1901.

Treatment of Shortening after Leg Fractures.—Dr. N. Kaefer says the three methods in use are: (1) Exact reposition under narcosis, by means of plaster; (2) extension by weights, and (3) by the elastic apparatus of von Eiselsberg, by which the parts, after partial enclosure in plaster of Paris, are subjected to a constant tug by means of heavy elastic bands secured in a movable metal frame. The author describes a modification of his own of the latter principle, which works by means of a screw attached to two plates.

Treatment of Patellar Fractures. By Dr. A. Wiener.

Wiener klinische Rundschau, January 6, 1901.

Tabes and Diabetes Mellitus.—Professor J. Pal reports a case of locomotor ataxia, the patient having simultaneously a diabetes mellitus. Pal says that the circumstance is either purely a coincidence or that the two diseases rest upon a common basis. He thinks the latter may be the case, as follows:

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                Syphilis
                |      |
Syphilitic endarteritis  Locomotor ataxia
          |
   Diabetes mellitus
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He thinks that tabes stands in the same relation to diabetes as to aortic insufficiency, from which many patients with locomotor ataxia suffer.

Patellar Reflex after Supralumbar Horizontal Division of the Spinal Cord. By Dr. L. Bruno. (*To be continued.*)

Psychical Epilepsy Cured by Operation.—Dr. Alexander Pilcz reports such a case. (Those interested should consult the original article.)

Riforma medica, December 24, 1900.

Diffuse Subscutaneous Emphysema in a Case of Acute Melancholia. By Dr. Vitige Tirelli.—The patient was a young man aged twenty-one years, who was affected with melancholia, accompanied by acute attacks of maniacal excitement. After a particularly severe attack of this kind a diffuse subcutaneous emphysema was noticed, especially on the cheeks, somewhat less marked on the neck and back. Crepitus and small bullæ were discovered along the course of the right femoral artery. The ribs were sound and there was no trace of any thoracic lesion. After another attack of mania, the emphysema around the neck increased, and large bullæ appeared here and there at the upper part of the chest. The nose, the forehead, the scalp, and the ears were free from emphysema. No œdema was present in the affected parts; there was no dyspnœa; swallowing and urination were free. On the following day the emphysema diminished to a certain extent, and two days later it disappeared almost entirely, while the mental condition remained the same. The patient died about a month later, and the autopsy showed the presence of fresh adhesions in the upper part of the pleura. The author thinks that these adhesions offered a place of lesser resistance, and that the lung may have given way at some point opposite the adhesions, the air thus spreading under the skin.

Vratch, December 9 (O. S. 21), 1900.

Concerning the Cryoscopic Method of Examination as Applied to the Testing of Pharmaceutical Preparations. By Dr. A. v. Poehl.—An account of the possibilities of cryoscopy, or the art of determining the freezing-point of a solution or mixture, in the examination of extracts of drugs, of mineral waters, etc.

Self-intoxication as a Result of Fatigue of Nerve and Muscle. Organotherapy. By Dr. A. v. Poehl.—The author has examined the urines of race-riders on bicycles and found that over-exertion is always accompanied by a certain degree of self-intoxication. He found that the relation of the nitrogen of the urea to the total nitrogen of the urine—the so-called coefficient of oxidation—was diminished; that the proportion of uric acid to that of phosphoric acid was markedly increased; that the proportion of phosphoric acid which existed as sodium phosphate to the total amount of phosphoric acid was increased, and that the absolute osmotic pressure of the urine fell considerably. These chemical facts show that the energy of oxidation is diminished by fatigue, and that in over-exertion the alkalinity of the tissue-fluids is diminished, the quantity of intermediate products containing nitrogen is increased, while the osmotic pressure of the body-fluids is lowered, and their metabolism retarded. The author also found in bicyclists who participated in a recent long-distance race from St. Petersburg to Moscow, congestion of the kidneys, and not only hyaline, but also finely granular casts. He attributes these effects of fatigue on the kidneys to self-intoxication due to an enfeebled internal oxidation. The author also investigated the urines of a number of young men engaged in serious studies and has found that mental exertion produces very similar effects on the metabolism and results in self-intoxication. He found, however, that in these cases, there were, in addition to the changes detailed under muscular fatigue, a relative diminution of the chlorides (as compared with the amount of urea) and a relative increase of the sulphuric acids. The first is a sign which accompanies anæmia; the second indicates derangements in the process of fermentation in the digestive tract. The treatment of both mental and physical over-exertion should therefore aim to increase the internal respiration and the alkalinity of the body-fluids. One of the organic extracts, spermine, has the property of markedly increasing the alkalinity of the blood, and is therefore indicated in these conditions. The author's clinical experience confirms these theoretical considerations.

Secondary Simple Pneumothorax in a Case of Emphysema. By. Dr. D. I. Vieriujsky.

The Significance of Injuries in Public Life, especially in the City of Moscow. By Dr. A. P. Levitzky

Dublin Journal of Medical Science, December, 1900.

Fractures of the Pelvis. By E. H. Bennett, M. D., F. R. C. S. I.—In a paper read in the Section of Pathology of the Royal Academy of Medicine in Ireland the author showed pathological specimens of extensive fractures of the pelvis to prove the possibility of recovery after most severe injuries of that region.

Porro's Operation (Extraperitoneal)—A Successful Case for Ruptured Uterus, Complicated by a Large Myoma and a Five-and-a-half-months' Pregnancy. By George Cole-Baker, M. D.

The Operative Treatment of Cleft Palate by a New Procedure. By Edward H. Taylor, M. D., B. Ch., F. R. C. S.—The author describes the operation as follows:

The patient is placed on a low table, the head well thrown back, and the vertex looking directly downward—Rose's position—and chloroform is administered. Smith's gag is then introduced into the mouth, and the edges of the cleft pared freely. The blood which quickly fills the mouth is removed by means of a suction apparatus, somewhat similar to that recommended by Mr. Robert H. Woods in connection with extirpation of the larynx (Excision of Right Half of Larynx, by Mr. R. H. Woods. *Transactions of the Royal Academy of Medicine in Ireland,* Vol. xiv, 1896). Throughout the operation, sponges are dispensed with so far as possible, pressure with the finger on the bleeding point proving sufficient. A curved incision is now made on each side close to the alveolar margin of the palate, commencing posteriorly inside the last molar tooth, and curving round anteriorly to terminate in the cleft, and arranged at the same time in such a way that sufficient tissue is left immediately behind the incisor teeth to hold a suture subsequently. With this incision the posterior palatine artery is retained in the flap. The latter is reflected by means of a rugine, an instrument which enables one to lift the muco-periosteal flaps very rapidly and without laceration or serious damage. I regard the various forms of raspatory used for detaching the soft tissues from the palate as quite unsuited for the purpose. Some are very narrow, with sharp-pointed tips, and consequently are in the highest degree calculated to damage the tissues which they are meant to detach. The rugine, on the other hand, which I employ has a fairly broad anterior extremity, and the inclination of its free edge is very abrupt, forming an angle of about 60° with the horizontal. It is therefore in no sense of the term a cutting instrument; but, while it insures the minimum of damage to the palate tissues, it separates the flaps with

the utmost facility. The next step in the operation is to sever the connections between the hard and soft palate on their nasal aspects. This step is much facilitated by turning back the flaps which have been already detached from the hard palate, and a knife or curved scissors may be employed for the purpose.

In all cases hæmorrhage is to be avoided as much as possible. Loss of blood is badly borne by young children, and may be followed by serious consequences. Free hæmorrhage, too, floods the mouth, and greatly obscures the confined field of operation. It can be obviated best by making the incisions as recommended; and when the flaps are being separated any undue bleeding may be easily controlled by pressing these firmly against the bony palate and waiting for a few seconds. Therefore, too great haste at this stage of the operation is to be avoided, and blood and saliva should be removed from the mouth by means of suction rather than by vigorous sponging.

The author usually employs silkworm-gut sutures. In introducing them it will probably be most convenient to commence behind and come forward. Small *curved needles passed with a needle holder* may be used; but, if preferred, a curved needle in a handle may be substituted for them. It is very striking to observe the facility afforded by the mobility of the flaps in carrying out this stage of the operation. At the anterior extremity of the cleft the suture should be passed through the flap from its mucous to its periosteal aspect; the free end of the suture is then carried through the gum, behind the incisor teeth in the reversed direction—viz., from its deep to its superficial aspect. This suture anchors the flap in front during the process of healing. Should it be deemed insufficient *an accessory suture* passed further out on each side will afford ample security. Difficulty may be experienced in bringing the flaps into apposition at the level of the hard and soft palate, and seeing how unfavorable a high degree of tension is for securing good and rapid union it will be well, following the advice of Dieffenbach, to make an antero-posterior incision in each side, about half an inch in length, at the inner side of the hamular process. These incisions, in addition to relieving tension, secure rest for the palate, owing to the division of the fibres of the levator and tensor palati muscles; and any harmful traction influence which these might exert is therefore obviated.

The author claims for this operation over others: (1) Greater ease and rapidity; (2) absence of troublesome hæmorrhage; (3) security of blood supply; (4) ease of introduction of sutures, and (5) simplicity of postoperative details.

The Relation of Veterinary Science to Human Medicine. By Sir Christopher J. Nixon, M. D., LL. D.

Letters to the Editor.

DYSPEPTIC ASTHMA AND DISPLACEMENT OF ABDOMINAL ORGANS.

113 Hancock Street, Brooklyn,
January 14. 1901.

To the Editor of the New York Medical Journal:

Sir: I have read, with great pleasure and interest, in your issue of January 12th, the article by Dr. Frank H. Murdoch, entitled Dyspeptic Asthma. It is a condition to which little reference, at least so far as I have observed, has been made outside the text-books. I have seen cases in which the trouble went even so far as to produce syncope, due simply to over-distention and pressure effects. My object, however, in writing springs from the belief that in many of these cases the symptoms are, in a measure, *reflex* in origin, due to a low position of one or both kidneys and the stomach or to gastroptosis alone. I have noted in Dr. Murdoch's paper that in Case I he mentions that the stomach was in normal position, also in Case II. In Cases III, IV, and V, however, he does not speak of the situation of the organ. I should like to hear if in the many cases of this nature there has not been observed a connection between *ptoses* of the various abdominal organs and this condition known as dyspeptic asthma. To my mind there is. As to the management of the trouble, I should like to suggest the application of a plaster bandage to the lower abdomen, as described by Dr. Rose in the *Post-graduate* for March, 1900, and by myself in the *Medical News* for September, 1900. This method will without doubt relieve those patients for whom a simple dietary and secretion-correcting regimen is insufficient.

H. W. Lincoln, M. D.

Book Notices.

The Care of the Consumptive. A Consideration of the Scientific Use of Natural Therapeutic Agencies in the Prevention and Cure of Consumption, together with a Chapter on Colorado as a Resort for Invalids. By Charles Fox Gardiner, M. D., Non-resident Fellow of the New York Academy of Medicine, Member of the American Climatological Association. New York and London: G. P. Putnam's Sons, 1900.

The author has given us in this little work a *résumé* of the modern treatment of pulmonary tuberculosis. He emphasizes the personal hygiene of the patient, the importance of out-door life, of suitable clothing, of good, nutritious food, and of proper occupation and exercise. There is a very readable chapter on the care of the children of consumptives, with special reference to their physical development and attention during such illnesses as are likely to leave pulmonary tuberculosis as a sequel. The closing part of the book is devoted to a rehearsal of the advantages of Colorado as a resort for tuberculous subjects.

Obstetrics. A Manual for Students and Practitioners. By David James Evans, M. D., Lecturer on Obstetrics and Diseases of Infancy, McGill University, Montreal, etc. Series Edited by Bern B. Gallaudet, M. D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, etc. Illustrated with One Hundred and Forty-nine Engravings. Pp. 3 to 430. Philadelphia and New York: Lea Brothers & Company, 1900. [Price, $1.75.]

In this small work the author has attempted to condense obstetric data into a space consistent with clearness. He has succeeded, we think, exceptionally well. The main topics of the physiology and pathology of pregnancy, parturition, and the puerperium are touched upon, and enough is written to give a lucid understanding of the subject. The book is not intended, of course, for reference. For a brief work for the student, it answers all purposes.

Le pneumocoque et les pneumococcies. Par ADRIEN LIPPMANN, Interne des hôpitaux de Paris. Préface du Dr. DUFLOCQ, Médecin de l'Hôpital Tenon. Avec 2 figures dans le texte. Pp. 5 to 96. Paris: J. B. Baillière et fils, 1900.

IN this monograph the author has covered a large experimental and clinical field. He has considered the life history of the Fränkel-Weichselbaum diplococcus and its cultural and biological peculiarities. He has studied its manifestations when experimentally or clinically found in the various organs of the body, especially pneumonia, the arthritides, peritonitis, and cerebrospinal meningitis. He believes that, judging from published evidence and his own observations, much may be expected in a therapeutic way from serum treatment when the pneumococcus is the invading micro-organism.

Essentials of Histology. By LOUIS LEROY, B. S., M. D., Professor of Histology and Pathology in Vanderbilt University, Medical and Dental Department; City Bacteriologist to Nashville, Tenn., etc. Arranged with Questions following each Chapter. With Seventy-two Illustrations. Philadelphia: W. B. Saunders & Company, 1900.

THIS compend embraces the essential points in the histological diagnosis of tissues. It may be of use to students or graduates who wish to refresh their minds on the subject; but it is very superficial and the illustrations are essentially crude.

A Text-book of the Diseases of Women. By HENRY J. GARRIGUES, A. M., M. D., Gynæcologist to St. Mark's Hospital, New York City, etc. With 367 Illustrations. Third Edition, thoroughly Revised. Pp. 7 to 756. Philadelphia: W. B. Saunders & Company, 1900. [Price, $4.50.]

IT is no doubt because it is such an eminently practical text-book that Dr. Garrigues's book on diseases of women has entered upon its third edition within six years from the date of its original publication. In the present edition we find many new illustrations and a greatly increased amount of very readable text, but no deviations from the cardinal principles of gynæcological treatment which the author laid down in his former editions. In no spirit of fault-finding, we offer the suggestion that in some one of the numerous editions of this work which we hope will follow this one the author limit his description of operations to the *one* which he would have his student or reader perform, rather than give the entire list of procedures for each condition. Dr. Garrigues's book is a capital exposition of modern gynæcology and is deservedly popular.

Therapeutisches Vademecum der Haut- und Geschlechtskrankheiten für praktische Aerzte. Von Dr. REINHOLD LEDERMANN, Specialarzt für Hautkrankheiten in Berlin. Zweite durchgesehene und erweiterte Auflage. Berlin: Oscar Coblentz, 1901.

THE first edition of this work appears to have met with favor, for in two years the second revised edition has appeared. The first part of the work, and the larger part, is devoted to the treatment of the diseases of the skin, and many prescriptions are given for the treatment of these ailments and their complications. The latter part of the book is given over to a consideration of the venereal diseases. The author favors the newer albuminous silver compounds for the treatment of gonorrhœa, while no new suggestions are offered for the therapeutics of syphilis.

BOOKS, ETC., RECEIVED.

Encyclopædia Medica. Under the General Editorship of Chalmers Watson, M. B., M. R. C. P. E. Volume V, Herpes to Jaws, pp. vi-536. Vol. VI, Joints to Liver, pp. vi-562. New York: Longmans, Green & Company, 1900.

Medico-surgical Aspects of the Spanish-American War. By Dr. Nicholas Senn, Lieutenant-Colonel and Chief Surgeon, United States Volunteers, etc. Pp. 10 to 379. Chicago: American Medical Association Press, 1900.

Flesh Foods, with Methods for their Chemical, Microscopical, and Bacteriological Examination. A Practical Hand-book for Medical Men, Analysts, Inspectors, and others. By C. Ainsworth Mitchell, B. A. (Oxon.), F. I. C., F. C. S., Member of Council, Society of Public Analysts. With Illustrations and a Colored Plate. Pp. xv-336. London: Charles Griffin & Company. Philadelphia: J. B. Lippincott Company, 1900.

Physical Diagnosis in Obstetrics. A Guide in Antepartum, Partum, and Postpartum Examinations for the Use of Physicians and Undergraduates. By Edward A. Ayers, M. D., Professor of Obstetrics in the New York Polyclinic, etc. With Illustrations. Pp. viii-276. New York: E. B. Treat & Company, 1900. [Price, $2.]

Diseases of the Heart: Their Diagnosis and Treatment. By Albert Abrams, A. M., M. D. (Heidelberg), F. R. M. S., Consulting Physician for Diseases of the Chest, Mount Zion Hospital and the French Hospital, San Francisco. Pp. 172. Chicago: G. P. Engelhard & Company, 1901. [Price, $1.]

Urinary Diagnosis and Treatment. By John W. Wainwright, M. D., Member of the American Medical Association, etc. Pp. 140. Chicago: G. P. Engelhard & Company, 1901. [Price, $1.]

Rudiments of Modern Medical Electricity. Arranged in the Form of Questions and Answers prepared especially for Students of Medicine. By S. H. Monell, M. D., Professor of Static Electricity in the International Correspondence Schools, etc. Pp. 5 to 165. New York: Edward R. Pelton, 1900. [Price, $1.]

Transactions of the American Orthopædic Association. Fourteenth Session, held in Washington, May 1, 2, and 3, 1900. Volume XIII.

New Inventions, etc.

A TURBINATE-CUTTING FORCEPS.

BY GEORGE C. GAGE, M. D.,

NEW YORK.

IN cases of nasal obstruction due to hypertrophies of the turbinate bones and soft tissues, with the sequel of deficient and unequal air pressure in the middle ear, the arrest of treatment through the difficulty, and in many cases the impossible application, of sufficient air pressure, either by the use of the Politzer method or the

Eustachian catheter, also for the treatment of the many nasal reflexes due to such hypertrophies of the turbinates, we find it necessary to have recourse to operative measures for the removal of such redundancy of tissues by the use of some instrument which will not splinter, break, or leave spicula of bone to cause future trouble, or, in other words, "the remedy (in its results) should not be worse than the disease" treated.

In clinical work we meet more of these obstructive growths, especially of bone enlargement, in adults, who, fortunately, have in many cases wide and open alæ, allowing of the use of a larger and stronger forceps than could be used in childhood. A narrow-bladed cutting

forceps like the one here figured will permit the points to enter on each side of the turbinate bone, with the cutting edge uppermost, blades concave and fenestrated, with an open space at the bottom to allow for the yielding of soft tissues, while the upper edge makes a clean cut through the bone.

47 West Forty-ninth Street.

Miscellany.

The Treatment of the Proteids of Cow's Milk.—Dr. T. M. Rotch (*Journal of the Boston Society of Medical Sciences,* November 20, 1900) says that for a long time we have known that the chief elements that we have to deal with in the composition of the total proteids in woman's and in cow's milk are caseinogen and lactalbumin, yet the casein resulting from the coagulation of the caseinogen in both milks differs so markedly in its size and consistency, and the cow's coagulum causes so much more gastric disturbance than does the woman's, that it has become a fruitful source of discouragement to those who are endeavoring to solve the problem of substitute infant feeding.

The total proteid of cow's milk is about three or four times as great as in woman's milk, and a great advance was made in the management of the total proteid in cow's milk when by means of exact methods we were enabled to order and obtain for the special infant the special percentage of total proteid indicated by the special conditions of the case. In this way the total proteid percentage in the infant's food could be made to correspond to the various total proteid percentages known to occur in woman's milk.

This advance was all the more marked since in previous years it had proved to be almost impossible to obtain by a home modification the exact proteid percentage that might happen to be desired. This inaccuracy arose chiefly from the necessity of using creams with different fat percentages to obtain a variety of proteid percentages, making a somewhat complex problem, and one which resulted in the infant seldom getting the proteid percentage that the physician supposed he was providing. For this reason clinical investigations and results have been very inaccurate and misleading. Even when we were enabled to provide a food with the exact proteid percentage demanded, there was still a marked difference between the power of a special infant to digest exactly the same total proteid provided from woman's milk and from cow's milk, respectively, the former being far more digestible for the average infant than the latter.

In Europe the use of cereals, to make the coagulum of the cow's milk proteid finer, is almost universal, and in this country many physicians interested in the subject uphold this use. Much more has been claimed, however, for cereal dilution than is warranted by the later chemical and physiological investigations of White, especially in regard to the use of dextrinized cereals in place of a simple decoction of starch as in barley water.

This mechanical method of rendering the coagulum finer is crude and does not accomplish the desired result of making the casein of cow's milk correspond to that of woman's milk; it also necessitates the introduction of a foreign element, starch, into the food at a period of life when it is most objectionable. It has also been proved clearly by White that when the cereal diluent is dextrinized no greater effect is produced on the coagulum mechanically than when plain water is used.

The reason that some further treatment of the total proteid of cow's milk than that by mechanical division or peptinizing has been found necessary, is evident when we consider the analysis of woman's milk proteid in comparison with cow's.

According to König's analysis, the total proteid of woman's milk is shown to consist of two thirds lactalbumin and one third caseinogen, while in cow's milk the relative proportions are one sixth lactalbumin and five sixths caseinogen.

While, therefore, in the early period of its existence the human infant has its proteid digestion adapted to a high percentage of lactalbumin and a low percentage of caseinogen, we have been forced until lately to provide as a food one in which the proportion of lactalbumin is very low and that of caseinogen very high. The practical result accomplished by prescribing for definite percentages of lactalbumin and caseinogen, instead of for a total proteid, is that we can now materially reduce the coagulated caseinogen to the same percentage as occurs in woman's milk and yet retain the same high total proteid percentage which we had before.

There are at present, however, only certain combinations of the fat, sugar, lactalbumin, and caseinogen which can be provided. Thus, while we can obtain with various creams any percentage of fat, sugar, and total proteids required, we cannot, when varying percentages of lactalbumin and caseinogen are required, obtain a higher total percentage of proteids than 1.25, and of this the lactalbumin percentage cannot be obtained higher than 0.75, and the caseinogen higher than 0.50.

This is owing to the fact that the lactalbumin has to be obtained from whey, in which the lactalbumin is about one per cent. We are therefore, by this advance in the accuracy of our percentage prescribing, enabled to feed infants on a very low percentage of caseinogen at a period of life when this is especially indicated, and as they grow older the total proteid percentage can be gradually increased, as it naturally would when the power of digesting cow's milk caseinogen is acquired and

the necessity for a high percentage of lactalbumin in the total proteid becomes less.

To Clean Surgical Instruments.—The *Chemist and Druggist* for December 22, 1900, publishes an abstract of the thesis of a young Dutch surgeon, Dr. Jacques H. Polak, of Amsterdam, in which are given the results of a number of experiments made by him with a view of ascertaining the reliability and rapidity of the action of various methods of sterilizing. Although the most efficacious method is undoubtedly that of boiling the instruments, preferably in a two-per-cent. soda solution in a closed vessel, there are certain objections to this method, he says, as it is apt to blunt the keen edges of knives or the sharp points of needles. He has tried absolute and dilute alcohol, carbolic acid in two- and five-per-cent. solutions, formalin in the proportion of 1 to 500 to 1 to 1,000, and spirit of soap. Solutions of mercuric chloride attack the instruments, and are therefore unsatisfactory. Professor Straub, of Amsterdam, has adopted soap spirit as a disinfecting agent for his instruments in his practice, with most satisfactory results. The experiments were made with nickel-silver awls infected with pus swarming with the staphylococcus; in some cases the awls were infected with spores of anthrax. The awls were then placed in the disinfecting solution for periods varying from one minute to three hours, and subsequently inserted in agar and incubated. Dr. Polak got the best results with spirit of soap, which killed within the space of fifteen minutes the *Staphylococcus pyogenes* dried on the instruments. The spirit has, moreover, a valuable mechanical action, as it causes the pus to swell and thereby become more readily detached. Dr. Polak recommends the combined chemical and mechanical treatment of the instruments after each operation by first placing them in the soap spirit for a quarter of an hour, and then rubbing them for not less than half a minute with a cloth saturated with spirit of soap. It is desirable to place the instruments again in the soap-bath for a quarter of an hour immediately before an operation, and either to dry them with a sterilized linen cloth, or to remove the soap by means of a solution of alcohol (fifty per cent.), or a sterilized solution of boric acid. Dr. Polak used two varieties of spirit of soap, one consisting of:

Potash soap.	20	parts by weight;
Absolute alcohol.	29	"
Oil of lavender.	0.2	"
Water.	50.8	"

This is the Dutch *Pharmacopœia* formula; the other is the following, according to the German *Pharmacopœia:*

Potash soap.	15.4	parts by weight;
Absolute alcohol.	42.8	"
Water.	41.8	"

He found practically no difference in the action between them. Rectified spirit will, of course, suffice.

On the Physician's Reading.—At the dedication of the new medical library at Boston, Dr. Weir Mitchell, in a letter to the librarian, said:

"I see as I grow old—or may I say older?—how few are the young medical men whose tastes are scholarly, and who, like Holmes and our own lamented Da Costa, are familiar with the fathers and find pleasure in the old books—the quaint books, the sense and the vagaries of the past. Without a great library few can afford these intellectual playgrounds, or, indeed, acquire the material for such indulgence.

"May your new building and growing wealth of books tempt many into paths where some of us have found unlooked-for treasuries of interest, and even of practical value; for, indeed, the dying century did not invent common sense, and genius is of every age."

The decay of scholarly tastes among physicians is undoubtedly much to be regretted; but even in the ingestion of mental, as of material pabulum, a proper selection of food, and a healthy condition of the digestive organs, cerebral as well as abdominal, is needed, as was propounded in some remarks at the same meeting by Professor Osler with his enviable aptness of speech. Professor Osler said:

"But when one considers the unending making of books, who does not sigh for the happy days of that thrice happy Sir William Browne whose pocket library sufficed for his life's needs; drawing from a Greek testament his divinity, from the aphorisms of Hippocrates his medicine, and from an Elzevir Horace his good sense and vivacity. There should be in connection with every library a corps of instructors in the art of reading, who would, as a labor of love, teach the young idea how to read. An old writer says that there are four sorts of readers: 'Sponges which attract all without distinguishing; Howre-glasses which receive and powre out as fast; Bagges which only retain the dregges of the spices and let the wine escape, and Sives which retaine the best onely.' A man wastes a great many years before he reaches the 'sive' stage."

Erotic Hallucinations.—Dr. E. Bellamy (*Journal de médecine de Bordeaux,* January 6th), in a Bordeaux thesis, says: Erotic hallucinations constitute a phenomenon, as frequent as important, of the neuroses and psychoses. They may be divided into (*a*) *genital,* (*b*) *extragenital,* according as they are occupied with the genital sense itself or with other senses.

The first class is manifested by all kinds of particular sensations, from the impression of contact or of the slightest friction up to the most acute orgasms of normal or abnormal sexual acts, the most horrible pains of violent sadism, or the most complete symptoms of pregnancy and parturition. The second class is manifested simply by sensations visual, olfactory, gustatory, or tactile, of an erotic character.

Erotic hallucinations are found especially in hysteria, in systematized insanities, the delirium of intoxication, and among the degenerate.

In *hysteria,* they are as often extragenital as genital. The sense of sight is most frequently affected, but it is seldom that there is not some affection of other senses. The hallucinations are produced in the dream state or in the subconscious condition, either by day or by night. Frequently painful, they may be accompanied by voluptuous sensations. Related by the subjects with a luxuriance, a precision of detail, capable of investing them with an air of reality, they have often served as a starting-point for self-accusation or calumnious denunciation, *e. g.*, the witches and sorcerers of the middle ages. They have a quasi-infectious property of communicating themselves.

In the *systematized insanities,* erotic hallucinations are capable of affecting all the senses. Those of sight are the most rare and imply a basis of a hysteropathic or alcoholic character. Those of smell, of taste, and especially of hearing, are the most frequent and varied. There are also genital hallucinations, properly socalled, in which all possible sensations may be encountered.

The erotic hallucinations of the delirium of persecution, the type of systematized insanities, are specially painful, and induce, on the part of the subject, in the genital form, characteristic defensive actions, such as crossing of the thighs, covering of the sexual organs, stuffing of the vagina with rags, paper, etc.

The subjects of *toxic delirium,* particularly alcoholics, have frequently erotic hallucinations; visual hallucinations, colored, mobile, multiple, most often tending to ideas of jealousy, *e. g.,* the vision of a wife or a mistress in indecent postures, in the arms of a lover, etc.

As to the *degenerates,* they are rarely subjects of hallucination. An exception must be made of the mystics, whose delirium, like that of the hysterics, with which it may have much in common, is accompanied by a great number of cases of erotic hallucinations. These hallucinations, essentially of dream-character, are genital or extragenital, and either voluptuous or painful, respectively, regarded as a mark of divine favor or torture, according as they are attributed to celestial or diabolic agency.

Syphilis in Arabia.—Dr. D. A. Zwightman Van Noppen (*Medical Brief,* January), when at Djeddah, a city of Arabia, on the Red Sea, inquired into the native Arabian treatment of syphilis, which is prevalent in the country. In the Arabian language it is called El Adon (the great foe), or Mord-el-Rébir (the big evil), or Mord-Chine (the great nuisance). The treatment, after the Arabic prescriptions, is as follows: 1. A leech is fried to ashes in a new earthen pot. These ashes ought to be consumed by the patient in three days. If this does not help, the patient repeats it for seven days. 2. Fumigation of red precipitate of mercury. This medicine is put in a pot with burning coal, and the patient inhales the fumes, his head covered with a *burnoe,* a towel. After that the patient is, as a rule, salivated. 3. The patient eats for seven days nothing but couscous, an Arabian food prepared from chopped meat with flour or corn, without salt, pepper, or spices. He is then packed in sheets, and has to eat in the morning and at night powdered root of sarsaparilla, mixed with corn. Further, he has to drink for three days an aqueous decoction of sarsaparilla. After that follows a régime of three days' couscous.

Fracture of Cervical Vertebræ.—At a recent meeting of the Section in Orthopædic Surgery of the New York Academy of Medicine, Dr. Reginald H. Sayre related the case of a man who had been carried home unconscious after a fall on the head and neck about two months before. On his regaining consciousness, there was paralysis of the extremities, bladder, and rectum, in which there was slow improvement after two days. As every attempt to walk increased his symptoms, he was kept in bed several weeks. A diagnosis of fracture and dislocation of the fifth and sixth cervical vertebræ was made. The diagnosis was confirmed by Röntgen pictures, of which it had been necessary to take several from different points of view. One of the negatives was taken after fastening a bandage tightly over one shoulder and under the opposite armpit so as to make a gulch in which one edge of the plate had been forced so far as it would go. The pictures and a brace were exhibited. The latter consisted of a leather and steel collar attached to posterior steel rods and a pelvic belt. The head and neck would be thus fixed until consolidation was assured, the brace being capable of easy modification from time to time as the patient improved. The speaker recalled an almost exact counterpart in a case which occurred several years ago in which the application of a jacket and jury-mast had been followed by disappearance of the paralysis.

Milwaukee the Healthiest City in the United States.—The annual report of Dr. J. W. Coon, registrar of vital statistics of Milwaukee, indicates that Milwaukee is the healthiest city of its size in the United States, for though slightly larger than in 1899, the death rate last year was but 13.80 to the thousand, which is remarkable low. The number of deaths in Milwaukee last year was 4,001, while in 1899 it was 3,843. The comparative rates were 13.80 to the thousand and 13.48, respectively.

Laxness in Keeping Vital Statistics in Louisiana.—Owing to the laxness of the parish boards of health in enforcing the law regarding the keeping of vital statistics, the State of Louisiana has never been able to furnish accurate and complete statistics regarding the health of its citizens. Such information is of great value as a guide in sanitary legislation, and Dr. Edward Souchon, president of the State board of health, is making renewed efforts to enforce the law requiring proper registration of births, deaths, and marriages.

A Physician the First Volunteer in the Civil War.—Dr. Charles F. Rand, a retired physician of Washington, is said to have been the first soldier to enlist for service in the civil war. He enlisted at Batavia, N. Y., within less than ten minutes after the receipt of the telegram announcing the call for 75,000 troops by President Lincoln.

The Dignity of Medical Philanthropy in Russia.—A recent decree of the Czar makes all physicians serving in dispensaries or other institutions receiving the poor gratuitously, and all physicians who give gratuitous instruction to sisters of charity in institutions connected with the Red Cross, officers in the Imperial service with all the privileges appertaining to this rank, and places them under the control of the Minister of the Interior.

When Police May Supply Medical Aid.—Chief Devery issued an order recently empowering the police in Queens borough to employ a physician in case of accident to a citizen. The ambulance service in that borough is not such as is furnished in Manhattan and Brooklyn, where an ambulance with a surgeon normally reaches the scene of an accident within a few minutes. A call in Queens, where ambulances are widely scattered, usually is not answered in less than an hour, unless the accident happens to occur in one of the larger centres of population.

Proposed Changes in the Hospital Corps Insignia.—The war department is considering important changes in the insignia of the hospital corps of the army. The brassard now worn by the privates and non-commissioned officers of that corps is essentially the badge of the Geneva convention, and consequently cannot be considered a distinctive mark for any single corps of the army. It is felt by the officials that this badge should not be worn except under the special conditions for which it was provided. It is therefore proposed to substitute for the brassard a modified Maltese cross of emerald green cloth, with a narrow white border of the same shape as now worn by officers of the medical department. It is also proposed to have a modified Maltese cross of unburnished

gilt material as a cap ornament for enlisted men of the hospital corps.

Ichthargan, a New Silver Salt.—Aufrecht (*Deutsche medicinische Wochenschrift,* 1900; August 2, *Therapeutische Beiträge,* No. 4) studies the properties of this new silver preparation, which is supposed to be a substitute for mercuric bichloride. The disadvantage of the silver salts heretofore employed, such as argentonin, argonin, protargol, largin, etc., is that they are weak and comparatively poisonous, while nitrate of silver is too superficial in action and too irritating.

Ichthargan is stated to be free from these disadvantages. It contains 30 per cent. of silver, and in this respect approaches $AgNO_3$, which contains 63.5 per cent. of silver. Ichthargan is a compound of 15 per cent. of ichthyol and 30 per cent. of silver. It occurs as a dark-brown amorphous powder, odorless, and easily soluble in water of neutral reaction, in glycerine, in dilute alcohol; but insoluble in concentrated alcohol or ether. The aqueous solutions decompose in the presence of light, but can be kept for a long time in good condition in dark bottles. Concentrated solutions give a sediment with sodium chloride and with small quantities of albumen. The sediment dissolves in an excess of albumen. Ichthargan penetrates more deeply into the tissues than silver nitrate and the antiseptic properties of the new preparation are very strong, much stronger than those of silver nitrate in the same concentration. Experiments on animals show that ichthargan acts injuriously only when given in doses exceeding 0.1 to 0.15 per kilogramme of body weight, *i. e.,* in such quantities as are never prescribed.

Globon, a New Nutrient Substance.—Adolph Hoff (*Aerztliche Central-Zeitung,* 1900, No. 19) studies the properties of a new concentrated food called globon. This substance occurs as a yellowish white powder, odorless and tasteless, and is obtained by the decomposition of phosphorus-containing paranucleoproteids. It is easily digested in the stomach and in the intestines, and is easily peptonized; it is therefore indicated in those cases in which the power of the stomach to digest albumen is diminished or absent, and also in other disturbances of the stomach and the duodenum. Globon has also proved very useful in pneumonia, typhoid fever, severe forms of influenza, and in tuberculosis. Considerable success has also been obtained in carious disease of the bones and in rickets, in a case of stenosis of the pylorus as the result of cancer and in ulcer of the stomach. In those cases in which it could not be given by the mouth globon was administered in the form of nutrient enemata containing 250 cubic centimetres of milk, the yolks of two eggs, a spoonful of red wine, a pinch of salt and 20 cubic centimetres of globon. These enemata were used also with marked success in cases of intractable hysterical vomiting, as evidenced by the gain of the weight of the patient.

The Diagnosis of Stone in the Kidney.—Dr. H. D. Niles (*Denver Medical Times,* December, 1900), in a paper read to the Rocky Mountain Interstate Medical Association, emphasizes the following conclusions:

1. Stone in the kidney occurs more frequently than is generally supposed. 2. We are all prone to overlook any but the most characteristic manifestations of stone in the kidney. 3. Whenever a patient presents symptoms of renal insufficiency or systemic infection of obscure origin, we should include the kidneys in our search for the cause. 4. The value of the x-ray pictures depends entirely upon whether they give positive or negative evidence. 5. It is from the use of the Harris instrument that we must obtain our most reliable information in cases where the classical symptoms are absent. 6. The methylene-blue color test in connection with the Harris instrument promises to be a useful addition to our present means of diagnosis. 7. In this branch of surgery our present need is for greater alertness and accuracy in diagnosis rather than improved operative measures.

Acetic Acid as an Antiseptic.—Fürst (*Deutsche Aerzte-Zeitung,* June 15, 1900) speaks of the ordinary vinegar of the household as an efficient antiseptic for the hands of the surgeon in cases of emergency when no other disinfectant can be obtained. After washing the hands with hot water and a potassium soap, and rinsing in hot water, Fürst dips the hands into a warm solution of vinegar. The latter, in the strength of 0.6 per cent. to 1 per cent., inhibits the growth of some nonpathogenic germs, and kills many pathogenic organisms.

The Varieties of Membranous Angina.—Dr. William G. Bissell (*Buffalo Medical Journal,* December, 1900) sums up his paper with the following conclusions:

1. The streptococcus pyogenes and the micrococcus of sputum septicæmia can produce membranous anginas, accompanied by physical disturbances sufficient to result in death. 2. The oïdium albicans produces pseudo-membranous exudates easily mistaken for a Klebs-Löffler inflammation. 3. The only positive means of determining a Klebs-Löffler infection is by microscopic methods. 4. From the sanitary standpoint, as regards quarantine, anginas due to the streptococcus pyogenes, micrococcus of sputum septicæmia and the oïdium albicans, require little consideration.

Oxaluria.—Dr. Helen Baldwin (*Journal of Experimental Medicine,* October 1, 1900) reports a careful experimental study of oxaluria, with special reference to its fermentative origin. As a result of this study she arrives at the following conclusions: 1. As varying amounts of calcium oxalate may be held in solution in the urine, conclusions based upon the presence or number of calcium oxalate crystals found therein are of no real value as an indication of the quantity of oxalic acid present. 2. Unless the utmost care is exercised, the results obtained by quantitative estimation of oxalic acid are subject to large percentages of error. This is especially true in the use of Neubauer's or Shultzen's methods, in which the calcium oxalate is precipitated in an alkaline solution. 3. An ordinary mixed diet regularly contains traces of oxalic acid or its salts. 4. A portion of the oxalic acid ingested with the food may be absorbed and reappear unchanged in the urine. 5. The normal daily excretion of oxalic acid in the urine fluctuates with the amount taken in the food, and varies from a few milligrammes to two or three centigrammes, being usually below ten milligrammes. 6. In health, no oxalic acid, or only a trace, is formed in the body, but that present in the urine has been ingested with the food. 7. In certain clinical disturbances which in some of the cases studied were associated with absence of free hydrochloric acid from the gastric juice, oxalic acid is formed in the organism. 8. This formation in the organism is connected with fermentative activity in the alimentary canal. (*a*) The prolonged feeding of dogs with excessive quantities of glucose, together with meat, leads eventually to a state of oxaluria. (*b*) This experimental oxaluria is associated with a mucous gastritis, and with absence of free hydrochloric acid in the gastric contents.

Original Communications.

A CASE OF GASTRO-INTESTINAL HÆMORRHAGE CAUSED BY FATTY DEGENERATION OF THE RIGHT VENTRICLE OF THE HEART.

BY CHARLES PHELPS, M. D.

THE patient, a gentleman fifty-eight years of age, had always been a good liver, and in consequence had accumulated much abdominal adipose tissue and had acquired a small umbilical hernia. He had suffered from no other ailment than gout and indigestion. In time he had tired of wearing a protective pad which had been applied to his hernia, and resolved upon radical cure by operation, to which he was submitted December 30, 1899. The operation was simple and without incident of note except that anæsthetics were badly borne; his breathing was irregular, and he was exceedingly cyanotic during the whole period of operation. Reaction was not delayed, and he slept well through the night.

On the following day he took nourishment at intervals and had no discomfort except a slight headache. His morning temperature was 99.6° F., his pulse 78, and his respiration 17; in the evening his temperature was 100.2° F., his pulse 82, and his respiration 19.

On the second day after the operation his bowels were evacuated by an enema; he had severe headache with nausea throughout the day, and once vomited a little yellow fluid. His temperature rose from 99.8° F. in the morning to 102.2° F. in the evening, his pulse from 82 to 107, and his respiration from 18 to 25. He rested fairly well during the early part of the night under the influence of morphine, and toward morning vomited again a little fluid, which was this time of a greenish color.

On the morning of the third day after the operation his temperature was 99.8° F., his pulse 88, and his respiration 18. He suffered some abdominal pain, which was relieved by morphine, once repeated in the afternoon. In the evening his temperature rose to 103° F., and his pulse to 110, his respiration not being accelerated. Vomiting was frequent. He slept little during the night and became very restless.

On the morning of the fourth day his temperature was 103.4° F., his pulse 126, and his respiration 27, but he complained of little pain or discomfort and had no vomiting. At 11 o'clock he was in a condition of collapse; his skin was dusky, his extremities were cold, and his pulse was almost imperceptible. A high rectal injection of hot saline infusion was rejected, stained with blood; this gave the first intimation of the cause of the patient's collapse. At 1 o'clock P. M. his temperature was 105° F., his pulse 144, and his respiration 26. Large and frequent discharges of blood through the rectum continued during the afternoon and evening, and toward night he became delirious. At 10 o'clock P. M. hæmorrhage from the rectum ceased, and at 1 o'clock A. M. was succeeded by hæmatemesis. At 4 o'clock A. M. he died, soon after a large gastric hæmorrhage.

The urinary excretion was abundant at all times after the operation, and was of normal character.

Necropsy.—The wound of operation was closed by primary union throughout its length and depth, and the peritonæum and peritoneal cavity were normal. The subcutaneous adipose layer was very thick and the omentum and appendices epiploicæ were laden with fat. The lower half of the ileum, the colon, and the rectum were filled with blood. The intestinal tract throughout its length was devoid of apparent lesion. The stomach contained a small amount of blood, and its mucous membrane was soft and eroded.

The liver was slightly enlarged, and a section examined by Dr. Harlow Brooks at the Carnegie Laboratory indicated:

1. Moderately extensive fatty infiltration.
2. A less decided cortical atrophy due to chronic passive congestion.
3. Marked obliterative arteriosclerosis (endo-arteritis) of the small branches of the hepatic artery.
4. A moderate degree of chronic interstitial hepatitis.

The lungs were small, and nearly bloodless, but otherwise of normal appearance.

The heart was of normal size. Its right ventricle was covered with a layer of fat at least three fourths of an inch in thickness, and the wall of this ventricle was of no greater thickness than paper and almost pultaceous in character. The left side of the heart was less encumbered by fatty deposit, and had suffered less fatty degeneration of its fibre. The left ventricle was firmly contracted and empty of blood; the right ventricle contained blood in small amount.

The extent to which the cirrhotic disease in the liver had advanced was obviously insufficient to account for the fatal gastro-intestinal hæmorrhage; but the condition of the heart seems to afford adequate explanation. The weakened heart, so long as no special stress was put upon it, continued to perform its function, but failed to respond to the additional strain involved in the administration of anæsthetics; and, as often happens with degenerated hearts, was afterward unable to recover itself, even with the aid of constant and thorough stimulation and of equally strenuous effort directed toward the dilatation of the superficial capillaries. The special seat of degeneration in the right ventricle, and the entire dependence of symptoms upon this seat of disease, may be regarded as peculiar. The primary failure of the pulmonary circulation was evident in the extreme and persistent cyanosis of the patient during the whole period of anæsthesia. With the discontinuance of anæsthetics the blood passed more freely through the lungs, and cyanosis for a time disappeared; but the ventricular contraction was still inadequate, and with the supervention of vomiting on the third day became still more incapable of transmitting blood through the lungs. Blood gradually accumulated in the right side of the heart, and secondarily in the inferior vena cava and portal system, till the overdistended gastro-intestinal vessels finally gave way. The resiliency of the lungs forced the last of the blood received through the pulmonary arteries into the left ventricle, which, less degenerate than the right, in turn forced it into the general circulation; and the left ventricle, like the lungs, was left empty and contracted. The final drainage of the pulmonary vessels of the lung was doubtless aided by the suction force exerted by an already approximately empty left ventricle.

The copious hæmorrhage emptied to a large extent the portal veins, the inferior cava, and the right ventricle.

A CLINICAL ANALYSIS OF DIGITALIS AND ITS PREPARATIONS, CALLING ESPECIAL ATTENTION TO THE GLUCOSIDES AND MORE ESPECIALLY TO DIGITOXIN.*

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In the present state of our knowledge of the digitalis glucosides, there is a great diversity of opinion among authorities, and much confusion prevails in the minds of clinicians, regarding the several active principles of digitalis. It will not, then, be amiss for the writer to add his testimony to the great mass of literature on the subject, especially if he undertakes to bring, out of the existing chaos, some sort of order. As the title of this paper suggests, digitoxin has been chiefly considered, but other preparations of the foxglove had to be studied, in order that the relative strength of the former might be estimated, and comparisons have, of necessity, been made with the commoner preparations, such as the tincture, fluid extract, and infusion of digitalis; comparisons likewise have been made with the so-called "standardized and physiologically tested" powdered solid extract, and with the various digitalis glucosides, especially the digitalins. The physiological activity and relative strength of digitoxin was also estimated by clinical comparisons with the several strophanthus preparations, more especially, though, with the standardized tincture of strophanthus, which, from a clinical standpoint, is one of the most uniformly active preparations supplied us in recent years by pharmaceutical skill. Finally, the available literature on the subject of the digitalins, cumbersome and confusing as it all is, and the meagre literature on digitoxin, has been carefully reviewed and represents partly the information from which conclusions may be drawn at this time and in this paper.

There are several reasons for the present unsettled state of our knowledge regarding the digitalis derivatives, and these are, in the author's opinion, seemingly due no less to a meagre and unsatisfactory knowledge of the identity, virtue, and activity of the digitalis proximate principles, than to the faulty methods of isolating these principles, whereby their activity is lessened or destroyed; the rules, or lack of rules, governing the selection, gathering, and preservation of the plant digitalis, also deserves much of the blame. In fact, herein lies the great difficulty, which must be removed ere the digitalis problem is solved; and by this it is understood, that greater care must be exercised in the gathering of such plants as digitalis, not only as to the time of gathering, but also as to the selection of only true and perfect specimens, and as to the best method for preserving the same; and more vigilance must be exercised in the *first* inspection and examination of the leaf offered for sale, before a purchase is made by the manufacturer. (*Note.*—It does not seem to be generally known that *young* leaves of the digitalis plant are worthless—containing little, if any, active principle—and that the best time to gather the leaves is during the period of blooming of the *second* year's growth.)

At last the crude drug, digitalis or other plant, in its simplest unchanged form, must be standardized by chemical assay or by approved physiological test, and the total of contained active principles then estimated. In the case of digitalis, since it is not uncommon for clinicians to prefer an infusion prepared *only* from the fresh recently dried leaf, there may be some reason why the plant had best be examined in its *fresh* state, and the total amount of glucosides estimated and removed before the so-called *odoriferous* principles have escaped—if, indeed, it is possible for the latter to be lost in a short time, or if these principles are really worth the attempt to save. Attention was called to the importance of such a procedure years ago, but, so far as can be learned, no action was ever taken in the matter.

Too much stress cannot be laid upon the methods employed to abstract any one or more of the active principles of a drug, and to the technique of separating and removing one from the other, where, as is commonly the case, several active principles are present in the same plant, lest the activity be mitigated or destroyed; for it is a well-known fact, how very delicate, as a rule, glucosidal and alkaloidal principles are. And, when a given principle is once isolated, let us be positive of its isolation in a state of absolute purity; let us know that it is, in truth, a "simple," and not a compound and complex, substance; let us indicate at the same time, if such indication is at all possible, the exact chemical formula for the active principle in question, and then, before the physiological action is studied, let there be undertaken certain tests for the determination of positive identification and purity, and let these latter also be established, on good ground and authority. An approved method, recognized by all those engaged in the isolation of the digitalis glucosides, and a standard article of standard strength with approved method for such standardization, would very much simplify matters and result in the greatest good for all mankind. As it is to-day, the digitalin of one make is often double and treble, and occasionally many times multiple the strength of another digitalin, prepared by a different manufacturer. Recently, a specimen came to my notice, the dose of which, as used by a colleague, varied between one and five grains. In dealing with an article at once so potent as the digitalins *may* and *should* be, it seems criminally dangerous for our science to tolerate inaccuracies of this kind; the permitting of such tremendous differences in the dose of any medicine, much more in active principles, is a sad

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commentary on pharmaceutical, chemical, and mathematical precision; nor has there been, up to the present time, even a consensus of opinion as to the identity of the digitalis glucosides. French and German observers have invariably disagreed, and articles similarly named by them exert, in the clinician's hand, actions oftentimes widely differing. Different investigators in the same country—French, German or Italian—have likewise failed to agree among themselves. The fact that opinions not only do not coincide, but indeed greatly conflict, in the native sources of these products, makes it difficult for America, that does not manufacture, as a rule, such articles for her own consumption, to throw any light upon the subject, and we must continue to look to the source of the digitalis derivatives, for pharmaceutical chemistry to make conflicting opinions agree. It is to be hoped that the early future may soon see a definite, standard article—a digitalin of definite, standard strength—produced by any legitimate firm, it matters not whose label it bears. According to our present indefinite knowledge, the digitalis glucosides may be enumerated as follows:

1. Digitalin, pure powder—Germanic, or *digitalinum germanicum,* a yellowish, white powder soluble in water and alcohol, hardly soluble in ether and chloroform—obtained first by Schmiedeberg in 1874 and by him said to be a mixture, containing largely digitalein, by others said to contain some digitonin and digitoxin. The digitalin, German (Merck), is a more uniform product.

2. Digitalin, pure amorphous—so-called chloroformic digitaline or *Digitalinum gallicum,* Homolle's or Quevenne's digitaline, also called *Digitalinum amorphum,* a white or yellow powder, insoluble in water, soluble in alcohol and chloroform—contains chiefly digitalin and a little digitoxin. This preparation is identical with the digitalin of the *British Pharmacopœia* and with that in older editions of the *United States Pharmacopœia;* the process for the extraction of the same was removed in the 1880 revision, because of the indefinite product it yielded. In France, Homolle's digitaline is looked upon as an impure form of Nativelle's digitaline, and that manufactured in Germany, and called *Digitalinum amorphum,* is said by them to contain digitalein.

3. Digitalin crystalline—so-called *Digitaline française crystallisée,* or Nativelle's digitaline—a very active preparation; white, shining crystals, soluble in alcohol or chloroform, hardly soluble in water or ether, containing chiefly digitoxin and a little digitalin. Nativelle obtained the Orfila prize in 1871 for this digitaline. On account of its contained digitoxin, it has been advised, chiefly by the Germans, not to use it hypodermatically, fearing abscess; the fact that it contains digitoxin, no doubt, explains largely its activity. It produces no abscess.

4. Digitalin, true—Kiliani or so-called *digitalinum verum,* seemingly identical with the digitalein of Schmeideberg.

5. Digitoxin, a white, crystalline powder, soluble in alcohol and chloroform, slightly soluble in ether, insoluble in water; the most active preparation among the digitalis glucosides and the most prompt.

6. Digitophyllin of Kiliani, a crystalline substance resembling digitoxin, soluble in chloroform, not yet thoroughly understood; has the probable formula, $C_{32}H_{52}O_{10}$.

7. Digitalein, soluble in ether and in water and alcohol; an active cardiac stimulant.

8. Digitonin, readily soluble in water, sparingly in alcohol, is a direct cardiac depressant, resembling saponin, and is irritant to the stomach. It is the most active diuretic principle in digitalis.

9. Digitin, is therapeutically inert.

According to Fouquet, there are two groups or classes of digitalins, namely:

(1) Digitalins soluble in chloroform and insoluble in water.

(*a*) Crystalline digitaline.
(*b*) Amorphous digitaline.
(*c*) Digitoxin.

(2) Digitalins insoluble in chloroform and soluble in water.

(*a*) Digitalinum germanicum.
(*b*) Digitalein.

Of these two classes or groups, he advises the use of the first, and specially prefers, in this class, the crystalline digitaline. (*Note.*—It will be seen that this author counts digitoxin among the digitalins.)

Bardet affirms that amorphous and crystalline digitaline prepared in France are identical in their action, and that, according to the French *Codex,* both must be entirely soluble in chloroform, hence the appellation, "chloroformic digitaline," as applied by the French. However, Bardet also prefers the crystalline digitaline to the amorphous, because, as he says, it is "slightly *more* pure." The same author states that digitoxin, as marketed in Germany, is an indefinite mixture, incompletely soluble in chloroform, of variable activity, and only one half to one third as strong as the chloroformic digitalines. He asserts, furthermore, that German digitalin is not only variable in action, but is, in truth, only digitalein. Corin disputes these assertions on good authority, and H. C. Wood, Jr., and J. P. Arnold, in a contribution to the *American Journal of the Medical Sciences* for August, 1900, affirm that the digitalin, German, as prepared by Merck, is physiologically uniform in action and stable in its composition. Identical results were obtained by them with a sample two years old, and with a fresh sample, both from the Merck laboratory. My own clinical observations with digitalin, German (Merck), verify the results obtained by the two last-named experimenters. The product was found by me to be entirely uniform in its action, and, in a proper dose, from one twenty-fifth to one fourth of a grain, very reliable. As for digitoxin, it was found, contrary to Bar-

det's experience, to be soluble in chloroform, and instead of being only one third to one half as strong as chloroformic digitaline, it proved to be, in reality, from three to four times stronger. Indeed, the statements that digitoxin is the most active of all the digitalis glucosides, the most prompt, the most powerful, the most reliable in its composition and in its therapeutic effects, have all been abundantly realized in my hands.

The Choice of a Digitalis Preparation.

In the choosing of a preparation of digitalis, the profession is, as a rule, entirely too lax, and too indefinite an idea is ordinarily had of the work expected of the preparation in question. Among the several points which arise, when we are about to order digitalis, the following are most important:

1. Shall the effect be immediate or is only a slow result required?
2. Is a cardiac action chiefly desired?
3. Is a diuretic action chiefly desired?
4. Shall the action be both cardiac and diuretic?

The solubilities of the several digitalis principles are, as already stated, not identical, therefore the activity and virtue of a tincture (or a fluid extract) of the drug is not identical with that of an infusion, nor does either of these preparations represent the entire activity of the plant. In fact, but one preparation of digitalis does fully represent the drug, and this is the powdered leaves, which have the most irritant effect on the stomach of all the digitalis preparations. The Swiss preparation, known as the "dialysate of digitalis," is made by a special dialyzing process of the freshly plucked leaves with water and alcohol—each part by weight of the "dialysate," it is stated, corresponding exactly to a part by weight of the plant. The last-named preparation is said to be very active and reliable. In the tincture, as well as in the fluid extract, on account of their solubility in alcohol, digitalin and digitoxin chiefly preponderate, but there are found also some digitalein and digitonin in these two preparations. The action is therefore chiefly cardiac and slightly diuretic. The infusion containing little, if any, digitalin or digitoxin, but considerable digitonin, as well as some digitalein, is the best diuretic preparation of digitalis. In prescribing the tincture, it is well to remember that the addition of water modifies the virtue of the preparation by precipitating the contained digitoxin. If water is taken with the dose, any precipitate that settles to the bottom should be swallowed. It is best to exhibit this preparation in capsule.

Physiological Action.—The pharmacodynamics of digitalis is very well understood, but the writer, in reviewing several features representing the different actions of the various digitalis derivatives, desires to call attention to certain fallacies, which seemingly go unnoticed, in the ordinary measures and technique adopted to ascertain the physiological action of any drug. It has been the custom in previous years to study the cardiac action of digitalis, for instance, upon the heart of the frog; more recently, in attempting to standardize physiologically the drug in question, it has come to be the custom to employ for experimental purposes the dog or some other one of the lower animals—in the case of ergot, the fowl is used (the comb of the cock). There can be no doubt that the employment of warm-blooded animals or fowls for these purposes has much to commend it over the use of the batrachian, since, with the latter, the results are open to argument on the ground of the considerable difference in the histological framework of organs and tissues, to say nothing of the wide variance between the central and sympathetic nervous systems of the two subjects employed. But this is not the only point, nor, in the writer's opinion, is it the important point, to which especial attention will now be attracted. Under such circumstances, conclusions concerning pharmacodynamics are reached with experiments upon animals or fowls *invariably* in a state of more or less perfect health; and these conclusions are intended to afford the student and practitioner of medicine a definite idea of the action to be expected from the same drug, when administered in the same dose to a human patient—the latter, presumably, an individual with deranged secretions and in a pathological state. In other words, from the effect obtained by the administration of one fourth of a grain of morphine sulphate, for instance, to a healthy dog (or even to a healthy man), we are left to gauge the probable effect that will be obtained when the same dose of one fourth of a grain is administered to a person suffering, let us say, from renal colic; or, if to a third individual in shock, the identical drug in identical dose is given, the effect awaited is to be judged by the original effect observed in the case of the dog (or man) in health. If it is urged that these principles do not represent a true guide for the estimation of drug action, I reply that the premises then are always false upon which such judgment is based, and the text-books mislead us. According to our books and to the manner of calculating physiological action, doses of one thirtieth of a grain of mercury bichloride, given three times daily for one week, would have the same effect in the case of a healthy dog or healthy man, as the same dose of the same drug has in the case of a patient suffering with secondary syphilis; or a thirty-drop dose of fluid extract of ergot must act identically in the case of *postpartum* hæmorrhage, as it does on the bright red comb of a healthy young brown leghorn hen. Examples of this sort might be multiplied almost *ad infinitum,* and the conclusions are invariably reached along false lines. Drugs can only be studied, and pharmacodynamics only estimated, by a consideration of their influence as exerted in diseased states; and, when such a method of determination is once adopted, as it surely, sooner or later, must be, then the name, "physiological action," will cease to exist, as it properly deserves.

Digitalis is no exception in these respects, as the experiments of Czyhlarz have abundantly proved; with

Gaertner's tonometer he demonstrated the failure of a fixed amount of standardized digitalis (using the infusion) to raise the blood pressure or to increase the amount of urine in persons with normal circulation, the same infusion producing, without exception, these effects where cardiac trouble existed. In other words, all drugs have more or less so-called specific or "selective" action in disease—which often varies in the case of the same drug in different diseases—and no manner or variety of experiments upon the lower animal or upon the fowl *in health* could ever develop such true action. Twenty-five and fifty years ago, clinicians were in the habit of giving very large doses of infusion of digitalis to persons suffering with croupous pneumonia. It was found, then, that these cases were benefited by heroic quantities of the infusion—such amounts as people in health or those suffering from other affections than pneumonia could not tolerate. The reason was at that time unknown, but we readily see it to-day; since, according to Maragliano, digitalis actually neutralizes the toxine produced by the pneumococcus. This fact he has established, seemingly beyond the peradventure of a doubt, as follows: One centigramme and a half of digitalin are added to ten grammes of a pure culture of the pneumococcus, whereby the latter are killed; Maragliano affirms that as little as three milligrammes of digitalin, added to a ten-gramme culture of pneumococci, hinders their development. This action is "selective" or "specific" in the case of pneumococci alone, it having been found that digitalin will exert no such influence over the culture of other germs.

Indications and Contraindications.—We are taught that digitalis is indicated wherever there is failure in the dynamic power of the heart muscle, especially if, at the same time, arterial tension is low; but it is surprising—and this point must be emphasized—what benefit follows the administration of the drug in cases where, on theoretical grounds, consensus of opinion would advise us "*best* to avoid it." This not infrequently happens in aortic regurgitation. Again, great vascular excitement, high arterial tension—the latter as found in chronic nephritis—and existing hypertrophy of the heart, provided it is complete, contraindicate digitalis; the nitrites, under such circumstances, make an admirable addition to the drug, especially nitroglycerin, which, obviating arterial constriction, often permits of the use of digitalis when it would otherwise be impossible to exhibit it. A course of iodine—potassium or other iodide—preceding the digitalis or accompanying its administration, has been found highly satisfactory in some cases, especially, where the drug is contraindicated in arteriosclerosis; in the latter condition, high vascular tension sooner or later disappears, and then digitalis will serve its usual good purpose. In the issue of *Therapie der Gegenwart* for March, 1900, is reported the account of an autopsy on a middle-aged man; the report is of present value: Cor bovinum, moderate stenosis of ostium aorticum, aortic aneurysm, arteriosclerosis of kidneys—and notwithstanding the existence of these conditions (any one or all of which would ordinarily contraindicate digitalis) the patient had been kept "comfortable, in fact, in good health," for a period of eight years by the daily administration of from one and a half to two and a half grains of the powdered drug. During these eight years, it is calculated that the patient took something less than ten ounces of digitalis. His death was sudden, following an unusual physical exertion.

Cumulative Action.—This may be entirely avoided by carefully watching diuresis and by diminishing the dose or exhibiting the drug at longer intervals, say, once in twenty-four hours; occasionally, it is well entirely to skip a dose or two. For long-continued use, it is proper to give a diuretic with the digitalis periodically; in this respect it may be well to remark on the usefulness of calomel in combination with digitalis. In the *Practitioner* (London) Groedel says that cumulation is due to too large doses given after too short intervals, and he attaches the blame to the physician's hurry to obtain an effect without proper regard for elimination. It is well to bear this in mind.

Relative Cardiac and Diuretic Action of the Digitalis Derivatives.

Digitin, being therapeutically inert, will not be considered.

Digitonin is a direct cardiac depressant, resembling saponin, and, like it, directly antagonizing the cardiac action of digitalin, digitalein, and digitoxin, by depressing the vagus centrically and peripherally. It is the most active diuretic principle among the digitalis glucosides, as already mentioned; but it irritates the stomach very much.

Digitophyllin has been used to a very limited extent. Its action resembles that of digitoxin; like the latter, it is prompt and energetic and may, some day, enjoy wide use.

On the heart, and on the circulation in general, the three digitalis glucosides, digitalin, digitalein, and digitoxin, have effects much in common. There are, however, certain well-defined differences, which will shortly be outlined. All three can be called true heart stimulants, acting directly upon the heart muscle, making the pulse stronger and firmer; but digitalin stands alone and is unique because of its *special* influence upon the vasomotor centre, on the medulla, and upon the ganglia in the muscular coat of blood vessels, contracting the blood vessels and thereby raising arterial pressure. Digitalin also slows the pulse, by directly stimulating the cardiac ganglia (acting upon both the roots and the ends of the vagus). Digitalein and digitoxin do not directly raise arterial tension, nor do they directly slow the pulse. Professor Kobert has demonstrated, however, that both of the latter *dilate* renal blood vessels, increasing the flow of urine, and this action makes these two principles also unique, greatly enhancing their therapeutic virtue and value. It has already been stated that the diuretic action

of digitalis is best exhibited in cardiac affections accompanied by low arterial tension. In a healthy state of the heart and circulation, diuresis is usually wanting.

And now we have come to the most important part of our subject, namely:

Digitalin and Digitoxin Contrasted.—This study was made with Merck's digitalin, German, and digitoxin, Merck. The formulæ digitalin $C_{35}H_{56}O_{14}$, and digitoxin $C_{34}H_{54}O_{11}$, are now pretty definitely established, though not absolutely so.

Digitalin, German-Merck, is a yellowish-white powder, soluble in alcohol and water; almost insoluble in ether and chloroform.

Digitoxin—Merck—is a white, crystalline powder, insoluble in water, but soluble in alcohol and chloroform, and slightly so in ether.

Dose: Digitalin, from one twenty-fifth to one fourth of a grain; digitoxin, from one one-thousandth to one two-hundred-and-fiftieth of a grain, up to one fortieth of a grain daily (regarded as the maximum quantity of the latter.)

Digitoxin is the chief ingredient in the leaf of the foxglove, and the latter should, in the author's opinion, be standardized in terms of its contained digitoxin. By means of ether, digitoxin may be obtained and removed from an extract of the leaves. Contrary to Schmiedeberg's statement that digitoxin is *not* a glucoside, it is possible by means of heat, in the presence of an alcoholic solution of hydrochloric acid, to split up the digitoxin into digitoxose and digitoxigenin.

As a diuretic, digitoxin is superior to digitalin, since it actually dilates the renal vessels, while stimulating the heart. Furthermore, its action is prompter and more certain than that of digitalin. It manifests its effects oftentimes within twelve hours, and is less liable to cumulative action than digitalin. Because of the uniformity of its action and of its energy and strength, no doubt, digitoxin has the brightest future of all its sister glucosides. Masius, who has employed it considerably, styles the action "certain, quick and energetic." He has used as much as one fortieth of a grain a day. Heger believes that the action of digitoxin is chiefly on the left ventricle. Van Aubel classes it as "the most prompt, reliable, and powerful derivative of digitalis." After discontinuing the use of the drug, the influence of digitoxin is said to persist, sometimes, for from eight to ten days. Under Professor Unverricht, in the Municipal Hospital of Magdeburg-Sudenburg, Wenzel has experimented with the drug and declares it to have been useful in certain cases where other preparations, including the infusion, had failed. To avoid digestive disturbance, Wenzel employed it chiefly by enema, giving about one eightieth of a grain in ten minims of alcohol and four ounces of water. The action upon the heart, as observed in these experiments, was quite pronounced; at first, three rectal injections were given daily (previous thorough cleansing of the bowel being presupposed); afterward, only two injections were used; and, finally, only one was found necessary, in order to maintain the first effect produced. In my own hands, digitoxin has been given in a series of cases—of late, chiefly hypodermatically, but also by the mouth (*always after meals*). It was the exception to see any digestive disturbance when one five-hundredth of a grain or less of digitoxin was being given, three times daily; digitalin, however, not infrequently had caused, in my hands, some such unpleasant accessory effect. (*Note.*—The action of the smaller doses of digitoxin has been so satisfactory that I have not had occasion, in the majority of instances, to employ more than one five-hundredth of a grain, and never over one two-hundred-and-fiftieth of a grain.) In no case did an abscess ever result from the hypodermic syringe. A very hard infiltration œdema usually followed the injection, until, after many pricks of the needle, the tissues about the point of puncture became stiff and rigid, interfering somewhat with the function of the part (as about the arm or leg). Pain was almost invariably complained of when the medicine was given by this route, but it never continued long. If the arm was being used, it would become tender, and, from the great amount of infiltration for the time being, function would be modified. However, these symptoms and signs disappeared promptly with the withdrawal of its administration by this route. I am aware my experience in several ways does not coincide with that of Messrs. Wood and Arnold, who find the drug too irritating for administration by the mouth, and report it as liable to cause abscess when injected hypodermatically. Mr. Fowler, a local chemist and experienced tablet manufacturer, prepared the drug for me in hypodermatic form; at first tablets of $\frac{1}{1000}$th of a grain, later $\frac{1}{500}$th of a grain. By the mouth, the cardiac action was not so pronounced as when the drug was thrown under the skin. Under any circumstance, however, it mattered not by what route digitoxin was introduced, there was invariably an effect of which, not only doctor, but often patient as well, was aware, digitoxin being an agent the influence of whose action is a perceptible one; one patient, an elderly lady with myocarditis, who suffers recurring attacks of tachycardia and whose vitality is often at a low ebb, describes the action as "sustaining," and says that her strength is always re-enforced by the dose. It was sometimes observed that the bowels were relaxed while digitoxin was being taken, this chiefly occurring when the dose was exhibited by the mouth; however, laxative action was by no means the rule.

It having been urged that digitoxin in solution is likely to become insoluble on coming in contact with the fluids of the body, I have never attempted until lately to give it in solution, except in hypodermatic solution (dissolving one or more tablets in thirty minims of water), as already stated. A solution prepared for me by a local pharmacist and intended to be used internally—dose, one teaspoonful—without instructions as to how he should prepare it, contained fifty per cent. of alcohol; this was

thought not only too much alcohol for the stomach, but the solution precipitated when water was added; besides, it was feared that the alcohol might influence the cardiac action of the digitoxin; certainly, such a danger would not be insignificant if a solution of similar alcoholic strength was employed hypodermatically.

Where high tension existed, the combination of digitoxin with nitroglycerin acted admirably.

Uses.—Digitoxin has been especially recommended in chronic myocarditis and in cases of ruptured compensation. The following brief notes, taken at random from my history book, will illustrate the variety of purely cardiac and related conditions in which the drug has been employed by me:

Case I.—L. R., a young man aged twenty-three years, came under my observation in July, 1898 (during the absence of his physician), with a history as follows: Single; occupation, bookkeeper and collector; diagnosis, mitral regurgitation, compensation ruptured. Patient was suffering with dyspnœa, cough, a prune-juice sputum, cyanosis, œdema of the lower extremities, urine half a pint in twenty-four hours. Doses of $\frac{1}{1000}$th of a grain, later increased to $\frac{1}{500}$th of a grain of digitoxin, were administered four times daily by the mouth. The urine was much increased in twelve hours; it was doubled in twenty-four hours, and in another twenty-four almost a quart was passed; the cyanosis disappeared and with it the cough. After two weeks the patient was able to be up and about, and, in another week, to begin work (walking, as a collector, necessary). In several succeeding attacks, in which I saw him, the drug was just as effectual in relieving symptoms.

Case II.—Mrs. M. B., school teacher, aged forty-one years, addicted to the use of strong drinks and a morphine habituée, came to see me in March, 1897: Diagnosis, chronic interstitial nephritis, with myocarditis. Digitoxin, $\frac{1}{1000}$th of a grain every four hours (five doses daily), was ordered. The shortness of breath, palpitation, and præcordial distress and headache disappeared after one week.

Case III.—Mrs. B., aged sixty-three years. Diagnosis, mitral regurgitation of two months' duration, following acute articular rheumatism; compensatory hypertrophy had not occurred. The patient was referred to me from her home in the country. The condition was critical on account of pulmonary œdema, pleuritic effusion, and almost entire suppression of urine; there were general anasarca, obstinate nausea and vomiting caused by acute parenchymatous nephritis. Doses of $\frac{1}{500}$th of a grain, increased to $\frac{1}{250}$th of a grain, of digitoxin by the mouth were retained; the diarrhœa which occurred was thought to be a natural sequence from defective kidney elimination and not due to the digitoxin, although the drug had relaxed the bowels in other cases. The volume of the pulse improved and the pulmonary signs disappeared after three days. The kidney action was the most prominent feature in this case, the quantity of urine reaching one litre and one fourth by the end of the week. The patient soon thereafter left her bed, compensation having been very satisfactorily established.

Case IV.—Mr. M. F., aged seventy-five years, retired merchant; diagnosis, acute ulcerative colitis, arteriosclerosis with high-tension pulse; was seen by me through a long illness during which the bowel trouble assumed a chronic type and the danger of death by cardiac asthenia became evident. The administration of digitoxin $\frac{1}{500}$th of a grain, with nitroglycerin $\frac{1}{100}$th of a grain four times daily, was begun. The result was prompt and wholly satisfactory. The patient recovered, was once more able to appear on the streets, and lived over eight months.

Case V.—Mrs. R. D. A., aged seventy-two years. Diagnosis, myocarditis with frequent attacks of tachycardia. This lady has chronic interstitial nephritis. She was given digitoxin continuously for several months as a substitute for digitalin, which had been taken previously, and for years; the paroxysms of tachycardia grew very much less frequent, and the lady, who is intelligent and watches the effect of drugs closely, declares that there is a *"sustaining"* influence noticeable as soon as she takes digitoxin. (This case has already been referred to in this article.)

Case VI.—Mrs. J. F., aged forty-three years, widow, has been leading a very inactive and indolent life for the past three years, causing the accumulation of much surplus adipose tissue. Diagnosis, fatty infiltration of the heart; dyspnœa was complained of upon the slightest exertion, and attacks of syncope were of almost daily occurrence. Digitoxin was employed, $\frac{1}{500}$th of a grain every four hours (five doses daily), and massage with a modified plan of the "Schott method" of resisted movements and baths. The action of the digitoxin upon the heart and kidneys was perfect, recovery being complete within three months.

Case VII.—Mrs. A. L. L., aged twenty-six years, housewife. Diagnosis, asthma, cardiac in nature. Irregular, feeble pulse, more or less constant dyspnœa, very much exaggerated during the frequently recurring paroxysms, loss of flesh and strength, palpitation. The severity of this patient's asthmatic attacks can best be judged by the statement that morphine did not relieve them, nor did the inhalation of chloroform or ether, pushed to the obstetrical stage. It was found that digitoxin invariably controlled the paroxysm. The patient was put upon a liberal diet, and tonics, in conjunction with Buffalo Lithia water, completed relief from the disease, which has not reappeared now in at least six months.

Case VIII.—A. M., aged fifty-six years, minister. Diagnosis, Parkinson's disease. Upon his return from a certain health resort, he was found to be suffering from acute bromism, the result of the prolonged use of large doses of the mixed bromides. There was a tendency to depression of spirits with sudden bursts of emotion. The patient became angry upon slight provocation, and would cry even when the provocation was less. The pulse was feeble and fast. The first dose of digitoxin, $\frac{1}{500}$th of a grain, given hypodermically at 5 P. M., after an attack of syncope (precipitated most likely by the thought of his inability to begin work the following day), had a remarkable effect. The patient in a half hour was up and had dressed, insisting upon going to the barber's shop, although his gait had been unsteady and tottering, and much weakness had been complained of one hour previously. The walk to the barber's shop, some three blocks distant, was made without difficulty, and later he sent me word that the "sustaining" influence of the drug could still be clearly felt. One five-hundredth of a grain, four times daily, hypodermatically, was continued for two weeks, the cardiac asthenia entirely disappearing and the

psychical condition of the patient undergoing salutary change as well.

CASE IX.—Emil W., aged seventeen years, tailor's apprentice. Diagnosis, dilated right heart. A frail lad closely confined, running a machine in a contract sweat-shop. I had treated him for some three years or more for a stubborn malarial cachexia. While climbing a steep hill on his bicycle one Sunday morning, the patient suddenly felt an agonizing pain in his cardiac region. His "breath came short and quick," and he fell from his wheel. I saw him the same morning; dyspnœa was marked, there was cough and frothy, blood-stained expectoration, the pulse was exceedingly feeble, but *slow*. Physical exploration made out a dilated right heart. Rest in bed, nutritious diet, and digitoxin $\frac{1}{500}$th of a grain every three hours, constituted the treatment. On the second day, the interval between doses was increased to four hours, and, after two days, three doses daily of the digitoxin were administered, the symptoms justifying this infrequent exhibition of the medicine. Within two weeks, the cardiac measurement was normal and the patient has experienced no further trouble.

CASE X.—Mrs. S., aged twenty-eight years, member of the demi-monde. Diagnosis, mitral regurgitation. The patient had been an inveterate smoker of cigarettes, and otherwise was leading a riotous life. She suffered attacks resembling pseudo angina pectoris and had been unable to lie down or to sit down for the most part of the day when I saw her. Inhalations of amyl nitrite were practised, for the paroxysm, and the patient was put on digitoxin $\frac{1}{500}$th of a grain every four hours, later increased to $\frac{1}{250}$th of a grain. The attacks became less frequent, and the patient enjoyed several months of complete freedom, finally dying suddenly while in bed, after I had dismissed her from immediate care.

CASE XI.—Mr. R. W., aged twenty-five years, street railway motorman, suffering with typhoid fever. Strychnine had been employed, during the latter weeks of the disease, and continuously after convalescence had otherwise been well established, but the pulse continued to run up twenty to fifty beats per minute upon the slightest exertion, and severe palpitation with præcordial distress would then be experienced. The strychnine was discontinued, and four tablets of digitoxin ordered daily (grain $\frac{1}{500}$th). Within twenty-four hours the patient felt better, and, after three days, was able to walk half a mile without palpitation or much increase in the pulse rate. On the ninth day he was dismissed, having then completed his thirty-sixth tablet of digitoxin. He was able to leave with his gun on a hunting expedition.

CASE XII.—Mrs. J., aged forty-one years, widow, professional hairdresser. Typhoid fever in 1897, treated by me. Since then, dyspnœa upon exertion; the patient leads a very active, outdoor life; nevertheless, she has taken on flesh steadily. She complained of palpitation and darting pains through the region of the heart. Recently, I was summoned to find her extremely dyspnœic, with pulse 120, soft and compressible. There were cough, numerous dry and some moist râles, and slight expectoration. The patient thought she was entering the climacterium and that this explained her present indisposition. In order to make a comparative test of the cardiac activity of drugs, in this case, strychnine was first employed (after controlling the paroxysm with a morphine injection). There being no appreciable influence upon the quality of the pulse by the fourth day of its administration, digitalin was substituted, followed after another three days, because of lack of effect, by the infusion of digitalis, but this did not slow the pulse rate. Finally, digitoxin was administered in $\frac{1}{500}$th of a grain doses. The effect was prompt and entirely satisfactory, the pulse becoming fuller and stronger.

CASE XIII.—Miss C. S., aged fifty years, school teacher, with aortic stenosis. Compensatory hypertrophy, originally complete; every spring, for the past six or eight years, patient has had to take heart tonics. During the three previous years, she has been under my care, and on each occasion infusion of digitalis was prescribed for the first few days, and, when the stomach rebelled, was followed by ten-drop doses of tincture of digitalis, four times daily, in capsule. Even under the latter preparation the stomach rebelled and the appetite waned, until, as was the rule, anorexia became complete. Last April, Miss S. again consulted me. Digitoxin was this time prescribed, $\frac{1}{500}$th of a grain four times daily. The effect was prompt, salutary and *benign*, there being no gastric disturbance. To use her words, "Digitoxin marks a real advance and is a boon."

CASE XIV.—Mrs. J. S., aged forty-two years. Diagnosis, typhoid fever. During the first week of the disease, the pulse was 110 and dicrotic. Digitoxin had a remarkable effect in this case, not only sustaining the hypodermic injection of $\frac{1}{500}$th of a grain had a quieting pulse, but when the patient was restless and fretful, the influence upon the nervous system as well. In fact, the action was very similar to that of morphine as we see it in shock.

It seems unnecessary to recite other examples. In the accounts, already given, which have been taken at random from my records, a very fair idea may be had of the certain results obtainable with digitoxin. Until a more definite product is supplied by the various manufacturers under the generic name of digitalin, the former must continue to grow in favor and finally supplant the latter, and, as the profession becomes better acquainted with the virtue of the article, digitoxin seems destined to enjoy the widest range of usefulness and popularity.

Note.—A solution of digitoxin, we are told, is liable to precipitate on coming in contact with the secretions of the body. To avoid this, and yet not use too much alcohol in the pharmaceutical preparation of the solution, it has been recommended to add a little chloroform to the solution; several formulæ have already been worked out. The following solution has, after experimentation, been found to be stable and will not precipitate upon contact with blood serum, water, or sodium chloride solution:

℞ Digitoxin. . . . . $\frac{1}{250}$th of a grain;
Chloroform. . . . . $1\frac{1}{2}$ minims;
Alcohol at 90 per cent. . . . . 23 minims.
Water sufficient to make $\frac{1}{2}$ an ounce.
M.

SECOND STREET AND ORMSBY AVENUE.

Physicians Demand a Living Salary for Health Officer.—The doctors of Marinette, Wis., recently passed resolutions asking that the salary of the health officer be raised by the city council from $200 to $1,000, and that that official be named by the physicians. All the physicians have pledged themselves to decline the office unless this is done.

AMŒBIC ABSCESS OF THE LIVER, WITH A REPORT OF FOUR CASES.

By FIRST LIEUTENANT C. R. DARNALL,
ASSISTANT SURGEON, UNITED STATES ARMY.

SINCE the American occupation of the Philippine Islands, Puerto Rico, and Cuba, the members of the army medical service have, for the first time, been brought into intimate contact with many diseases peculiar to tropical and subtropical climates. Some of these affections recent arrivals escape for a time, either because of vigorous health at the time of arrival, or because of special care being taken to avoid them. However it may be, it has long been observed that foreigners may enjoy excellent health for a year or eighteen months, and then, being more or less enervated by the climate, become the victims of such diseases as psilosis (sprue), amœbic dysentery, or amœbic abscess of the liver. For a considerable time amœbic liver abscess was rarely found among the cases in our military hospitals, but it has become more and more frequent until now it is quite common.

The cases reported below have all been received on the *Relief* since July 22, 1900. Besides these four cases, one other was found in the postmortem room during that time, in a patient dead from amœbic dysentery.

CASE I (U. S. army hospital ship *Relief*, Register No. 2303).—I. P. M. S., bandsman, Fourteenth Infantry, U. S. army, a native of Denmark, aged thirty-two years. Original admission to sick report, June 17, 1900. Admitted to U. S. army hospital ship *Relief* July 22, 1900, at Nagasaki, Japan, from U. S. army transport *Indiana*.

History.—Had been in excellent health until present illness began. Had been in Philippine Islands since August, 1898. Before that time had always lived in a cool climate. In April, 1900, he began to have a slight diarrhœa, which, growing steadily worse, became in a short time dysenteric in character. In May he noticed pain and tenderness over the liver and in the right shoulder and was more or less feverish in the evening. About this time he also began to lose flesh. He was first admitted to his regimental hospital in the latter part of June. He states that under treatment his dysenteric symptoms improved somewhat, and he was allowed to start with his regiment on the expedition to China. On arriving at Nagasaki, however, he was too weak to go farther and was transferred to the *Relief*.

On admission to my ward on the *Relief* he was found to be much emaciated, weighing only ninety-two pounds, his normal weight having been one hundred and forty pounds. Pulse, small, compressible, and about 100 a minute. The active dysenteric symptoms were somewhat in abeyance, the evacuations numbering three or four in twenty-four hours. The stools were of a light slate color, of a pultaceous consistence, and were streaked with mucus containing large numbers of very active *Amœbæ coli*, but no blood.

Temperature irregular, usually nearly normal in the early morning, and about 103° F. in the evening. There was marked enlargement over the right hypochondrium. The liver extended from the fifth rib in the right nipple line to two inches below the costal border. There was much tenderness over the liver. This was particularly noticeable when pressure was made in the intercostal spaces. He had pain over the liver on coughing or taking a deep inspiration. Had slight dry cough.

Examination of urine was negative in result. Examination of blood showed diminution of red cells to 3,600,000 per cubic millimetre. There was a slight leucocytosis.

On making an exploratory puncture, pus was found in the convexity of right lobe. I operated on July 24th, resecting two inches of the eighth and ninth ribs between the anterior axillary and nipple lines. The limitation of the pleural cavity was found, and a trocar and cannula passed through the diaphragm below it into the abscess. The opening was then enlarged with a forceps and about two ounces of chocolate-colored pus evacuated. The abscess cavity was then washed out and a rubber drainage tube introduced. The wound was packed with iodoform gauze and dressings applied.

From the large amount of the subsequent discharge I am inclined to think that there were two abscesses in this case, only one of which was opened at the time of operation, the other rupturing into the first subsequently.

The temperature fell but little during the week following the operation, but gradually declined after that time. In scrapings from the abscess wall I found numbers of *Amœbæ coli*. The patient made an uneventful recovery. On September 13th, seven weeks after operation, the wound had entirely healed, there was no pain or elevation of temperature, and he was rapidly increasing in weight, having gained fourteen pounds since September 1st.

CASE II (U. S. army hospital ship *Relief*, Register No. 2326).—J. V. F., bandsman, Fourteenth Infantry, U. S. army, a native of Iowa, aged thirty-five years. Admitted to sick report August 2, 1900. Admitted to *Relief* from U. S. army hospital at Tientsin, China, August 16, 1900. Diagnosis on transfer slip: Acute pleurisy, right side (August 13th, effusion).

History.—He landed in the Philippines in August, 1898. Before that time he had always lived in a cool climate. During the time he was in the Philippines he had been in excellent health. Had never been on sick report nor had he ever had even a mild diarrhœa during that time, his bowels being always perfectly regular. He left Manila about the middle of July with his regiment for China, where he arrived July 27th. After being in China a few days he began to have pain in the right side and right shoulder. He stated that at times the pain in his side was excruciating. He located the pain over the convexity of the liver. He had slight fever in the evening and severe sweats at night. His bowels during this time were constipated.

When admitted to the *Relief*, on August 16th, he was considerably emaciated, the skin sallow, the pulse rather weak, compressible, and about 90 a minute; appetite good, no nausea, bowels constipated. Pain over right hypochondrium, aggravated by coughing or deep inspiration, also pain in right shoulder. Temperature ranged from 99° F. to 103° F. in evening. Severe sweats at night, or even in daytime when asleep; slight hacking cough; liver much enlarged, particularly upward and to the right. There was considerable bulging of the right side of the chest. The intercostal spaces were not obliterated, but there was much tenderness on pressure over them.

Blood examination showed slight leucocytosis. On August 18th, suspecting abscess of the liver, I made a number of exploratory punctures with a large needle in

various parts of the right lobe, but did not succeed in locating the pus. On August 22d the patient was seized with a paroxysm of coughing and expectorated large amounts of pus. He continued to expectorate some pus every day, but the amount varied considerably. I demonstrated the *Amœbæ coli* in the material expectorated. The rupture of the abscess into the lung had a slight, but not marked, effect on the temperature, and no effect whatever in the way of improvement in the general condition. His emaciation and weakness gradually increased. His condition did not admit of an operation, but his breathing became so labored and the distress so great, that, on September 18th, I made a small incision into the most prominent part of the swelling, under local anæsthesia, and evacuated 1,000 cubic centimetres of pus. This procedure relieved his sufferings, but he grew gradually weaker and died on September 25th.

Autopsy.—Emaciation extreme; skin and conjunctiva slightly jaundiced. There was about six ounces of a straw-colored fluid in pericardium. Liver much increased in size and both right and left lobes were adherent to the diaphragm. The right lobe was the site of two immense abscesses. One of these, situated in the convexity and extending upward and backward, had ruptured into the right pleural cavity, forming a large abscess at the base of the lung. The opening in the diaphragm was about two inches in diameter. The other abscess of the right lobe involved the under surface and anterior border. It was this abscess that I opened on September 18th. There was no communication between these abscesses. The left lobe was the site of a third abscess still intact and containing about 1,500 cubic centimetres of pus. There was merely a thin covering of liver tissue about this abscess, the whole interior of the lobe having been destroyed. The walls of all these abscesses were composed of partly destroyed liver tissue, and presented an irregular, shaggy appearance.

The kidneys were normal. The left lung was slightly œdematous at posterior part. The intestines were apparently normal. There were no evidences of dysentery, either recent or remote. I was unable to find amœbæ in the stools of this patient, though I made several examinations.

CASE III (U. S. army hospital ship *Relief*, Register No. 2481).—I. D., Troop A, Sixth U. S. Cavalry, a native of Massachusetts, aged twenty-two years. Admitted to *Relief* September 9, 1900, from U. S. general hospital, Tientsin, China. Diagnosis on transfer slip: Acute diarrhœa.

History.—Had been in good health until about a month previous to admission. He gave an obscure history of an attack of dysentery about a year ago, while living in Idaho. Had never been beyond the borders of the United States until he came to China in the latter part of July of the present year. For a month previous to admission he had been having diarrhœa, the evacuations consisting principally of undigested food, mucus and blood. He stated that he had much pain and tenesmus.

On admission to the *Relief* he had tenderness over the abdomen, frequent stools mixed with blood and mucus, a temperature of 102° F. and a pulse of 88.

On September 10th, I examined his stools and found enormous numbers of *Amœbæ coli:* urine normal; examination of blood showed moderate leucocytosis. The tenderness over the abdomen increased, particularly over the right upper quadrant. There was progressive emaciation. His temperature showed a diurnal variation of about three degrees, the maximum being 103° F. Acting Assistant Surgeon Paul G. Hutton, under whose care the patient was at this time, made a diagnosis of suppurative hepatitis, and the patient was transferred to my ward on September 15th. On examination, I found marked tenderness over the liver, which was enlarged in all its dimensions. There was pain in the right shoulder and also pain over the liver on deep inspiration. There was marked bulging of the lower part of the chest on the right side. Severe pain was produced by pressure over the epigastric region, and by pressure over the lower right intercostal spaces. The patient's general condition was bad. I made an exploratory puncture on the 15th in the right anterior axillary line between the eighth and ninth ribs, and found fluid of a smoky chocolate color, mixed with some thicker yellow material. The patient immediately prepared for operation, which I did on the same day, assisted by Dr. Hutton. I resected three inches of the ninth rib in the right midaxillary line, and upon arriving at the pleura I found the costal and diaphragmatic portions firmly adherent over the site of the abscess, into which I made a free incision through the diaphragm. About three pints of a grumous, shreddy, cream-colored material, mixed with a thin coffee-colored fluid, were evacuated. The walls were then curetted and the abscess cavity washed out and drained with tubing and lightly packed with gauze. The discharge for the next day or so was quite free, but then lessened rapidly. The average temperature was reduced only about one degree by the evacuation of the pus. The discharges from the bowels (ten to fifteen in number daily) continued in spite of all treatment. The patient's condition grew steadily worse, death taking place on September 21st, six days after operation, from asthenia.

Autopsy.—On opening the abdomen there were found evidences of an old local peritonitis confined to the left side. The descending colon was firmly tied down by old adhesions throughout its extent. This part of the colon was very small, not so large, in fact, as the small intestine. I think it very probable that during the attack of dysentery, which he stated that he had a year ago, there was a perforation which caused the local peritonitis that produced the adhesions. There were found on opening the colon, inflammation and ulceration throughout its extent, most marked, however, in the descending portion, the mucous membrane of which was practically destroyed. These ulcerations, mostly circular in form, varied in diameter from five millimetres to three centimetres. Many had destroyed all the structures down to the peritoneal coat which was inflamed over them. The small intestine appeared to be normal. The liver was much enlarged and was adherent to the diaphragm over the site of the abscess. The latter, situated in the convexity of the right lobe, presented a large cavity with irregular projections from its walls. The walls consisted of a yellowish-white broken-down liver tissue gradually shading externally into the normal. Amœbæ were in the material scraped from the walls. The abscess was single, the remainder of the liver tissue being apparently normal. The gall-bladder was rather smaller than usual and contained a few drachms of normal bile. There were adhesions between the pleura over the base of the right lung and on the diaphragmatic pleura over region of abscess. There was hypostatic congestion of the posterior part of both lungs. The pericardium contained about six ounces of straw-colored serum. There were no other evidences of pericarditis.

CASE IV (U. S. army hospital ship *Relief*, Register No. 2526).—H. B. S., clerk, Quartermaster's Depart-

ment, U. S. army, aged thirty-two years, native of New Jersey. Admitted to U. S. army hospital ship *Relief* at Nagasaki, Japan, September 22, 1900.

History.—Health had always been excellent until going to the Philippines in April, 1899. He was perfectly well until April, 1900, when he had, as he stated, an attack of "malaria." He had fever at this time, slight in character, as he was able to continue his duties. About May 1, 1900, he began to have pains over the right side and in the right shoulder. He also began to lose weight about this time. In June his fever became worse in the evening and he began to have night sweats. His strength failed so much that he was obliged to give up his work in the latter part of June. He took a trip to San Francisco and returned to Nagasaki about September 10th, considerably better, as he thought, although he had not gained in weight. He did not notice the fever, but stated that the sweats were still present. On September 14th he noticed a slight circumscribed swelling on the right side of the chest in the midaxillary line on a level with the ninth rib. This increased rapidly in size and became very tense. He became alarmed, although he noticed no particular change in his general condition, and went to bed on the 18th. He was transferred to the *Relief* on September 22d. He stated that, since landing in the Philippines in April, 1899, he had not had even the slightest irregularity of the bowels. No previous history of dysentery. His appetite and digestion had been remarkably good.

On admission to my ward I obtained the foregoing history and found the following condition on examination:

Emaciation very marked; weight ninety-seven pounds; skin very pale and with a very slight yellowish tint; lungs normal; heart's action rapid and feeble, second sound slightly accentuated; pulse small and compressible, 96 a minute; temperature 100.4° F. On the right side of the chest, in the axillary line, there was a large tumefaction with fairly well defined borders. This extended from the eleventh rib below to the sixth rib above, was oval in outline, with a maximum width of four inches. Fluctuation was present, though it was rather doughy to the touch. Skin over tumor normal; very tender on pressure. The liver was markedly enlarged and tender, extending two inches below costal border. Bowels normal; appetite excellent; urine normal; a blood examination showed a leucocytosis of 13,000. Temperature on the evening of September 22d, 101.8° F. A provisional diagnosis of abscess of liver with perforation of diaphragm and chest wall was made, empyema being excluded by absence of physical signs and history.

I made an exploratory puncture on the morning of September 22d, finding pus containing dead amœbæ. In the afternoon of the same day I operated, making an incision three inches long over and parallel to the ninth rib, with its centre in the anterior axillary line. I found the subcutaneous cellular tissue necrotic and filled with pus, not a single large pus cavity, but numerous small ones in the interstices of the superficial fascia. On finding this condition I scraped out the whole cavity with a curette down to the chest wall and found an opening between the eighth and ninth ribs in the anteroaxillary line. This opening was about five millimetres in diameter and pus was flowing from it. I found the ninth rib bare, its periosteum having disappeared over an extent of four inches. This destruction of the periosteum affected only that on the external surface of the rib, that on the internal surface being normal and attached to the rib. At the extremities of the denuded portion, the periosteum presented a gelatinous condition, being thickened, very soft, and easily detached from the bone. The bone itself was not eroded. I extended the incision at each extremity along the rib to obtain sufficient room, and then removed the denuded bone (four inches). I enlarged the opening through the chest wall to three inches and evacuated 1,500 cubic centimetres of creamy pus mixed with a thinner reddish fluid. On exploring with the finger I found that the cavity extended downward and forward into the liver for several inches. Its walls were covered with shaggy, irregular, whitish, more or less broken-down, liver tissue. This was scraped away with a curette, the cavity washed out thoroughly and drained with gauze and tubes. The wound was dressed daily; the cavity flushed out and repacked. The discharge was quite free for the first week, but afterward rapidly diminished. The temperature fell to normal immediately after operation, and remained so with the exception of a few days in the first week in October, when I attempted secondary suture of a part of the large incision.

The patient's condition rapidly improved, the night sweats ceased, and he began to gain weight. On October 11th (eighteen days after operation), he was allowed to get out of bed, and on November 7th he was discharged. At the date of discharge, forty-five days after operation, he weighed 127 pounds and was feeling better than he had felt for a year.

Remarks.

Ætiology of Amœbic Abscess.—In all the cases the *Amœbæ coli* were present in the contents of the abscess or in its walls. In cases I and III *Amœbæ coli* were present in the fæces; in cases II and IV they were not demonstrable. In case II they were present in the pus expectorated. In case IV they were present in the pus which had burrowed through the chest wall into the subcutaneous tissue. No other organisms were present in pus obtained from the abscess cavity, so far as could be ascertained by microscopical examination. The pus was apparently sterile, but this cannot be stated positively as no cultures were made from it.

Relation to Dysentery.—In two of the cases amœbic dysentery was present. In case III it determined the fatal issue, but in case I the dysentery was well in hand at the time of operation. In case III the dysentery began only one month before a diagnosis of abscess was made. This patient had never been in the tropics, but gave a history of having had dysentery in Idaho a year before. In cases II and IV no history of diarrhœa or dysentery, recent or remote, could be obtained, though both had lived in the tropics for over a year. No amœbæ were demonstrable in the stools of these patients.

Only one, Case IV, gave a history of a *malarial infection,* and it is doubtful in that case.

It is interesting to note that cases I and II were members of the same organization and, presumably, were subjected to the same environment.

Symptomatology and Diagnosis.—Fever was present in all the cases. It was very irregular as a rule. The highest recorded was in case II, in which on one occasion it reached 103.8° F. The average maximum in the four cases was about 102.5° F. Chills were not present in

any of the cases. Sweating occurred in cases II and IV. These sweats usually occurred after midnight. Pain in the shoulder occurred in all four cases. Pain in the right hypochondriac region was present in all. *Tenderness* over the lower intercostal spaces and at the costal border on right side was present in all the cases.

The bowels were perfectly regular in case IV. In case II there was constipation. In the other two cases there was dysentery. *Emaciation* was one of the most prominent features in all cases. *Leucocytosis* was present to a slight degree in all cases. In cases II and III, where the local destruction was most intense, it was less than in the two cases where recovery ensued.

Appetite was excellent in all four cases. I think this of some value in diagnosis. Even in cases II and III the appetite was good until near the fatal termination. There was neither nausea nor vomiting, nor appreciable jaundice in any of the cases.

Cough of a dry, hacking character was present in cases I and II. In case II there were fits of severe coughing after rupture of the abscess into the lung.

Urine was normal in quality and quantity in all cases.

Heart.—In the two fatal cases there was a pericardial effusion of about six ounces. In all the cases the heart's action was rapid and weak and the pulse very compressible. The two patients who recovered bore anæsthesia very badly, and required powerful cardiac stimulants and saline infusion.

A *positive* diagnosis cannot be made except by the exploring needle. A large needle with an aspirator should be used, as the pus will usually not flow unless assisted by aspiration.

One instance has recently come under my observation in which plastic pleurisy, affecting the lower portion of the right pleura, has closely simulated abscess of the convexity of the right lobe of the liver. It is evident that empyema might still more closely resemble liver abscess, particularly a sacculated empyema near the base.

Number of Abscesses.—In cases III and IV the abscesses were single. In case II there were three abscesses. In case I there were probably two.

Site.—In cases I, III and IV the abscess was situated in the convexity of the right lobe. In case II one was on the convexity of the right lobe, one on the under surface and the anterior border of the right lobe, and one in left lobe.

Treatment.—Is entirely operative, and of course the operation should be performed so soon as diagnosis is made, the method depending upon the site of the abscess and other circumstances.

UNITED STATES ARMY HOSPITAL SHIP *RELIEF*,
NAGASAKI, JAPAN.

Doctor Stricken Blind.—Dr. Chestnut, medical superintendent of the Winnipeg, N. Y., General Hospital, was recently suddenly stricken with blindness while attending to his duties.

AUTO-INTOXICATION FROM RENAL INSUFFICIENCY, WITH AND WITHOUT DISEASED KIDNEYS; WITH REPORTS OF SOME REMARKABLE CASES.

BY JAMES T. JELKS, M. D.,

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MY attention was specially called to this subject several years ago by reading Bouchard on Auto-intoxication, Haig on Uric Acid, and, later, papers from the lamented Etheridge, of Chicago, and L. Duncan Bulkley, of New York. Bulkley wrote of Urinary Insufficiency in its Relation to Diseases of the Skin. Since then, I have read what Purdy has to say on the subject, and for years have made a point of examination of the urinary output (for twenty-four hours) of every patient who consults me. I wish to assure you that it has been a revelation to me, and the therapeutics based on this revelation has enabled me to accomplish some marvellous results.

We have been accustomed to think of uræmia as a result of diseased kidneys; I now know that it may occur in a person whose kidneys are perfectly sound. We have been taught recently by Bondurant and others that Bright's disease is a frequent factor in the causation of insanity. I know that insanity may supervene in a patient who, so far as can be learned, has no family defect in this line, who has no organic disease of the kidneys and is simply suffering from uræmic mania, or, if you please, insanity.

According to Purdy, Etheridge, Haines, and Haig, the amount of urinary solids eliminated daily should bear a certain proportion to the body weight. After forty years of age this amount is not so great, and hence a deduction is made from the standard. From forty to fifty years, ten per cent. is taken from the amount the person should pass; from fifty to sixty years, twenty per cent., and from sixty to seventy years, thirty per cent. A man, say twenty to forty years of age and weighing 160 pounds, should pass 1,168 grains of urinary solids daily; if he passes by actual measurements only 500 grains, what has become of the 668 grains? Suppose this to continue for days, what will be the condition of the patient? One of several things may occur; either a general condition of uricacidæmia, manifesting itself in vertigo, contracted capillaries, arteriosclerosis, cold skin, especially of the extremities, so-called sick headache, which is now recognized as uric-acid headache; "the blues" or melancholia, palpitation of the heart, interrupted heart beat, various forms of skin diseases, rheumatism, gout, endocarditis, pericarditis, myocarditis, hysteria, epilepsy, and genuine insanity. Can it be possible that all these things may be

the result of faulty elimination by the kidneys without the presence of disease in these organs?

In the report of the following cases, I have divided them into two groups; those with interstitial nephritis, and those without any organic lesion of the kidneys. I would especially call your attention to the relation of auto-intoxication to disease in women. In recent years, gynæcologist is another name for surgeon, and rightly so. But I wish to say that many women who come to us do not need "local treatment," and do not need surgical intervention; or, if they seem to need the latter, it is only apparently so. They are not cured by surgical procedures. Many would be cured if we took a broader view and gave these patients a general overhauling and a general line of treatment calculated to put all their emunctories into good working condition.

Our fathers were very nearly right when they purged all patients and gave so many of them calomel and squills. Here were remedies which stimulated elimination by the bowels and kidneys, and the result was a general feeling of well-being. This position is well illustrated by the popularity of patent medicines. Practically, all of them purge and stimulate the kidneys and eliminate waste products; thus the vital processes are relieved of the accumulation of toxines which are naturally produced by tissue metabolism. Practically all diseases of adult life, not infectious in character, are results of faulty metabolism and faulty elimination. If we can correct these defects our patients will be cured. Before reporting the cases I will call attention to the part that potassium salts play in the rôle of urinary intoxication, and from this you will readily see, that no patient suffering from defective urinary elimination should have any salt of potassium under any circumstances. I would especially warn against the error of giving bromide of potassium for the nervousness of these patients, or acetate or citrate of potassium as urinary stimulants.

Bouchard, on page 123 of his work on Auto-intoxication, says "Where the emunction of urine falls to one half or two thirds of what it ought to be," that "there is produced in the organism an accumulation of mineral substances, particularly potassium." Again, on the same page, "We know that among uræmic phenomena there may be, in certain conditions, a preponderance of the action of potash which may represent two thirds of the toxicity instead of one third." Quoting again from Bouchard, on page 125 we find: "If one kilogramme of man eliminates in twenty-four hours a quantity of urine capable of killing 461 grammes of animal, the proportional part that potash plays, is 217 grammes out of 461 —almost one half." Hence we say, under no circumstances give any salt of potassium to any patient whose kidneys are inflamed or inactive. In one of the cases referred to hereafter, I produced uræmia by giving bromide of potassium to quiet a distressing nervousness; again, to the patient I gave acetate of potassium, together with an infusion of digitalis, to assist the latter in increasing the urinary output. The result was an attack of uræmia which subsided when the potassium salt was eliminated. In the treatment of these cases the remedies used are as follows: Squill, calomel, milk, and large rectal or hypodermic injection of deci-normal saline solution; digitalis or its derivatives, sodium phosphate, sodium salicylate, and vichy water. The small quantity of potassium present in the vichy is not deleterious.

All of these remedies were used in connection with the baths, where it was possible to give them, and these patients were ordered to drink from one half to one gallon of water from the hot springs daily. Several of them were inmates of the Ozark Sanatorium. The diet consisted of fruits, vegetables, milk, and not more than three or four ounces of meat in twenty-four hours.

An easy method of ascertaining the amount of urinary solids is to collect the entire amount of urine for twenty-four hours. Let me ask you to insist on this with your patients, or they will bring you one half or one third of the amount. Take the specific gravity and multiply the number of ounces by the last two figures of the specific gravity, and to this amount add ten per cent. This will give you a very close approximation to the amount passed by the patient; or, you may multiply the last two figures of the S. G. by the coefficient of Häser, 2.33; this will give you the number of grammes in 1,000 cubic centimetres of urine; then, if the patient has passed 1,500 cubic centimetres, you have a simple sum in arithmetic as follows: Say the urine is 1,020 S. G. and the patient has passed 1,500 centimetres, you proceed thus:

20 by 2.33 equals 46.60 grammes in 1,000 cubic centimetres, therefore $\frac{46.60 \text{ by } 1500}{1000}$ equals 69.9 grammes of solids.

Personally I prefer the method advocated by Etheridge, Bulkley and Haines, viz., multiply the number of ounces for the twenty-four hours by the last two figures of the S. G. and add to the result ten per cent.

TABLE No. 1.—Relation of body weight of healthy human beings to daily excretion of urinary solids.

TABLE No. 2.—Relation of body weight of women of average health to total excretion of urinary solids.

TABLE No. 1. Weight.	Total Urinary Solids.	TABLE No. 2. Weight.	Total Urinary Solids.
40 pounds	392 grains.	90 pounds	500 grains daily.
50 "	472 "	95 "	535 " "
60 "	563 "	100 "	570 " "
70 "	639 "	105 "	605 " "
80 "	716 "	110 "	640 " "
90 "	789 "	115 "	675 " "
100 "	854 "	120 "	710 " "
110 "	916 "	125 "	745 " "
120 "	974 "	130 "	780 " "
130 "	1,028 "	135 "	780 " "
140 "	1,078 "	135 "	815 " "
150 "	1,150 "	140 "	850 " "
160 "	1,198 "	145 "	885 " "
170 "	1,237 "	150 "	920 " "
180 "	1,260 "	155 "	955 " "
190 "	1,300 "	160 "	990 " "
200 "	1,330 "	165 "	1,025 " "
		170 "	1,060 " "
		180 "	1,100 " "

For patients between forty and fifty years of age, deduct ten per cent.: for those between fifty and sixty years,

twenty per cent.; and for those between sixty and seventy years, thirty per cent.

CASE I.—W. J., aged forty years, weight 170 pounds. Came to Hot Springs for disease of the rectum, which was pronounced syphilitic and for which his physician gave him mercury and iodide of potassium, the latter in increasing doses until 240 grains daily were given. The last ten days of the treatment the patient grew rapidly worse, became delirious and weak, was put to bed and a watch was set over him. Delirium increased until his family decided to send him to some institution for nervous diseases. At this point I was called in consultation with two other physicians. The physician in attendance thought the patient was suffering from syphilis of the brain. This I questioned for several reasons, of which one was that the symptoms all came on after the large doses of iodide of potassium were reached; and, knowing that potassium salts enter largely into the ætiology of uræmia, I thought that the man was suffering from urinary intoxication. His urine for twenty-four hours showed twenty ounces, 1,010 S. G., albumin and hyaline casts. This gives 240 grains of urinary solids, as against 1,237 that he should pass. The mercury and iodide were discontinued, and, at the request of his physician, who was on the point of leaving for his vacation, I took charge of the case. He was given one quart of vichy water daily, one glass of sweet milk every two hours, and a tablespoonful of infusion of digitalis after meals. His brain cleared up in ten days.

CASE II.—Mrs. B., aged fifty years, weight 90 pounds. Great depression; always has the "blues," and feels that she is dying; is constantly saying so to her family and friends, and accuses them of want of affection, though they are devoted to her. Analysis showed albumin and casts. She should have passed 500 grains daily; actually passed 170; stored 330.

CASE III.—Mrs. M., of Kentucky, aged sixty-five years, weight 170 pounds. Rheumatic pains. Examination showed albumin and casts. She should have passed 1,060 grains daily; actually passed 264; stored 796.

CASE IV.—Mrs. J. Heart very irregular, rapid and intermittent, delirium and constant talking, singing or counting with incessant motion of the hands or feet; an utter impossibility to keep her quiet, though there was no violence. Urine for months showed no albumin and no casts. After a prolonged course of diuretin, which is a salicylate of theobromine, casts and albumin appeared in the urine, the latter in about fifty per cent. by volume. She has had in the last twelve months four attacks of dropsy. I placed her on infusion of digitalis and vichy water with nitroglycerin, and the urine increased to 100 and occasionally to 140 ounces daily. At this point all symptoms of uræmia disappeared and her heart lost much of its irregularity.

CASE V.—Dr. J. P., aged sixty-four years, weight 190 pounds. Rheumatism in knees, vertigo, and great weakness. Urine showed no albumin. Should have passed 910 grains daily; actually passed 364; stored 546. Treatment as above outlined for one month, in connection with the baths, relieved him of all his symptoms.

CASE VI.—Mrs. G., aged thirty-three years, weight 125 pounds. Intense nervousness, gets very melancholic and cries easily. No albumin and no casts. Should have passed 745 grains; actually passed 389; stored 356.

CASE VII.—J. A., aged thirty-five years, weight 150 pounds. Rheumatism in hands and feet; neither albumin nor casts in urine. Should have passed 1,150 grains of solids daily; actually passed 396; stored 754. In two weeks, under digitalin, he passed 704 grains and was steadily improving.

CASE VIII.—Colonel B., aged sixty-one years, weight 135 pounds. Rheumatism in feet, back and knees. No albumin, no casts. He should have passed 821 grains of urinary solids daily; actually passed 572; stored 249 grains.

CASE IX.—Mr. J., aged forty years, weight 220 pounds. He came to me suffering from an attack of carbuncles, with high fever. After he was operated on, fever disappeared, wound healed. Later on he became delirious, and we were compelled to tie him to his bed. He was as "mad as a March hare." Urine was very scant in quantity and high specific gravity. At one time, we seriously considered sending him to an insane asylum. Under digitalin, vichy water, hot water, and milk, the urine increased in quantity, and when it reached 100 ounces his brain cleared up.

CASE X.—Mrs. L., aged thirty-eight years, weight 130 pounds. Very nervous and depressed. For the last seventeen years has had facial neuralgia about every twenty days. Uranalysis showed no albumin, no casts. Should have passed 780 grains daily; actually passed 229; stored 561.

CASE XI.—J. W., aged forty-nine years, weight 160 pounds. Lawyer, very nervous, vertigo, unable to work with vigor. No albumin, no casts. Should have passed 1,097 grains; actually passed 792; stored 305.

CASE XII.—Mr. D., aged thirty-eight years, weight 240 pounds. Rheumatic pains over body; no albumin, no casts. Should have passed 1,330 grains or more of solids; actually passed 720; stored 610.

CASE XIII.—Dr. R., aged forty-two years, weight 170 pounds. Rheumatism; no albumin; no casts. Should have passed 1,150 grains; passed 728; stored 422.

CASE XIV.—Mr. L., aged thirty-eight years, weight 170 pounds. Vertigo, melancholia, and very irritable. Hands and feet burn all the time; pain in calves of legs and lumbar region; no albumin, no casts. Should have passed 1,237 grains; actually passed 363; stored 874.

CASE XV.—Mr. O., aged thirty-five years, weight 175 pounds. Uranalysis showed no albumin, no casts. He suffered great depression, weakness, interrupted heart beat and intense melancholia. Passed twelve ounces of urine with a specific gravity of 1,030; should have passed 1,250 grains of solids; actually passed 396; stored 854.

CASE XVI.—J. L., aged fifty-eight years, weight 17[illegible] pounds. Uranalysis showed no albumin and no casts. Gout in great toe. Should have passed 991 grains of solids daily; actually passed 297; stored 694.

CASE XVII.—Dr. T., aged forty-eight years, weight 160 pounds. Vertigo, melancholia, difficulty in keeping up conversation; excluded himself from society; saw no one if he could help it; apprehended epilepsy. Uranalysis showed no albumin, no casts. Should have passed 1,040 grains daily; actually passed 374; stored 666.

CASE XVIII.—Mrs. M., aged forty years, weight 15[illegible] pounds. Vertigo, low spirits. Uranalysis showed no albumin, no casts. Should have passed 850 grains daily; actually passed 572; stored 278.

CASE XIX.—E. N., aged thirty-nine years, weight 165 pounds. Great vertigo; could not attend to business, could scarcely get about and frequently fell down. No albumin, no casts. Should have passed 1,120 grains; actually passed 432; stored 688.

Case XX.—Mrs. J. S., aged fifty-seven years, weight 90 pounds. Recently suffered from an attack of herpes zoster with great pain in the intercostal nerves. Should have passed 500 grains daily; actually passed 308; stored 192.

Case XXI.—J. G., aged thirty-seven years, weight 170 pounds. Rheumatism in hands, feet, and knees. Uranalysis showed no albumin and no casts. Should have passed 1,237 grains daily; actually passed 531; stored 706 grains.

Case XXII.—J. S., aged forty years, weight 250 pounds. Consulted me on September 15th. For the last week he had been troubled with great vertigo, weakness, and heaviness of legs. Could not stand. Uranalysis showed nineteen ounces and a half, with a specific gravity of 1,025. Should have passed 1,400 grains daily; actually passed 487; stored 913.

Case XXIII.—Colonel J., a very prominent politician, suffered from an uncontrollable desire to talk. He had a perfect diarrhœa of words, and impressed people unfavorably; they thought he was going crazy, and so reported him. When he consulted me this was the only noticeable feature about the case. Uranalysis showed there was no albumin and no casts, but he was eliminating 1,750 grains of urinary solids daily when he should have passed only 1,260. Here was a plus elimination of 490 grains a day. This was strange, and it occurred to me that the plus elimination of these poisons set his tongue wagging continuously; in other words, he was suffering from a too rapid elimination of toxines which had previously been stored in large quantities. He was relieved by giving him for one week, nitrohydrochloric acid, and then sodium salicylate in addition to the acid. Recovery was complete and permanent.

In closing, I will say that those patients who are suffering from renal insufficiency because of nephritis usually die, not from the nephritis, but from the cardiac complications; namely, the hypertrophy and subsequent dilatation with which, sooner or later, all these cases are afflicted. Hence, the main indications for treatment are connected with the heart. If it is pounding because of capillary contraction or arteriosclerosis, nitroglycerin, opium, chloral hydrate, or iodide of sodium should be given to overcome the peripheral resistance. Careful watch should be kept on the heart, and if dilatation is threatened, digitalis infusion or digitalin should be prescribed, with rest in bed. In using digitalin I always order what is known as "German Merck" digitalin in preference to the American preparations or the "French Merck." This remedy I give in doses of from one fifteenth to one eighth of a grain three or four times a day.

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INTESTINAL OBSTRUCTION.

By LOUIS A. HERING, M. D.,
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"Mechanical interference with the passage of fæces through the bowel" defines this affection in a sense at once comprehensive and explanatory. When we come to consider its pathogenesis, and realize that it is the result of several distinct, independent disorders and is a condition rather than a disease *per se,* the classification into acute or chronic is acceptable, and the sub-classification into partial or complete appeals to our understanding as proper.

This paper will treat of that class of cases essentially acute in their manner of onset, and complete in type and character.

Among the structural changes bearing a causal relationship to the condition under consideration are mentioned intussusception, internal strangulation or constriction, volvulus, stricture or compression, and congenital malformation; causes other than structural, are functional obstruction and impaction of fæces or of foreign bodies. Since the cases coming under the consideration of the writer have been in the adult, the causes accepted as operating in children may be barred from consideration. I may state, however, in passing, that I have been impressed by the frequency of intussusception as a cause of obstruction in the adult. This condition is readily conceded by most pædiatrists to be a very frequent cause in children, but is somewhat hesitatingly admitted to consideration as a factor in the adult by most writers on the subject. I can confidently state that it must not be entirely eliminated as a cause operating in the adult and that it is a more frequent type of obstruction than has been heretofore believed. Again, it is a question with me whether invagination is a primary or an associated cause when fæcal impaction can be diagnosticated as present, giving us the proposition to consider whether, primarily, we may not have an invagination at the ileocæcal valve (which D'Arcy Power (1) asserts to be the seat of obstruction in from forty to sixty per cent. of cases), the pathological changes incident thereto laying low the peristaltic wave of the intestinal tract beyond, and thus allowing the lodgment or impaction of fæces; or whether the fæcal accumulation may be considered as primarily active, and the back-flow of gases arising from the accumulated waste matter as producing the intussusception at the ileocæcal valve, the distention acting as a stimulus to peristalsis, thus driving the ileum into the cæcum, and, in the event of this variety of obstruction being complete, driving the whole into the colon, the ileocæcal valve forming the apex of the intussusception.

One authority states it as his opinion that the active cause of invagination is irregular peristalsis; probably, a quiescent state of a portion of the intestine with hyperperistalsis of an adjacent portion would be a better explanation, the active portion being driven into the distended and inactive portion. Colic, diarrhœa, and constipation are each in turn advanced as causative factors favoring the development of this condition. In the cases under consideration obstinate chronic constipation was the cause.

Internal strangulation, or constriction, is tabulated as causing about thirty-five per cent. of all cases, the ileum being the portion of the intestinal tract most frequently

involved. Fibrous bands and adhesions resulting from peritonitis are cited as common causes; the vermiform appendix, by attaching itself to some point in the pelvis, may become a constricting band and in this way produce obstruction (2).

Volvulus contributes from about three to ten per cent. to the fatal cases. The common situation is the sigmoid flexure. The cæcum is also a frequent seat of the accident; the lesion in this case generally consists of a twist in the long axis of the gut, or a loop of the bowel may be twisted around another, or, again, the gut may be bent sharply upon itself.

Stricture and compression rarely produce complete obstruction, and they result generally in chronic constipation. Cicatricial contraction following ulceration, as occurs in dysentery, syphilis, tuberculosis, and cancer, is the most common cause of stricture. In my experience, chronic constipation, obstinate in type and character, has occupied oftenest the causal relation to acute intestinal obstruction.

"I go along all right for a time, then become constipated—after four or five days I pass a lump as hard as a stone, it seems, and then I have relief for a time," was the narrative of his complaint by one patient who subsequently was down with obstruction with perforation of the bowel. It will be found that a goodly percentage of cases of this malady are primarily due to fæcal impaction high up in that portion of the descending colon known by the name of *S romanum,* which sets up secondarily, by a reversal of peristalsis, an invagination of the ileum into the cæcum at the site of the ileocæcal valve. In cases coming under my observation the cause and effect mentioned seemed to be operating as evidenced by physical signs and clinical symptoms.

Syndromology.—The tripod of symptoms announcing acute intestinal obstruction is generally stated to consist of pain, vomiting, and entire absence of stool. These are the rule to which the exceptions are many; thus, one of the writer's patients passed a very small quantity of fæcal matter some hours before making his exit. Such an occurrence, happening in the practice of the diffident, dilatory practitioner may prove the soothing syrup which lulls him into inactivity, if I may be allowed the vulgarism to impress the truth. In this same case, also, the patient had ceased vomiting; and if cessation of vomiting is regarded as a herald of signal success attending upon waiting tactics, it may prove illusory. In another case, while the rectum was being examined by a colleague who had been called in consultation, gas was passed, and I believe that he was led to make a more favorable prognosis from this fact; vomiting had also ceased in this case.

Pain is a constant symptom and is of an aggravated, agonizing character, closely simulating that of gastralgia and setting in suddenly, as a rule. It may be all over the abdominal area, but careful inquiry will elicit the fact that it seemed to start on the right side over the site of the cæcum, which, upon pressure, will often be found to be the tenderest point. Of the gastro-intestinal symptoms, the earliest in evidence is the belching of gas, becoming more and more frequent as the case progresses; eventually, after three or four hours, or, frequently, later, vomiting sets in, first of food and other matter, followed by mucous material, and, finally, if perforation has not taken place in the interim, fæcal matter is ejected. In one of my cases there was persistent vomiting of bile and no fæcal matter, which of course ceased after perforation had occurred. The vomiting was projectile, almost incessant, and most distressing. Hiccough was present at some time in all my cases.

The entire absence of stool is essential to establish a diagnosis of complete intestinal obstruction, bearing in mind that small bits of fæcal matter may be detached from the mass and be passed during the efforts at defæcation; no flatus escapes *per rectum,* or very little, and this only at long intervals. The temperature is very little elevated, and, in the cases under consideration, showed frequent remissions to normal at the morning observation; at no time was the rise more than 1° F., notwithstanding the slight thermometric range. Thirst was so pronounced as to attract attention, thirst which could not be appeased; the temperature chart is, therefore, of little value as a guide in this affection, unless there is a subnormal temperature due to gangrene, perforation, or septic peritonitis, all of which cause rapid collapse. The pulse increases steadily in rapidity and is small and wiry.

Gaseous distention of the abdomen was prompt and progressive, so that the site of the umbilicus formed a deep pit, and I could observe in all my cases peristaltic movement, which soon disappeared. Pitting could be freely demonstrated on the left side of the abdomen over the site of the impacted fæces, and extreme tenderness over the whole abdominal area, most pronounced over the cæcum, less in evidence over the impaction; only elicited there on deep pressure. Rectal examination demonstrated a small tumor-like feeling on the left side of the pelvis. Upon percussion, the abdomen proved to be superresonant, tympanitic in all its regions, the tympanites being exaggerated over the site of the cæcum, modified over the location of the impacted fæces upon light percussion, and flat upon deep percussion. Tenesmus was always present, together with blood passed *per rectum.*

There was noticed a rapid loss of flesh and strength, and the ocular padding of adipose tissue had perceptibly vanished by the third day of illness. Borborygmi, so loud as to be heard at some distance from the bedside, were frequent. Toward the close, there was noticed great restlessness; the face was pale and cold, and the body clammy to the touch; the eyes were sunken, the nose was sharp, and the features were pinched; the voice was inaudible or whispering; the pulse very rapid and small, and the temperature was slightly elevated, or, when shock was established, subnormal; the tongue was dry and glazed, thirst was increased, the mind in exceptional cases remained clear, and the patient at times tossed

about moaning, but oftener complete euthanasia was present.

Prophylaxis.—Much may be accomplished by prophylactic measures, *e. g.*, an abdominal binder should be recommended for those presenting the condition of enteroptosis, or in those habitually constipated (and I believe that this habit predisposes the largest quota to intestinal obstruction); a fixed habit should be formed of going regularly to stool each day at a certain hour. As to diet, the foodstuffs especially to be advised are fresh green vegetables and succulent fruits. The eating of an apple at bedtime, in itself seemingly an insignificant matter, is an efficient aid to movement of the bowels the next morning; however, to secure this effect, eating an apple should become a fixed habit. With these measures should be conjoined systematic massage of the abdomen. A very excellent practice is to flex the body several times night and morning while in a standing position, as recommended by Tyson (3); and, lastly, since I have been able to trace this condition in my cases to some faulty action of the liver, I have become partial to the use of phosphate of sodium administered in a glass of hot water before meals.

Treatment.—In acute intestinal obstruction, gangrene sets in early; indeed, Eskeline would have it beginning as early as the third day. It is evident, therefore, that one must bring into play a faultless perception and quick decision in meeting the exigencies which arise in this condition; exhaustion steadily advances by forced marches and soon wrests from the patient any vitality that would stand him in good stead should an operation be determined upon. I have recently operated upon a patient in whom ileus followed vaginal hysterectomy for cancer. I opened the abdomen early on the second day after signs of obstruction had become evident, and found that the bowel had been perforated in a minute area of necrosis, and that the pelvis was full of liquid fæcal matter; this emphasizes the importance of operating early before the gut is weakened by inflammation and its attendant sequelæ.

Among medical measures which may be instituted as precursory to surgical intervention in the event of failure, high rectal enemata head the list. These should always be given with the patient in the knee-chest position, but, if the patient is too weak to assume this posture, a left or right lateral semiprone position will answer. The enemata should be carried by means of a long, flexible rectal tube as high up as one can succeed in introducing it; plain warm water, or water and glycerin, or water to which a modicum of turpentine has been added, the turpentine being emulsified by shaking up with an egg, may be used. If three or four enemata do not yield results, it is, in my judgment, unwise to delay cœliotomy. It is risky to administer purgatives, although I have on occasion given a single large dose to see whether it would pass through.

Opiates should be withheld as part of the medical treatment. Murphy (4) warns against giving opiates, since they mask the symptoms; they should only be given during the time consumed in preparing for operation, to obtund the pain. In the event of failure with the enemata, all observers are agreed that early operation offers the only salvation for the patient. Murphy (5) operates early; McArdle (6) advocates early operation; Broca (7) operates after twenty-four hours; Naunyn (8) also urges early operation, and holds that the best results are obtained in the first three days.

Operative Treatment.—Abdominal section in the treatment of intestinal obstruction is one of the most formidable operations in surgery, and the surgeon who undertakes it should be familiar with the anatomy of the abdominal cavity and its contents. A good surgeon must necessarily be a good antiseptist and aseptician; therefore it is unnecessary for me to lay down here a description of the technique for his guidance. Suffice it to state that strict precaution should be exercised to have everything concerned in the operation sterile, remembering that as soon as the abdomen is opened sterile normal salt solution should replace the antiseptic solutions. Sponges, gauze pads, etc., for use in the abdominal cavity, should all have been sterilized by heat, and should not come in contact with the chemical antiseptic solutions. If morphine has not been already given to the patient, I deem it excellent practice to administer it just before beginning the operation, and it is well, also, to give strychnine hypodermically. I have never been able to introduce a stomach-tube with uniform success in this condition, on account of the eructation of gas and the vomiting; but it is recommended to precede the administration of the anæsthetic, and also as a medical measure to relieve the nausea and vomiting.

The obstruction can rarely be located to a certainty beforehand; it is best, therefore, to make the incision through the right rectus muscle, large enough to at least admit the hand. Much trouble will be experienced in handling the intestines, on account of the contained gas; it is best to give vent to this, not, however, until the obstruction has been found. The opening for this purpose should be transverse to the long axis of the gut, and should be closed with Lembert sutures.

In the systematic examination of the intestines for the purpose of locating the obstruction, it is well to mark the point of beginning by making a slit in the mesentery, running a piece of gauze through the opening, and loosely tying it, not forgetting to repair this same slit when finishing the operation. If the patient is in good condition, he may be put in the Trendelenburg position, since it facilitates the handling of the gut. If the opposite condition prevails, then the dorsal decubitus should be assumed, and the intestines protected by warm gauze compresses, moistened with the normal salt solution.

When the obstruction is located and the involved portion of the gut is resected, if necessary, the next step which gives one the most perplexity is the method of

establishing anastomosis. I have used the old method of suturing advocated by Abbe (9), and I give his technique. After the resection of the gut has been done, and the two free ends have been closed in the usual manner, the two ends are laid alongside of one another, and two rows of continuous Lembert sutures, a quarter of an inch apart, and one inch longer than the proposed cut, are applied. Each thread should be twenty-four inches long and should be left at the end of its row, still containing its needle; the bowel is now opened a quarter of an inch from the sutures for four inches, both rows of sutures being to one side of the cut; the opposite portion of the bowel is next opened in the same manner; the two adjacent cut edges are now united by an overhand suture, the needle piercing both the serous and mucous coats, and in this way stopping the bleeding vessels, which have previously been secured by hæmostatic clamps; the cut free edges are similarly whipped, after which the serous surfaces on the opposite side of the opening are approximated and secured by two rows of continuous Lembert sutures, the first two threads being utilized for this.

I have here detailed the simplest method which I know of, and it is free from the many risks which attend the employment of artificial aids to anastomosis, of which there are many, *e. g.*, Senn's bone plate, Abbe's catgut rings, Robinson's untanned leather plates, Stanis's cartilage plates, Baracz's turnip plates, Dawbarn's potato plates, Murphy's button, and the various forceps and appliances which are introduced from time to time to facilitate suturing. I think that, after a trial of all of these, the surgeon who is called upon to do much work with the intestines will applaud the simpler method given above. I have lately used on dogs a contrivance which I fashioned myself somewhat after the LaPlace forceps, and I must admit that I like it; it is, however, constantly in the way, and is a clumsy method.

In resecting the gut, it is well to clamp above and below the portion to be so removed, surrounding the portion to be cut away with sterile gauze to protect the peritonæum. If an end-to-end anastomosis is decided upon, I have found a sterilized potato, cut into the shape of a double-pointed cone, serviceable; it can be made to fit all sizes of gut and inserted into the ends of the intestine, and these then drawn over the potato and approximated. It furnishes a *point d'appui* for passing the suture. The sutures should not be passed through the entire bowel, as practised in Maunsell's (10) method, on account of the element of risk of producing infection, a method, it seems to me, just as pernicious as the advice given to evacuate the gas in the bowel by needle punctures.

After the bowel has been reposited, the abdominal incision should be approximated according to the technique laid down by Kelly (11), of Baltimore. This avoids disturbing the patient for the removal of sutures, and is more efficient than the older methods.

After-treatment.—It will always be wise to surround the patient with heat when putting him back to bed after an operation. I have sustained my patients by rectal alimentation, and have not allowed any food to enter the stomach for two days. This is an unnecessarily long period, and I now begin the administration of peptonized milk in small quantities after a lapse of twenty-four hours in favorable cases; and, later, if this is well borne, of egg albumen water. This regimen is continued up to the fourth or fifth day, and, if the pulse is normal and the general condition is encouraging, I advise a semi-liquid dietary, gradually coming back to the ordinary diet as time goes on. In the beginning, when nothing is allowed by the stomach, thirst is bitterly complained of; this may be somewhat appeased by sponge baths or rectal enemata of warm normal saline solutions. Bismuth is advised by some, to allay the thirst. I have always found it too irritating and constipating in this condition, the action of the drug being probably enhanced by the paralytic condition of the intestinal tract.

In this condition, we have still the critical point to pass in securing action of the bowels. When this occurs, it is one of the most favorable signs, signalizing, as it does, the successful removal of the obstruction and the restoration of peristalsis in the intestinal tract. Measures to move the bowel should not be instituted until the third day, and at this time the best preparation to give is effervescent citrate of magnesium, freshly prepared. Opiates should be withheld, because they impair peristalsis and, in that way, delay the spontaneous movement of the bowel.

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SOME REMARKS ON EPIDURAL HÆMORRHAGE WITHOUT FRACTURE OF THE SKULL, AND REPORT OF A CASE.*

By J. SHELTON HORSLEY, M. D.,

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THOUGH in recent years surgery has been advancing with seven-league strides, there is probably no region in which progress has been so marked as in the treatment of injuries to the brain and its membranes. Surgery of brain tumors and abscesses is in occasional cases brilliant, but on the whole unsatisfactory and productive of

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little good. In spite of the scholarly work of Victor Horsley, Munk, Ferrier, and others, location of brain tumors in the hands of skilled neurologists is most uncertain, and, even when they are located, surgical intervention is usually unjustifiable.

It is in traumatisms of the brain and its membranes that the advances in physiology, backed by modern surgical methods, have proved of such inestimable benefit. Experimentally, it has been determined that the introduction of a non-irritating substance into the cranial cavity can be continued without producing cerebral symptoms until six and a half per cent. of this space is filled. Above this amount, evidences of pressure or compression are shown. If the amount introduced epidurally equals in volume one twelfth of the cranial cavity, fatal coma results. The effect also varies according to whether the substance is injected suddenly or gradually, the brain tolerating more compression under the latter condition. Pressure thus produced soon results in compression of the whole brain, and consequent cerebral anæmia.

The chief sources of epidural hæmorrhage are three: From the sinuses of the dura mater, from the veins of the diploe, and from the middle meningeal artery or its branches. This last is much the most dangerous, as the slight pressure which is produced will usually check hæmorrhage from the first two sources before much blood is lost, if no fracture exists.

The dangers of epidural hæmorrhage without fracture of the skull are, in the order of their importance, compression of the brain, shock, and exsanguination of the patient. The first is by far the most serious, and here localization of motor and sensory centres is of great value.

The diagnosis of this condition is most important, and in cases uncomplicated by cerebral injuries is comparatively easy, if a correct history of the case can be obtained. The symptom which is well nigh pathognomonic is an interval of consciousness between the time of injury and the first cerebral symptom. This interval may be a few minutes or many hours, depending upon the severity of the hæmorrhage. During this time the patient feels perfectly well. Of course, epidural hæmorrhage frequently exists when there is no such interval, but this class of cases will be found complicated with some trauma of the brain. Subdural or pial hæmorrhage is rarely sufficient to cause compression, and cortical hæmorrhage cannot exist without a lesion of the brain itself.

Other signs and symptoms of importance exist. There is usually some sign of injury to the scalp, if only a slight contusion. Inequality of the pupils is frequently found, the pupil on the side of the hæmorrhage being dilated. This, however, is by no means always true. The period of coma from compression comes on gradually and is heralded by stupor, convulsions, and paralysis. Early convulsions point to the first seat of pressure. As it takes a considerable amount of blood to cause sufficient pressure for cerebral symptoms, by the time this quantity has accumulated a number of centres are covered and pressed on, and as pressure increases we find hemiplegia or paraplegia coming on gradually, according to whether the hæmorrhage is on the side or the top of the brain. In the latter instance there is hæmorrhage from points on both sides of the middle line as a rule. This paralysis is at some time associated with convulsions of the rest of the body, due to cerebral compression. Epidural hæmorrhage at a distance from motor centres or tracts, as in the frontal region, cannot cause convulsions or paralysis (including paralysis of the iris muscle) until it has produced general compression. The speech centre is soon affected if the hæmorrhage is near it. The breathing is slow, deep, and stertorous in a majority of cases, and is always slow when much bleeding exists. The pulse is usually slow and full, and later, when the heart and its ganglia become tired, and the centre of the vagus paralyzed, is rapid and weak. It is frequently of unequal volume on each side. The temperature is subnormal. With severe general compressions control of the bladder and rectum is lost.

Uncomplicated cases of epidural hæmorrhage without fracture, and of sufficient severity to cause diagnostic symptoms, should be operated on as soon as possible; but, as Abbe has so truly said, while speaking of perforations in typhoid fever, one should never be in such haste as to handicap himself too greatly by poor lights, poor assistants, or unfavorable surroundings. It should also be borne in mind that epidural hæmorrhage is frequently so complicated by injuries to the brain as to contraindicate an operation, or at least to affect the time at which it should be done. Dr. Charles Phelps, of New York, says: "If other intracranial injuries have been sustained which are obviously or presumably of immediately fatal character, operation will probably hasten rather than retard the catastrophe. It is only when symptoms point clearly to hæmorrhage as the essential, if not the exclusive, lesion that operation for its relief will afford legitimate hope of success." The operation of trephining is a comparatively simple procedure, and in the hands of a surgeon of ordinary skill should be practically without mortality, just as exploratory cœliotomy is. In cases where there is reasonable doubt as to the severity of the cerebral lesions it is probably best to trephine, remove clots, and stop bleeding. This will relieve pressure and give Nature a chance to take care of the other injuries. The steps for this operation are detailed in surgical text-books, and do not come within the province of this paper, but I wish to lay stress upon three most important features in the after-treatment, viz.: free purgation, rest, and cold applications to the head.

In reporting the following case, I am aware that it is not very rare, nor is it unusual in any large city hospital with an emergency service; and I should, perhaps, apologize for reporting it. But it is a very typical case

of epidural hæmorrhage without fracture, and shows what can be done for such cases if operated on at the proper time. For these reasons I trust it may be of some interest.

Mr. R. R., aged twenty-one, works in a steam laundry; previous health good. On March 4, 1900, about 9 P. M., he was struck on the head with a wooden club. He was momentarily stunned, but soon recovered and felt perfectly well. About an hour and a half after the injury he became drowsy, and within a few hours fell into a stupor. Dr. H. H. Stark was called in. At this time he could be aroused from the stupor, but would soon relapse into the same condition. The following afternoon Dr. J. A. Rawlings was called in consultation. The condition of the patient was rapidly becoming worse, and at 7 o'clock on the evening of March 5th these gentlemen kindly referred the case to me for operation. There was a small contusion on the left parietal eminence. The patient was in profound coma. His pupils were slightly contracted, were equal, and would not respond to light; his breathing was slow and stertorous, but not very deep; the pulse was irregular and intermittent, and on the operating-table, before the clot was reached, would vary from 110 to 160; the temperature was 97° F. The right side of his body and face was paralyzed, and the left arm and leg were in constant jerking convulsions. He had lost control of the bladder and rectum. The operation was performed at St. Luke's Hospital, with the assistance of Dr. Stark and Dr. Rawlings, at 8 P. M., an hour after the patient arrived. No anæsthetic was used at first, but convulsions of the left side proving annoying, chloroform was finally given. I intended making an osteoplastic flap with the trephine and Gigli saw, but, as the patient's condition was becoming rapidly worse and haste was demanded to relieve pressure, I trephined over the left parietal eminence and came down upon a large clot of blood. There was no fracture of the skull, not even a fissure. The trephine opening was enlarged with rongeur forceps, and a quantity of blood, estimated from four to six fluid ounces, was removed by means of the finger, a uterine curette, and small gauze mops on artery forceps. The opening was a little above the middle of the clot, which measured an inch and a half deep at its centre and covered an area about four inches in diameter. Only slight bleeding occurred after the clots were broken up and removed; so the space was loosely filled with iodoform gauze and a rubber drainage tube inserted. A few silkworm gut sutures were introduced and left untied. Bleeding from the scalp was free, but easily controlled by a continuous overhand suture of catgut, carried along the margins of the scalp wound. His temperature was 98.5° F. an hour after the operation, and did not vary as much as half a degree during the entire convalescence. Next morning the patient was conscious and answered questions intelligibly. On March 7th, the dressing was changed, the gauze and tube were removed, and the sutures, previously introduced, were tied. The first week the patient was inclined to be noisy at night. Some superficial suppuration resulted, but otherwise he recovered uneventfully. He was discharged on April 9th.

A Health Officer for Atlanta.—A movement is on foot in Atlanta looking toward the appointment of a salaried health officer for the city. The matter has been discussed in the city council and referred to a special committee for consideration.

THE CLOSURE OF CUTANEOUS WOUNDS WITHOUT SUTURE.

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NEW YORK.

INFECTION along the track of a suture is an accident which occasionally occurs in spite of every precaution known to surgical science. It is particularly annoying when the operation was supposed to be a clean one, and much of the final success depends upon absolute primary healing. Take, for example, the removal of the vermiform appendix during an interval between acute attacks. Here we strive to leave the abdominal wall as nearly normal as possible, with no weakened portion at the site of the incision. Primary union is essential if this ideal result is to be attained. Suppuration among the deeper layers of the parietes usually leads to the formation of an insecure cicatrix with the probability of hernia in the future. Now, it is a matter of common observation that ligatures and buried sutures, no matter of what material they may be, rarely become infected, but that the suppuration of stitch-holes in the skin is comparatively frequent. The most plausible explanation of this is that the sutures become infected from the skin itself. This is hardly to be avoided in a certain proportion of cases, because of the well-known impossibility of sterilizing the deeper layers of the living human skin, and when infection occurs it is apt to spread to the deeper parts of the wound even in the presence of drainage.

Certain suture materials appear to invite trouble more commonly than others. Catgut and the other absorbable animal substances not only are pabulum for bacteria, but in the presence of infection they swell by imbibition, thus plugging the suture-openings and causing retention. Silk, silkworm gut, and the other non-absorbable substances do not swell and may even act to a limited degree as drains in the presence of infection. Still, they, as well as the catgut group, may carry pathogenic bacteria from the skin to the deeper portions of the wound. Silkworm gut and the other rigid materials have the additional fault that they do not conform exactly to the position of the tissue planes, as does the more pliable silk. Spaces are therefore formed in the suture tract which, filling with lymph or blood clot, become septic in the presence of very minute quantities of infectious germs which the living tissue under other conditions would be able to counteract.

The subcuticular suture has been devised to meet the objections to the employment of stitches which perforate the skin. It is applied by passing the needle through the deep layers of the skin while the lips of the wound are everted, thus burying the stitches. This method is a decided improvement upon the older ones, but it is not always simple to carry out and requires more time than the other sutures. Besides, its removal in case of necessity may be a little complicated.

About four years ago I began testing various methods

of wound treatment, in selected cases, without the use of cutaneous sutures of any kind. The deeper layers of the wound were closed in the usual manner with the aid of suture materials of various kinds, absorbable and non-absorbable, but the wound in the skin was merely covered with sterilized gutta-percha tissue and left thus until the healing process was well under way, when the edges were approximated with strips of india-rubber zinc plaster, 20 per cent., made by Dieterich, of Helfenberg, Germany. This plaster is an elegant preparation, very adhesive and pliable and non-irritating. It was torn into strips about six inches long and from an eighth to a quarter of an inch wide, which were applied at an angle with the line of the incision. Bulging surfaces lend themselves most readily to this form of treatment, and here the strips may be applied at right angles to the wound. In depressions or hollows the strips must be placed at an oblique angle to the line of the wound. The front and sides of the abdomen are especially adapted to this kind of wound closure, while in the groins it is not in every case applicable.

The results were gratifying, the deep sutures healing in beautifully, whether they were absorbable or not. It then occurred to me to employ the method at the time of the operation instead of waiting until repair had begun. In other words, I would make use of an aseptic method of pre-antiseptic days, for the closure of wounds with plasters is very ancient. For nearly three years, in my hospital service and in private practice, I have as a routine treated wounds in this manner, and I am so well satisfied with the results of the procedure that I feel it my duty to recommend its general application. The wounds made in the operations for abdominal section, nephropexy, major amputation, kelotomy, and amputation of the breast are some of those which have been closed by the plaster, and thus far I have seen no infections attributable to its use in spite of the fact that Dieterich's plaster is not guaranteed to be aseptic and does not come in a sterilized container. For the last few months I have been using a plaster made in this country by Johnson & Johnson at my suggestion. They have found that the zinc-rubber plaster may be rendered perfectly sterile by exposing it to the fumes of formalin in a vacuum chamber, and the plaster is now furnished sterile and in a sterile container. The containers each hold enough plaster already cut in strips to close an ordinary wound six inches in length. It is sold under the trade name of Sterilized Z. O. strips. Any of the material which is left over is thrown away or it may be resterilized.

Before applying the plaster one must be careful to check all hæmorrhage and to dry the skin thoroughly with alcohol or ether. The strips are then laid on while an assistant adjusts the edges of the wound. The method should not be used when there is tension, but only when the wound can be closed without force. It is perfectly applicable to the partial closure of wounds when drainage is employed. The strips should be removed on the fifth or sixth day by loosening both ends and drawing them toward the wound. If the adaptation of the edges has been careful, the wound in a clean case on removal of the plaster will look like a mere scratch. A second application of the plaster is not necessary, a dry sterile covering being sufficient. If at any part of the line the edges of the wound have not been accurately approximated, the surface should be thickly dusted with a dry aseptic powder.

In conclusion, I would say that a trial of this method of aseptic wound closure is earnestly advised. In addition to its advantages in the saving of time—often an important element when the patient bears the anæsthetic badly—it conduces to more perfect and aseptic healing, and does away with the necrosis of cutaneous tissue from constricting sutures.

679 Madison Avenue.

TRACHEAL INJECTIONS IN THE TREATMENT OF PULMONARY TUBERCULOSIS.*

By T. MORRIS MURRAY, M. D.,

WASHINGTON, D. C.

I have brought the subject of intratracheal injections before you in a preliminary report of the work now being done in my clinic at the Central Dispensary and Emergency Hospital. A. T. Modestoff, of St. Petersburg, was, I think, the first to put the intratracheal method of introducing remedies into the human organism upon a scientific basis. He maintained, as the result of many experiments upon dogs, that remedies so introduced penetrated to the farthest limits of the respiratory space. In 1888, we hear from Garrel, Boteq, and others advocating the intratracheal administration of creosote in cases of pulmonary tuberculosis. In 1889 Downie, of Glasgow, read a most interesting paper before the Medical and Chirurgical Society upon this subject. The injection used by him was twelve per cent. of menthol and two per cent. of creosote dissolved in olive oil. Of this as much as two drachms was injected at a sitting daily. He says that "out of forty cases so treated, all expressed feelings of benefit in several ways."

In describing the results of his treatment he observes that the patients breathe more freely, and where tightness or a feeling of constriction about the chest is complained of, this is rapidly relieved by the menthol injection. There is less inclination to cough.

"The patients at the infirmary say that they cough none at all for from four to eight hours after the injection, and if it be given at bedtime many whose sleep was previously much interfered with by the frequent recurring of cough rest the whole night long without once coughing. The expectoration becomes greatly reduced in quantity

*Read before the American Laryngological Association at its Twenty-second Annual Congress.

and much less offensive. In several of the cases the purulent element entirely disappeared, and what little expectoration continued to be discharged resembled the frothy expectoration of simple bronchitis. There was marked increase in weight in most of the patients thus treated." I have quoted Dr. Downie at length because his is the best exposition of the subject that I have seen and accords so nearly with my own experience.

The most recent contribution to the subject comes from Dr. Mundell, of Roubaix, who has substituted the essential oils for the usual creosote and menthol. The solution selected by him, after experiment, is the following:

Essence of thyme	5	grammes;
Essence of eucalyptus	5	"
Essence of cinnamon	5	"
Sterilized olive oil	100	c. ctm.

Of this he injects three cubic centimetres three or four times consecutively. The results reported by him, which were most satisfactory, have been to some extent confirmed by my own cases.

The method of administering intratracheal injection is simple; the curved cannula of the syringe is passed between the vocal cords, and the fluid is slowly injected into the trachea. The syringe which I have employed is the Schadel syringe. The usual effect in a majority of cases is a slight explosive cough. I have not seen a single instance of glottic spasm follow even the first injection. Out of thirteen cases treated during the past seven months with the Mundell solution, all but three have been decidedly benefited, their cough and expectoration have been lessened, and their temperature has been lowered. These patients were not in the hospital, and could only be seen three or four times a week, and were very poor, with all which that means in the way of environment.

The advantage of the intratracheal injection over the usual methods of treatment in tuberculosis lies in the fact that the antiseptics used enter at once the field of their labors unaltered and penetrate to the farthest limit of the respiratory space, and, coming in immediate contact with the toxines as they are generated, bring about the beneficial results described without interfering with the digestive organs.

While I do not undertake to reach a conclusion as to the full value of this treatment in cases of tuberculosis, I think it can be fairly said that it does lessen the cough and expectoration, lower the temperature, and improve the general condition of the patient.

Therapeutical Notes.

Urotropin.—Dr. Edward L. Keyes, Jr. (*Therapist*, November 15th), in a paper read at the last Congress of American Physicians and Surgeons sums up the conclusions suggested by a consideration of five cases in which he had employed this drug, as follows: 1. Urotropin seems to be almost a specific in the treatment of some cases of acute catarrhal pyelitis, uncomplicated. 2. To prove effective it may have to be administered in high doses until the urine is practically clear of bacteria, after which a smaller dose may suffice. 3. In judging of the effects of the drug, the centrifuge and microscope should be employed. 4. The dose must not be sufficient to cause pollakiuria and dysuria by irritation of the neck of the bladder. 5. The possibility of such an irritation cannot be overlooked, even when very small doses are employed. 6. Urotropin is extremely serviceable as a prophylactic of the various forms of urinary septicæmia and urethral chill. 7. Its routine employment both before and after operations on the urinary passages is indicated. 8. The urine containing urotropin occasionally has an escharotic effect upon wounds, which may constitute a contraindication to its employment.

For Præmenstrual Pain.—*Ἰατρικὴ Πρόοδος* for December, 1900, gives the following:

℞ Codeine. . . . . ¾ of a grain;
Chloral, } of each.15 grains;
Ammonium bromide, }
Camphorated water. . . . . 1 ounce.
M.

To be taken in one dose at bedtime.

A Tooth Wash for Chlorotic Patients.—Dr. Max Kahane recommends (*Berliner klinische Wochenschrift*, 1901, page 20) the following:

℞ Tincture of benzoin, } of each. . . . 1 ounce.
Tincture of rhatany, }
M.

Rinse the mouth thoroughly before and after meals, using one dessertspoonful of the mixed tincture in a glass of warm water, and swallowing a little.

Huchard's Hæmostatic Pills.—Six to ten of the pills made according to the following formula (*Berliner klinische Wochenschrift*, 1901, page 31) should be taken two or three times a day:

℞ Quinine sulphate. . . . . 1½ drachms;
Extract of ergot. . . . . ½ drachm;
Digitalis leaves, powdered, } of each.6 grains.
Extract of hyoscyamus, }
M. Ft. pil. No. 40.

Herxheimer's Treatment for Scabies.—Captain W. D. Sutherland, I. M. S. (*Indian Medical Gazette*, November, 1900), records this note from Herxheimer's clinic: For scabies, Wilkinson's salve—

℞ Birch tar. . . . . 2½ drachms;
Precipitated sulphur. . . . . .150 grains;
Green soap, } of each. . . . . .300 "
Vaseline, }
M. Ft. unguent.

All the affected region is smeared with this salve once a day for three days, and on the fourth day the patient is given a warm bath, even though he may be suffering from scabies eczema.

Or, the parts are painted with

℞ Balsam of Peru, } . . . . . .Equal parts.
Liquid storax, }
M. Ft. pigment.

This is applied once daily for three days and then removed with spirit.

By either of these methods the acarus is said to be killed, and the eczema is then treated.

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THE BELL BILL.

ASSEMBLY bill No. 167, entitled "An act to amend section one hundred and fifty-two of chapter six hundred and sixty-one of the laws of eighteen hundred and ninety-three, entitled 'An act in relation to the public health, constituting chapter twenty-five of the general laws,'" introduced into the New York legislature by Mr. Bell, was made the subject of a hearing last week. The occasion caused the gathering in Albany of a numerous concourse of opponents of the bill, consisting principally, if not entirely, of "Christian Scientists." Among them were rhetoricians of the kidney most revered by ill-balanced people, and there were some who seemed to have had the training of the stage manager, for at their command there was no lack of men and women to stand up and proclaim the wonders that had been wrought in their persons by the power of "Christian Science." The scene was as if a whirlwind of zealotry had swept away almost the last remnant of reason. And no doubt it had the desired effect upon the legislators.

The effect, it must be admitted, was facilitated by the unreasonable wording of the bill, a bill which, while intended to represent requirements unobjectionable to everybody but those who seek to evade responsibility for offending against the spirit of the old law, was really so sweeping as to chill most of those who would have given a more temperate measure their hearty support. If passed as originally drafted, the bill would violate the innate rights of man and carry us back to "blue law" days, if not to those of the Inquisition. We understand that it has been much modified, and we can readily recognize that essential modification was needed if it was to stand a ghost of a chance of passing. In the latest printed copy that has come under our observation we find the following passage: "Any person shall be regarded as practising medicine within the meaning of this act who shall prescribe, direct, recommend, or advise for the use of any other person any remedy or agent whatsoever, whether with or without the use of any medicine, drug, instrument, or other appliance, for the treatment, relief, or cure of any wound, fracture, or bodily injury, infirmity, physical or mental, or other defect or disease." But emergency services and the administration of domestic remedies are not interdicted.

We believe, with Dr. Van Fleet, whose letter on the subject we publish in this issue, that the promoters of the bill never intended to visit upon the people of the State of New York such curtailment of personal liberty as would be its inevitable outcome if it were enacted in the form in which it was introduced. But good intentions cannot palliate the appearance of their palpable contradiction in a statute book. When the bill is so modified that it may be called temperate, we shall not be backward in advocating its passage. Meantime it seems to us best not to press its passage until it has been further amended so as to prove detrimental to nobody but those who are engaged in violating the spirit of the present law. We cannot support the bill in its present form, much as we deprecate illegal practice.

THE STATE PATHOLOGICAL INSTITUTE.

AMONG the notable acts of the Medical Society of the State of New York at the meeting held in Albany last week was the passage of a resolution praying the legislature not to reduce the appropriation for the Pathological Institute. The work of the institute has been severely criticised of late, and the criticism has probably inclined the legislature to look upon it somewhat with coldness; hence the need of such action as has been taken by the State society. The fault that has been found with the institute, it seems to us, has been petty, being largely founded on the contention that routine laboratory work, such as can conveniently be done in the State hospitals, has been to some extent sacrificed in order that deeper work, more far-reaching if comparatively barren of immediate results, might be prosecuted systematically and persistently. The institute has ably—to our mind, convincingly—defended itself, and we trust that the legislature will not follow the penny-wise-and-pound-foolish policy of crippling it.

The institute is young, and the problems it legitimately has to deal with are not such as can be solved offhand. Time and continued research, the devotion of

trained men for years, are absolutely necessary to the consummation of such work, if, indeed, it is ever to be consummated, for in medicine, and especially in such a difficult branch as psychiatry, new problems are forever cropping out, and no sooner has one of them been worked out than another presses forward. The research that finally culminates in the acquisition of precious knowledge is not the mere application of known methods of inquiry to one after another of a series of commonplace situations; methods, new ones, must be devised, and to arrive at them the investigator, no matter how broad his knowledge and experience, no matter how ample his resources, must needs prove as he goes along the value of the individual steps of his progress, and often retrace them when he finds he is on a false path. More than that, he must disprove the false that appears to be true, and eliminate one by one the illusive beacons that might else forever lead him astray. These negative demonstrations, time-consuming as they necessarily are, are not striking to the observer from without; neither are the trenches that are destined to lead to the fall of a besieged town. One of the glaring faults that we have only recently begun to shed is that of demanding immediate positive results from research work. Let us divest ourselves of it altogether, and we shall then be reasonably sure that we are bearing well in mind the old motto, *Festina lente*. Not that the work of the institute need be exceptionally slow; indeed, we believe it has thus far been gratifyingly rapid, and we are confident that, if it is generously supported, it will not be found lagging.

THE DISTEMPER OF DOGS AND ITS MICROBE.

APART from the fact that physicians are generally lovers of the dog, it may be taken for granted that any advance in veterinary pathology and therapeutics, especially if it concerns an infectious disease, is of interest to our readers. Such an advance seems to have been made by Dr. S. Monckton Copeman, of the Brown Institution, in England, whose communication on the subject was recently transmitted to the Royal Society by Sir Michael Foster and appears in the number of the society's *Proceedings* dated January 19th.

Dr. Copeman states that his investigations into the bacteriology of the distemper have been in continuation of those begun in his laboratory at St. Thomas's Hospital about ten years ago by the late Everett Millais. He finds that the specific micro-organism of the disease is a coccobacillus which stains with the ordinary aniline dyes, but is decolorized by Gram's method. It grows readily on agar-agar at the temperature of the body, and the individual colonies, when isolated by the method of plate culture, are grayish, glistening, and semi-translucent by reflected light and of a light brownish tint by transmitted light. It grows well in beef broth also. It is capable of growing, though rather slowly, on solidified serum and in milk, which does not become coagulated. On potato it develops with difficulty, but now and then, after some days' incubation, a moist-looking streak of a pale buff color may be observed. If gelatin is inoculated, the growth occurs slowly at the temperature of the room, and after a time the medium tends to become liquefied. Its growth on agar-agar may be carried on for many generations, but after about twelve removes its morphological and biological characteristics are found to have been somewhat altered. So, also, its pathogenic properties seem to be gradually weakened, but its virulence may be regenerated by repeated intraperitoneal inoculations of the guinea-pig.

By heating a broth culture of the bacillus to 140° F. and keeping it at that temperature for half an hour, subsequently adding a little carbolic acid as a preservative, one may obtain a prophylactic product which acts against the distemper like those of Haffkine and Wright against the plague and typhoid fever, respectively. This preventive may be standardized after the manner of Wright. The prophylactic dose must vary according to the size of the dog. In three instances the author has found that the subcutaneous injection of half a drachm of the sterilized culture appeared sufficient to protect fox-terrier puppies weighing about forty-seven ounces against the distemper, while an unprotected puppy of the same batch contracted the disease from an affected dog. The author is not prepared to make a definite statement as to the length of time for which the protection lasts, but he says that experiments on a large scale are being carried on by dog-breeders in Great Britain, in Germany, and in America.

THE RELATIVE VALUE OF LAW AND LIFE.

IN a recent case in Philadelphia a physician had been subpœnaed to appear as a witness, and being half an hour late, was fined ten dollars by the judge. The physician explained that he was in attendance on a patient and that he had paid an urgent and necessary visit before going to court, hence his detention. The judge

however, though the fine was eventually remitted on the ground that the case was one of diphtheria and a matter of life and death, held that the physician's first duty was to the court. Harsh as this statement may appear, it seems to us that the judge's side of the question must not be lost sight of; for the law must guard itself against allowing its claim to paramount obedience to be disregarded, and itself imposed upon under a plea of professional engagement, by a physician as well as by any other member of the community.

But, if the newspaper report is to be believed, the judge went further, by giving utterance to the *obiter dictum* that "it was better that a patient should die than that the commonwealth should be treated with contempt." This is a most dangerous doctrine, intolerably subversive of the rights of the individual and the sacredness of life, and one which should be emphatically repudiated. In this particular instance, it might, perhaps (we know not), be urged that the physician in question could have paid his professional visit earlier, due notice of his court summons having been afforded, or that he might, in view of the occasion, have arranged for that particular visit to be paid by a brother practitioner; but it is easily conceivable that the circumstance might occur under conditions in which no loophole of escape from the dilemma of a choice between duty to life or to the commonwealth would be forthcoming, *e. g.*, the case of a country practitioner in an isolated district, or of an obstetrician or surgeon in the midst of a confinement or an emergency operation. Under such circumstances we think that the public conscience would repudiate an attempt to apply the judge's dictum with abhorrence. It must be remembered that it is primarily the individuals that confer rights and impose obligations on the community, not the reverse.

THE LATE DR. HORACE GREEN.

We are glad to be able to record that on Thursday evening, the 7th inst., a bust of the late Dr. Green was presented to the New York Academy of Medicine by one of its ex-presidents, Dr. D. B. St. John Roosa. Tardy as it is, this is a graceful recognition of Dr. Green's early achievements in laryngology which in some degree makes amends for the contempt that was visited on him before his death.

BLOODLETTING IN HEAT FEVER.

From time to time accounts appear of beneficial results from the almost obsolete procedure of bloodletting. Klein, of Giessen (*Münchener medicinische Wochenschrift,* 1900, No. 27; *Wiener klinische Wochenschrift,* December 13th), reports the case of a powerful stoker on an ocean steamship who was overcome by heat. The unconsciousness and general spasms proved refractory to the usual remedies, and signs of increasing cardiac weakness were observed. Between six and seven ounces of blood was drawn, and the man's life was saved.

THE ANTIQUITY OF SYPHILIS.

The much disputed antiquity of syphilis seems to have been supported recently by Zambaco Pacho, who, in his own name and that of M. Fouquet (*Revue médico-pharmaceutique,* 1900, No. 15; *Progrès médical belge,* January 1st), declared concerning certain bony specimens more than eight thousand years old, from Negadasud, Abydos, Thebes, and Beit-Allam, that they bore traces of lesions which they could attribute only to syphilis.

POISONING WITH NITRATE OF SILVER.

At a recent meeting of the Berlin Psychiatric Society (*Deutsche Medizinal-Zeitung,* January 10th) Dr. Max Edel remarked upon the rarity of poisoning from the use of the stick of lunar caustic, an occurrence which, he said, was chiefly the result of the stick's breaking while it was being used in the mouth, and the detached fragments being swallowed. He reported the case of an insane man who had swallowed three sticks with suicidal intent. In three days after his admission into an asylum he was attacked with fibrinous pneumonia, and died in a few days more, after persistent high fever and delirium. At the outset the breath was fœtid and there was diarrhœa with whitish flocculi resembling curdled milk.

HEMIPLEGIA AS THE OCCASION OF RECOVERY FROM HEREDITARY EPILEPSY.

Epilepsy is more apt to result from cerebral hæmorrhage than to yield to it. Nevertheless, Brunet (*Archives de neurologie;* ix, 51; *Gazette hebdomadaire de médecine et de chirurgie,* November 4th) reports a case in which the convulsive seizures had occurred about once a month. After a more than usually violent paroxysm the patient, a woman, was seized with partial left hemiplegia, after which the attacks gradually diminished in frequency, and for twenty years, up to the time of her death, there were no more. The epilepsy had lasted for fifty years when it was blotted out by the apoplectic stroke.

MOVABLE LIVER.

There are recorded cases of lobulation of the liver due to tight lacing, with decided depression of the artificial lobule. Marked mobility of the organ as a whole, however, seems to be of rarer occurrence. A case is related by Dibajlow (*Jeschenedelnik,* 1900, No. 33; *Deutsche Medizinal-Zeitung,* December 10th) as having occurred in an unmarried woman thirty-four years old. The liver could be moved freely without pain. There were no symptoms, but the patient had applied for treatment under the idea that she had an ovarian cyst. An anomaly of the suspensory apparatus seemed to be the cause of the abnormity.

News Items.

Society Meetings for the Coming Week:

MONDAY, *February 11th:* New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private) (anniversary); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynæcological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, *February 12th:* New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioner's Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, *February 13th:* New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society for Medical Progress, New York; Medical Societies of the Counties of Albany and Allegany (quarterly), N. Y.; Pittsfield, Massachusetts, Medical Association (private); Franklin, Massachusetts, District Medical Society (quarterly—Greenfield); Philadelphia County Medical Society.

THURSDAY, *February 14th:* Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; New York Laryngological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

FRIDAY, *February 15th:* New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynæcological Society.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending February 2, 1901:

DISEASES.	Week end'g Jan. 26.		Week end'g Feb. 2.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	33	12	27	15
Scarlet fever	329	22	326	14
Cer.-spinal men'gitis	0	0	0	0
Measles	110	2	116	2
Diphtheria and croup	332	52	361	40
Small-pox	11	1	50	2
Tuberculosis	331	185	282	90

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine Hospital Service for the Seven Days ending January 31, 1901:

CORPUT, G. M., Assistant Surgeon. To proceed to Cleveland and assume temporary command of the service during the absence of Surgeon W. J. PETTUS.

MCINTOSH, W. P., Surgeon. To proceed to Jeffersonville, Georgia, for special temporary duty.

MCMULLEN, JOHN, Assistant Surgeon. Upon expiration of leave of absence, to proceed to Wilmington, N. C., and assume temporary command of the service during the absence of Surgeon T. B. PERRY.

PERRY, T. B., Surgeon. Granted leave of absence for thirty days from February 11th.

Board Convened.

Board convened to meet at Washington, D. C., on Tuesday, February 5, 1901, for the physical examination of Second Assistant Engineer R. F. HALPIN, R. C. S. Detail for the board: Surgeon PRESTON H. BAILHACHE, chairman; Surgeon G. T. VAUGHAN and Assistant Surgeon B. S. WARREN, recorder.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague, were reported to the surgeon-general during the week ending February 2, 1901:

Smallpox—United States.

Washington, District of Columbia	Jan. 19-26	2 cases.	
Jacksonville, Florida	Jan. 12-26	10 cases.	
Chicago, Illinois	Jan. 19-26	25 cases.	1 death.
Michigan City, Indiana	Jan. 20-27	1 case.	
Wichita, Kansas	Jan. 19-26	9 cases.	
Lexington, Kentucky	Jan. 19-26	2 cases.	
Shreveport, Louisiana	Jan. 19-26	5 cases.	
New Orleans, Louisiana	Jan. 19-26	11 cases.	3 deaths.
Baltimore, Maryland	Jan. 19-26	1 case.	
Erie, Pennsylvania	Jan. 19-26	1 case.	
Pittsburgh, Pennsylvania	Jan. 19-26	2 cases.	
Memphis, Tennessee	Jan. 19-26	8 cases.	
Nashville, Tennessee	Jan. 19-26	4 cases.	
Houston, Texas	Jan. 19-26	44 cases.	1 death.
Salt Lake City, Utah	Jan. 19-26	31 cases.	
Milwaukee, Wisconsin	Jan. 19-26	1 case.	

Smallpox—Foreign.

Antwerp, Belgium	Dec. 29-Jan. 5	1 case.	
Pernambuco, Brazil	Nov. 15-30		30 deaths.
Hong Kong, China	Dec. 8-15	1 case.	
Alexandria, Egypt	Dec. 24-31	2 cases.	1 death.
London, England	Jan. 5-12	1 case.	
Newcastle-on-Tyne, England.	Jan. 5-12	2 cases.	
Paris, France	Jan. 5-12		11 deaths.
Bombay, India	Dec. 24-Jan. 1		4 deaths.
Mexico, Mexico	Jan. 13-20	1 case.	
Tuxpan, Mexico	Jan. 14-21		1 death.
Vera Cruz, Mexico	Jan. 6-13	3 cases.	
Moscow, Russia	Dec. 22-Jan. 5	9 cases.	4 deaths.
Odessa, Russia	Dec. 22-Jan. 12.	137 cases.	24 deaths.
St. Petersburg, Russia	Dec. 22-Jan. 5	6 cases	2 deaths.
Warsaw, Russia	Dec. 22-Jan. 5		23 deaths.
Glasgow, Scotland	Jan. 11-18	121 cases.	2 deaths

Yellow Fever.

Havana, Cuba	Jan. 12-19		2 deaths.
Vera Cruz, Mexico	Jan. 6-20	5 cases.	

Cholera.

Bombay, India	Dec. 24-Jan. 1		2 deaths
Singapore, Straits Settlements.	Nov. 16-27	56 cases.	36 deaths

Plague.

Bombay, India	Dec. 24-Jan. 1		154 deaths
Constantinople, Turkey	Jan. 7		1 death.

Naval Intelligence:

Official List of Changes in the Medical Corps of the Unite States Navy for the two weeks ending February 2, 1901:

GROW, E. J., Assistant Surgeon. Detached from the *Culgo* and ordered to the *Glacier*, and also to duty in Olongap Philippine Islands.

MCCLURG, W. A., Medical Inspector. Commissioned medic inspector from November 19, 1900.

SHIFFERT, H. O., Assistant Surgeon. Ordered to the *Fran lin.*

Army Intelligence:

Official List of Changes in the Stations and Duties Officers serving in the Medical Department, United Stat Army, from January 19 to February 2, 1901:

BISPHAM, WILLIAM N., First Lieutenant and Assistant Su geon, United States Army, will proceed to Cabana Ba racks, Havana, for duty as surgeon, relieving H. JAMES, Acting Assistant Surgeon.

HESS, LOUIS T., First Lieutenant and Assistant Surgeo United States Army, is relieved from further duty the Division of the Philippines.

HOFF, JOHN VAN R., Major and Surgeon, United States Arm is detailed as a member of the board of officers appoint to meet in Washington for the examination of office for promotion, *vice* DALLAS BACHE, Colonel and Assista Surgeon-General.

LAGARDE, LOUIS A., Major and Surgeon, United States Arm is detailed as a member of the board of officers appoint

to meet in Washington for the examination of officers for promotion, *vice* CHARLES SMART, Lieutenant-Colonel and Deputy Surgeon-General.

O'REILLY, ROBERT M., Lieutenant-Colonel and Deputy Surgeon-General, United States Army, is detailed as a member of the board of officers appointed to meet in Fort Monroe, Virginia, for the examination of officers for promotion, *vice* CHARLES N. BARNEY, Acting Assistant Surgeon.

OLHEMUS, ADRIAN S., Captain and Assistant Surgeon, will proceed to Fort Ridley, Kansas, for temporary duty during the absence of CHARLES E. WOODRUFF, Captain and Assistant Surgeon.

A Bull's Eye.—The *Charlotte Medical Journal* for anuary is responsible for the assertion that "nearly ne half the men and women in the country die while hey are children."

Chinatown, in San Francisco, is to be cleaned up. 'he streets are to be bitumenized and the entire district ımigated and thoroughly cleansed.

Civil Service Appointment.—Dr. George Pfromm as been appointed medical examiner of the local civil ervice board in Philadelphia.

The State Board of Health may be Abolished.—'he bill abolishing the New York State Board of Health ıd establishing a single-headed commission has been eported favorably in the senate.

The Oldest People in the World.—According to the eport of a committee of the Hundred Year Club, the dest man now living is Izai Rodefsty, of Moscow, Rusa, who is in his hundred and thirty-sixth year, and Mrs. 'ancy Hollifield, of Battle Creek, Mich., who is 117.

An Automobile Service for Physicians.—The Deoit Physician Service Company is a new institution ıat will start in business in Detroit shortly. The comıny proposes to furnish an automobile business for phycians for a stated amount every month.

A New Medical Building for the University of ennsylvania.—A movement is on foot at the Universy of Pennsylvania toward the erection of a new medil building. The present building was one of the origal buildings, erected in 1873. It has little architecral beauty and none of the modern improvements.

The Alumni of Mt. Sinai Hospital will give their ınual dinner at the Arena, 39 West Thirty-first Street, ew York City, on Wednesday evening, February 20th, 7 o'clock. The secretary of the association, Dr. ıarles A. Elsberg, 105 East Fifty-seventh Street, has arge of the tickets.

Yellow Fever in Cuba Decreasing.—The report of . C. Gorgas, chief sanitary officer at Havana, for the onth of December makes a very gratifying showing. 'ıe total number of deaths was 485, the smallest for any ecember in ten years. Major Gorgas calls attention to e marked decrease in the number of yellow fever cases.

To Regulate the Practice of Medicine in Kansas.—A l creating a State board of medical examiners has been roduced into the Kansas legislature by Dr. R. W. ıintz, a member of that body. Dr. Maintz has also induced two bills intended to promote the accuracy of e statistical work of the public health bureaus, by requiring reports by physicians of deaths and births, and by court clerks and judges of marriages and divorces.

A Would-be Medical Trading Corporation Squelched.—A *pro forma* decree of incorporation was denied the Red Cross Medical Association of St. Louis on January 23d by Judge Fisher. The referee, to whom the matter was referred, reported that the statute under which the association sought to incorporate contained no provision for the incorporation of a medical society. The purpose of the association was to supply members with medical treatment on their paying monthly dues.

Proposed Change in Minnesota's Marriage Laws.—Dr. E. V. Clinton, of Howard Lake, has introduced in the Minnesota legislature a bill which provides that a marriage shall not be allowed between two persons where either one is, or has been, subject to fits of any kind, insanity, etc., and that a certificate of a physician showing that the applicants are fit to enter the married state shall accompany all applications for a marriage license. The penalty for a violation of the law is a fine of $1,000 or five years in the penitentiary, or both.

Readjustment of Medical Studies in Pennsylvania.—Provost Harrison, of the University of Pennsylvania, in his annual report, announces a readjustment of the studies required of students for the degree of doctor of medicine, by which they may complete the course in arts or science and obtain the medical degree in seven years. By pursuing the plan outlined, the course in medicine is made a three, instead of four, years' course. The plan provides that under certain conditions a senior in college may be a freshman in the medical school.

To Build a Home for Trained Nurses.—An entertainment is to be given at the Waldorf-Astoria, on the evening of February 16th, by the Guild of St. Barnabas for Trained Nurses, the proceeds of which will be devoted to securing a house where its members, when not on duty, can find a comfortable home, with a view to their mental, moral, and physical betterment. A number of the leading society women have taken a lively interest in this entertainment. The programme for the evening is under the directorship of Mr. Bruno Huhn. Tickets may be had of Mrs. A. E. Gallant at 60 West Fifty-sixth Street.

A Tuberculosis Conference at Ottawa.—A conference to take concerted action in order to overcome the ravages of tuberculosis will be held at Ottawa, Ont., on February 14th. The conference will last for a day. His Excellency the Governor-general is honorary president and Sir James Grant president. A series of resolutions will be drawn up and a general discussion take place. It is expected that there will be a large attendance. The Governor-general will preside and will deliver an address. Sir James Grant, president of the council for Canada, and others, will speak.

The Medical Society of City Hospital Alumni, St. Louis.—At the last meeting, on Thursday evening, the 7th inst., Dr. George Homan read a paper entitled Our Daily Bread, and Dr. Given Campbell presented the following cases: Lingual hemiatrophy and facial spasm; motor aphasia; and cerebral tumor.

The Jackson County Medical Society was organized at Jackson, Mich., on January 24th, with Dr. A. E. Bulson as president.

The St. Louis Medical Society of Missouri.—At the last regular meeting, on Saturday evening, the 2d inst., Dr. C. Barck read a paper entitled A Case of Otitic Cerebellar Abscess, Sinus Thrombosis, and Commencing Deep Cervical Abscess.

The Baltimore Medical and Surgical Association met on January 28th and the following papers were presented concerning grippe: The Causes and Distribution of Grippe, by Dr. W. Royal Stokes; The Effects of Grippe on the Naso-pharynx, by Dr. S. K. Merrick; The Grippe as Seen in Children, by Dr. Charles W. Witchell; The Broncho-pulmonary Symptoms of Grippe and their Treatment, by Dr. David Street; The Nervous Sequelæ of Grippe, by Dr. Charles G. Hill, president of the association.

The Associated Physicians of Long Island.—The third annual meeting of the Associated Physicians of Long Island was held in the rooms of the Medical Society of the County of Kings, Brooklyn, on January 26th, a large number of members being in attendance. The following officers were elected: President, Dr. William B. Gibson, of Huntington; first vice-president, Dr. Calvin F. Barker, of Brooklyn; second vice-president, Dr. James S. Cooley, of Glen Cove; third vice-president, Dr. William H. Ross, of Brooklyn; secretary, Dr. James C. Hancock, of Brooklyn, and treasurer, Dr. John P. Heyden, of Northport. Dr. Elias H. Bartley read a paper on The Science of Feeding in Acute Fevers. Nineteen new members were elected. In the evening the annual dinner was given at the Oxford Club.

The Cleveland Medical Society.—The ninth annual meeting of the Cleveland Medical Society was held recently and the following officers for the ensuing year elected: President, Dr. Charles F. Hoover; first vice-president, Dr. H. W. Rogers; second vice-president, Dr. Robert Pollock; secretary, Dr. J. N. Lenker; treasurer, Dr. J. M. Ingersoll; censors, Dr. C. A. Hamann, Dr. F. C. Herrick, Dr. H. C. Ballard, Dr. D. S. Hanson, and Dr. J. J. Thomas; trustees, Dr. J. H. Belt, Dr. W. A. Knowlton, and Dr. O. B. Campbell, their term of office expiring in 1904. Dr. W. H. Humiston read a paper on Multiple Fibroma of the Uterus, and Dr. G. W. Crile one on Medullary Narcosis Based on Experimental and Clinical Evidence, showing the effects of cocaine when used as an anæsthetic. Dr. H. W. Quirk presented a case of malignant growth on the back to the society.

The New York Academy of Medicine.—At the next meeting of the Section in Surgery, on Monday evening, the 11th inst., Dr. John Rogers, Jr., will read a paper entitled Experience with Tracheotomy.

At the next meeting of the Section in Otology, on Wednesday evening, the 13th inst., the following papers will be read: The Early Operative Treatment of Mastoiditis, by Dr. E. B. Dench, and A Case of Cerebellar Abscess Complicating Acute Suppuration of the Mastoid, by Dr. Wendell C. Phillips. Cases will be presented and new instruments and specimens will be exhibited.

At the next meeting of the Section in Pædiatrics, on Thursday, the 14th inst., the order for the evening will be as follows: Vaccination Clinically Considered, by Dr. Frank S. Fielder; Remarks on the Preparation of Vaccine, by Dr. John H. Huddleston; Remarks on Specific Organisms in Vaccinia, by Dr. Anna W. Williams; Report of a Case of Vomitus Nervosus associated with General Hysteria, with presentation of the patient, by Dr. Louis Fischer; Report of a Case of Diabetes in an Infant, by Dr. William E. Young; and A Simple Apparatus for Modifying Cow's Milk, by Dr. C. Herrmann.

Insanitary Conditions in Sing Sing Prison.—A committee of the Prison Association, aided by an expert sanitary engineer, has investigated the sanitary condition of Sing Sing prison and has made a report to the association strongly condemning the insanitary conditions prevailing in the institution. It is understood that vigorous efforts will be made to have the legislature authorize the destruction of the prison and the erection of another in a more suitable site, with due regard for sanitary considerations. The principal indictments against the prison are its location on the river bank but five feet above tide water, and on a moist and polluted soil, its lack of ventilation, its overcrowding, its faulty construction, which shuts out sunlight as well as air, and its plumbing arrangements throughout. The matter has been laid before the New York State board of health.

The Bell Bill Amended.—As the result of a conference between the chairman of the committee on legislation of the New York Medical Society, the chairman of the committee on legislation of the New York State Medical Association, the chairman of the committee of the New York Medical Association, and Assemblyman Bell, the father of the bill, the Bell bill has been changed so that the amendment now reads as follows: "The construction of this article is that any person shall be regarded as practising medicine within the meaning of this act who shall give treatment to any other person by the use of any remedy, agent, or method whatsoever whether with or without the use of any medicine or instruments or other appliances for the relief or cure of any wound or fracture, bodily injury, or infirmity physical or mental disease." The Bell bill originally made it a misdemeanor for any person to recommend or advise any person to take any medicine, or to take any thing, or to undergo any kind of regimen or treatment whatever. The New York State Medical Association vigorously combated this bill as interfering with the individual rights of citizens. At the second hearing, on February 6th, an amendment was also made which practically exempts patent medicines from the action of the measure.

A State Hospital for Missouri.—Health Commissioner Max C. Starkloff has sent to Senator C. A. Smith at Jefferson City the draft of a bill for the establishment of a State hospital, accompanied by a letter explaining the importance of having a hospital for the benefit of the sick poor of Missouri. Mr. Starkloff urges that it is unjust to St. Louis to be compelled to provide for the hundreds of pauper patients who go there each year.

The bill provides that the hospital shall be located in or near St. Louis, and shall be managed by a board of nine directors, to be appointed by the Governor, the board to consist of four physicians and five business men. The bill also provides for the selecting of a superintendent and sixteen consulting physicians.

The proposed hospital is to be known as the Missouri General Hospital, and the sick poor of the State may be sent to it by the county courts of their respective counties.

The Fitch Accident Hospital to Close.—After a meeting of the Charity Organization Society, Dr. Roswell Park made an announcement that the accusations brought against the staff of the Fitch Accident Hospital, Buffalo, charging them with incompetency and brutality, had not been verified. There will be no investigation and no dismissals. The hospital will be closed indefinitely on March 1st, on account of financial difficulties.

A Government Hospital at Cape Nome.—The terrible sufferings of the inhabitants at Cape Nome has been the cause of a bill being introduced in Congress asking for the appropriation of $20,000 for a government hospital. Dr. Nininger, a leading physician of that place, in a report to Senator Mason, said that the rates in the Nome hospital were so high that men could not pay even for a bed in the destitute wards. The bill has been referred to the committee on territories, and Senator Mason and Dr. Nininger will make a plea for its passage.

Hospital Staff Changes.—Dr. George W. Grabenstatter has resigned from the staff of the Fitch Hospital.——The hospital board of Columbian University, Washington, held a meeting on January 5th, and the following officers were elected for the ensuing year: Dr. F. A. King, president; Rev. Dr. S. H. Greene, vice-president; Mr. S. W. Woodward, treasurer, and Dr. E. A. De Schweintz, secretary.——At the Emergency Hospital in Washington, Dr. Clifford Spiro has been promoted from the rank of senior assistant resident physician to that of resident physician, and Dr. R. S. Beale has become senior assistant, and Dr. Boyd Dixon, of Columbian University, has been appointed junior assistant.——Dr. Mary M. Wolfe, resident physician of the Women's Department of the State Hospital for the Insane at Norristown, Pa., has entered on her new duties. It is likely that Dr. Florence Hull Watson will be chosen to fill the place made vacant by her promotion, that of third assistant.——On January 26th, twenty physicians met at St. Joseph's Sanitarium, Mt. Clemens, Mich., and organized a staff to be known as St. Joseph's Sanitarium staff of physicians and surgeons.

Hospital Reports.—The following data are gleaned from the annual reports of the several hospitals named: During the year 1900, 2,619 patients have been admitted to the Royal Victorian Hospital at Montreal, and the death rate was 4.95 per cent. The total cost per day per patient has been $1.47, as against $1.55 last year. The income for the year was $129,570.34, while the ordinary expenditure amounted to $99,208.62, the balance of 30,361.72 being applied toward the cost of the new out-patient department and the power house and laundry building. By their erection the hospital has incurred a debt of $75,000, which will be extinguished during the next few years by the savings from income, if it be not otherwise provided for.——During 1900 there were twenty-nine more private medical patients, and forty-one less ward patients, than the previous year at the Rochester, N. Y., city hospital; nine more births, 126 less private surgical patients, and thirty-three more ward surgical patients. Eighty-nine different physicians were in attendance upon private patients during the year, and there were over 450 operations.——The number of patients received at the German Hospital, Brooklyn, from December 1, 1899, to December 31, 1900, has been 822. Of these 447 were male and 375 female. The number of patients discharged as cured was 485; convalescents, 175; uncured, 37; died, 95; surgical treatment was accorded 596 patients; medicinal treatment, 226; 87 accident cases were treated. The total receipts from patients amount to $16,105.97. The total number of attendants at the hospital was fifty, including three medical students, two surgeons, two physicians, and one druggist. The receipts from January 1, 1900, to December 31, 1900, were $24,758.87, and expenditures, $46,040.03, leaving the cash on hand $34,614.09.——The Milwaukee (Wis.) Hospital for Insane recently presented its annual report, which shows the average number of patients under treatment daily was 431. The percentage of recoveries to admissions during the biennial period was 34¼ per cent., and the ratio of deaths to the whole number of patients treated was 6½ per cent.——The annual report of the Episcopal Eye, Ear, and Throat Hospital, Washington, D. C., shows that the total expenses of the year were $4,947.70. The report of the attending medical staff showed an increase of visits made to the hospital by patients of 2,975 over the previous year. There were 221 patients admitted to the hospital, of which 101 were treated free of charge, and 307 operations were performed, nearly all being successful.

Hospital Buildings and Endowments.—Steps have been taken looking toward the erection of a hospital building in Port Huron, Mich., the Academy of Medicine being the active agent in the matter.——The St. Paul, Minn., chamber of commerce has adopted resolutions favoring the establishment of a State sanitarium for consumptives.——Bids have been asked for by the War Department for the erection of a twelve-bed hospital at Fort Keogh, Mont.——The Clara Barton Hospital Association has been incorporated in San Francisco with a capital stock of $50,000, $7,000 of which is paid up. The incorporation of the company is the result of a controversy concerning the management of the Waldeck sanatorium, and the physicians formerly connected with that institution will have control of the new hospital. The directors of the association are: Dr. J. Henry Barbat, Dr. George H. Evans, Dr. E. G. Frisbie, Dr. Charles A. Dozier, Dr. Elmer E. Kelly, Dr. H. B. Kugeler, and Dr. F. B. Carpenter. Of these, Dr. Barbat and Dr. Carpenter were formerly members of the corporation conducting the Waldeck sanatorium, and Dr. Kelly is at present a member.——The Albany hospital has received a donation of $500 for the maintenance of a bed for the treatment of any needy resident of Chenango county standing in need of surgical treatment.——Five bills have been introduced in the California legislature making appropriations for various improvements in and additions to the Southern California asylum for the insane. The additions contemplated include a $50,000 tuberculosis hospital and a $92,000 central administration building.——An appropriation has been made by the War Department for a chapel, reading room, and library for the general hospital at the Presidio, San Francisco, Cal.——In his annual report the health commissioner of the city of Baltimore urgently insists that the city should promptly provide a hospital for infectious diseases.——A similar recommendation has been made by the hospital committee of the board of supervisors at San Francisco.——Health Commissioner Wende, of Buffalo, keeps up his agitation for a quarantine, or detention, hospital for Erie county, and the indications are that he will eventually carry his point.——

The House of Mercy, Pittsfield, Mass., has received a donation of $50,000 for a new hospital building.——The fact that Boston is not adequately provided in the matter of a reception hospital for infectious diseases is attracting considerable attention in the lay press.

Births, Marriages, and Deaths.

Born.

EDIE.—In San Francisco, on Friday, January 11th, to Dr. Guy L. Edie, United States Army, and Mrs. Edie, a daughter.

Married.

ATKINSON—TAYLOR.—In Norfolk, Virginia, on Wednesday, January 30th, Dr. A. Duval Atkinson, of Baltimore, and Miss Patty Taylor.

BUTLER—HUBBARD.—In Boston, on Thursday, January 31st, Dr. Charles S. Butler and Miss Margaret Parker Hubbard.

CONOVER—FRITSCH.—In New York, on Wednesday, January 30th, Dr. John Hamilton Potter Conover and Miss Abigail Henriques Fritsch.

ECK—RHOADES.—In Pottstown, Pennsylvania, on Tuesday, January 29th, Dr. William H. Eck and Miss Annie B. Rhoades.

LAMB—KEEN.—In Washington, on Tuesday, February 5th, Dr. Robert Scott Lamb and Miss Sarah Keen.

LUCY—LEWIS.—In Denver, on Thursday, January 24th, Dr. Daniel R. Lucy and Miss Margaret Lewis.

PITTMAN—CASON.—In Marietta, Georgia, on Thursday, January 24th, Dr. James Hardy Pittman, of Jacksonville, Florida, and Miss Myrtice Barnett Cason.

PLATT—TISDALE.—In Astoria, N. Y., on Monday, February 4th, Dr. Clarence N. Platt and Miss Edith Tisdale.

SAPPINGTON—ROBERTSON.—In Elmira, N. Y., on Saturday, January 19th, Dr. William Fulford Sappington, of Hartford County, Maryland, and Miss Florence Valiant Robertson.

Died.

BARR.—In Cleveland, on Thursday, January 24th, Dr. Frank H. Barr, in the fifty-first year of his age.

BAXTER.—In Philadelphia, on Friday, February 1st, Dr. Henry F. Baxter, in the fifty-eighth year of his age.

BEACH.—In Vandalia, Illinois, on Wednesday, January 23d, Dr. R. E. Beach, aged fifty-one years.

BOSLEY.—In Baltimore, on Friday, January 25th, Dr. Grafton Marsh Bosley, aged seventy-six years.

CHAMBERLAINE.—In Easton, Maryland, on Wednesday, January 30th, Dr. Joseph Ennalls Meuse Chamberlaine, in the seventy-fifth year of his age.

GRIGGS.—In Newark, N. J., on Friday, February 1st, Dr. Stephen Chandler Griggs, aged eighty-two years.

HAGAN.—In Los Angeles, on Wednesday, January 23d, Dr. Morton Hagan, formerly of the United States Army, in the sixty-ninth year of his age.

HOUSTON.—In Atlanta, on Sunday, January 27th, Dr. A. P. Houston, of Clarksville, Georgia, aged sixty-nine years.

JEWETT.—In Cortland, N. Y., on Wednesday, January 30th, Dr. Homer O. Jewett, in the eighty-second year of his age.

LINES.—In Vernon, Vermont, on Monday, January 28th, Dr. Oliver Todd Lines, of Brooklyn, in the eighty-eighth year of his age.

MARSHALL.—In West Chester, Pennsylvania, on Monday, January 28th, Dr. Edward James Marshall, in the sixtieth year of his age.

MILLER.—In New York, on Monday, January 28th, Dr. Theodore DeClermont Miller, aged fifty-nine years.

NEVISON.—In Cleveland, on Sunday, January 27th, Dr. William H. Nevison.

O'BRIEN.—In Pittsburgh, on Monday, January 28th, Dr. John Henry O'Brien, aged forty-one years.

PIGOTT.—In Annapolis, Maryland, on Thursday, January 31st, Dr. Michael Royston Pigott, United States Navy, in the thirty-sixth year of his age.

ROSS.—In Champaign, Illinois, on Thursday, January 24th, Dr. W. Frank Ross, aged forty-four years.

SHURTLEFF.—In Brookline, Massachusetts, on Sunday, January 27th, Dr. Augustine Shurtleff, in the seventy-fifth year of his age.

WINDER.—In Brooklyn, on Friday, January 25th, Dr. Guthrie R. Winder.

Pith of Current Literature.

Medical Record, February 2, 1901.

Radical Cure of Inguinal Hernia. By Dr. A. M. Phelps.—The author draws a line of distinction between Bassini's and Halsted's operations. They are both original and each differs from the other. The points of originality in the author's operation are: 1. The reproduction of large masses of inflammatory material to restore the abdominal parietes, and the introduction of a fine silver-wire filigree throughout the entire inguinal canal, over the transversalis fascia, which adds to the strength of the weakened abdominal parietes and prevents the new material from stretching. 2. Cutting off the hernial sac, and retreating from the operation exactly as from any abdominal operation, stitching up the peritonæum and transversalis fascia with a continued suture of fine silver wire. Drainage should be avoided if possible; but, if necessary in thick abdominal walls with much fat, a glass drain is the best.

The Treatment of Puerperal Fever. By Dr. H. J. Boldt.—According to the author's classification, the main varieties of puerperal fever are: Acute bacteræmia, chronic bacteræmia, sapræmia, and septic infection (local septic infection). His reasons for using these terms may be found in a previous article (Septicæmia and Pyæmia, etc.) printed in the *New York Medical Journal* on January 26, 1901. The author insists upon an observance of the rules of antisepsis in obstetrics. The patient, in puerperal fever, should, first of all, have perfect rest. Next, attention should be directed to the seat of primary entrance of the fever-producing agents. The parts should be wiped with absorbent cotton steeped in some antiseptic solution, and dried and dusted with one of the so-called antiseptic powders. No medicament which produces an escharotic effect should be used. When the seat of infection is in the uterus, this organ is found enlarged and relaxed, and the cervical canal generally admits of the introduction of the index finger. The uterus should be cleaned of all foreign material under antiseptic precautions, and the author advises discarding the curette for this purpose. An intrauterine douche is advisable before and after manipulations within the uterus. It is inadvisable to place gauze in the uterus for the sole purpose of draining off secretions; and as for curetting of the uterus, that treatment, according to the author, has been misused more than any other. Vaporization is more effective on infection elements in the deeper structures of the uterus, and is the treatment *par excellence* in septic infection of the uterus.

An Operation for the Relief of Stoppage of the Tear Passage, Abscess of the Sac, etc. By Dr. Erasmus E. Pond.—The operation proposed by the author is a simple one. A long silver wire threaded with a coarse silk string is passed through the canal into the nose where the end is seized with a pair of forceps and drawn out through the nostril. Both ends of the string are then tied together, and the string is drawn through the nose two or three times a day for about a week. As the string causes no solution of continuity in the mucous membrane, there can be no stricture, hence the opening remains permanent. In the author's practice the results have been very gratifying.

The Malarial Mosquito on the Susquehanna. By Dr. Harvey E. Bashmore.

Placenta Prævia or Detached Placenta. By Dr. George W. Squires.

Medical News, February 2, 1901.

Fatty Degeneration of the Heart. By Dr. Thomas E. Satterthwaite.—This is a common affection, according to the author, though it is not to be classed as a disease *sui generis,* but rather as a metamorphosis or process attending on loss of compensation in valvular diseases, but also nearly as often on non-valvular diseases. It is caused by fevers, toxæmia, dyscrasias, disorders of nutrition, and mechanical injuries, but it may also be a physiological process. In the early stage the prognosis is best for complete recovery—that is, if the patient does not yield to the primary disease. In the intermediate stage the prognosis is not so good for the absolute arrest of the fatty process, but the functions of the heart may be so improved that the patient should be able to resume his former work and enjoy a fair degree of health for an indefinite period. We may expect a physiological, if not a pathological, cure. In the third or final stage, which is marked by such profound implication of the internal viscera that their functions are in abeyance, the prognosis is always unfavorable. The end will rarely be delayed beyond a few months.

A Case of Puerperal Sepsis from Retained Lochia (Lochiometra), with Remarks. By Dr. George P. Shears.—With reference to the ætiology of these cases, the author asks the question, "How do the bacteria gain access to the genital canal?" Anteflexion of the puerperal uterus, and consequent lochial retention, can be regarded only as predisposing. We must account for the presence of the offending organisms. Infection may be transmitted in the usual way, *i. e.,* by the examining finger, instruments, etc., but, since all air contains saprophytes, the author considers it reasonable to suppose that decomposition of clots and other débris may be the result of the admission of air to the vagina and uterus, especially during manipulations in the third stage of labor. While the rigorous employment of every method for the exclusion of bacteria is of the first importance, no method of prophylaxis or treatment can be regarded as even approximately correct which does not include a careful study of the predisposing as well as the primary causes of infection.

Medical and Sociological Aspects of the Galveston Storm. By Dr. H. A. West.—The author attributes the appalling loss of life chiefly to the failure by those who lived in the vicinity of the beach front to recognize the gravity of the situation until it was too late. After the storm, the conditions deleterious to public health that prevailed were: (1) Overcrowding; (2) filth and general impairment of sanitation; (3) excessively high temperature; (4) an enormous increase of disease-bearing insects, especially flies; (5) imperfect water supply; defective sewage. The extensive prevalence of gastrointestinal disorders and typhoid fever indicates, in the author's opinion, the invasion of the food and water supply, as well as the atmosphere, with pathogenic microorganisms.

Infantilism. By Dr. W. T. English.—The author presents a highly interesting case of this affection. The changes that have come over the child during the eight months of treatment exemplify what can be done for these cases of myxœdematous retardation by the use of thyreoid. Muscles and mind are restored to activity and the faculty of speech recovered.

Boston Medical and Surgical Journal, January 31, 1901.

The Treatment of the Later Phases of Heart Diseases. By Dr. John L. Heffron.—By the expression "the later phases of chronic heart disease," the author has in mind that period of time, short or long, after compensation has once failed. At that time treatment must be guided by (1) the condition of the heart; (2) the abnormal conditions resulting from a disturbed circulation, and (3) the general condition of the patient. Absolute rest in bed is the first indication; it relieves the heart physiologically of from ten to twenty contractions per minute, as compared with the usual conditions which prevail when one is simply "confined to his room." All visitors should be excluded. Elaterium, calomel, salines, are, in the order of preference, the drugs the author uses for the elimination of waste matter. The diminution of ingested fluids must be insisted upon. To relieve the distressing nervousness, ice-bags over the heart may suffice, but, these failing, codeine in one-half-grain doses, hypodermically, should be first tried, and then morphine. Cannabis indica, on occasion, will give most gratifying results. The diet should be carefully regulated, and substances which are bulky and of small nutritive value should be excluded. Predigested foods are of use, but the best results are produced by giving small portions at very frequent intervals. When cardiac dropsy is manifested, all three of the emunctories should be acted upon, though it has been frequently observed that digitalis and all diuretics will fail to act until relief is attained by mechanical means. The cabinet bath is of use. If digitalis is contra-indicated, caffeine will produce good results. Before resort to tapping is made, it is the author's practice, with all aseptic precautions, to puncture the skin of the dorsum of the foot and of the leg in many places. If, fortunately, a failing compensation is restored, the very condition of the prolongation of life is moderation.

Peritonsillar Abscess. By Dr. F. C. Cobb.—The author's object is to urge the use of a little more care and study in the relief of this disease. He believes that it results from infection by the germs of acute tonsillitis. The symptoms are chill, followed by fever and headache and pain referred to one side of the throat. Puncture, with the application of cocaine, is painless, and results in cure usually. Should there be no sign of pus in either pillar, the supratonsillar fossa must be sought as the most probable seat of the suppuration. On account of the great vessels lying in the pharyngomaxillary space, care must be used in the use of the knife. Left to themselves, these abscesses usually subside through rupture in from four to seven days. Several cases, however, are on record where the pus has made its way into the posterior portion of the pharyngomaxillary fossa, and so into the mediastinum, with fatal results.

Retropharyngeal Abscess in the Adult. By Dr. J. L. Goodale.—This is a case of tuberculous retropharyngeal lymphadenitis, ending in suppuration. No point of entrance for the infection was found.

Journal of the American Medical Association, February 2, 1901.

Mental Symptoms of Cerebral Syphilis. By Dr. James H. McBride.—Though there is frequently an incongruity between the conduct of an insane person and his pretensions, yet it is so marked in the syphilitic insane as to have a diagnostic significance. A quiet, apathetic, mildly varying condition, with long periods of confusion and dullness, occasional and sudden return of apparent sanity with depression or short attacks of hysteria and return to habitual mental state—these are

the symptoms of a very common type of syphilitic insanity. Insanity may occur very soon after the appearance of secondary symptoms. The author has seen it develop within six months. The author is not of those who assert that all paretic dementia is due to syphilis, and, though some forms of syphilitic insanity are certainly much like paretic dementia, the author believes that these cases are often due immediately to conditions that are alike. The intellectual man who has contracted syphilis is more liable to have his brain attacked than another man whose mental capacity is of a lower order.

A Report of Seven Operations for Brain Tumors and Cysts. By Dr. Hermann H. Hoppe.—Tumors of the cortex or subcortical region of any portion of the cerebral hemispheres which can be reached through the calvarium are operable. The author is opposed to the exploratory operation, and also the palliative operation for the relief of intracranial pressure. In his opinion, tubercles, if isolated and located so as to be operable, should be operated upon, other things being favorable. Metastatic carcinomata are inoperable.

The Skull and its Contents. By Dr. W. H. Earles.

Treatment of Typhoid Fever, with Bactericidal in Connection with other Agents, and some Consequent Deductions. By Dr. J. M. Peck.—The author believes that the results secured by the bath and intestinal antisepsis are the most favorable. He asserts that it is a mistake to check a diarrhœa in typhoid fever except by the use of a purgative or by a thorough washing with sterilized water. Results indicate that the chlorine solution has a beneficial effect in checking the production of the toxines, or in rendering them less active. The use of calomel prepares the way or acts as a stepping-stone for the chlorine.

Influenza Accompanied by Four Distinct Pneumonic Attacks. Otitis Media Purulenta and Cerebral Hyperæmia, Colitis, Inanition—Recovery. By Dr. Julius Ullman.

Aural Manifestations of Syphilis. By Dr. Francis R. Packard.—The author does not think that syphilis can be a very frequent source of ear disease. In going over the literature of the subject, however, one is impressed with the great variety of ear lesions which have been described as occasionally of syphilitic origin. To the author it seems very probable that many most obstinate cases which do not yield to local treatment may possibly be due to syphilis and only awaiting proper constitutional treatment.

Prevention of Intracranial and Intravenous Complications in Suppurative Diseases of the Ear. By Dr. J. H. Woodward.—The author insists upon rectification of abnormal states of the nose and throat as an indispensable preliminary to the prophylaxis of intracranial and intravenous complications of infectious pyogenic diseases of the ear.

The Cerebral Neurones in Relation to Memory and Electricity. By Sir James Grant, M. D.—In the examination of nerve power by electroneurotone currents, the author noted on several occasions, after a few weeks' application, quite a change in intellectual activity, as evidenced by improved memory. The currents were passed through the base of the brain, chiefly, by applications to the parotid regions on either side of the neck. The individuals operated on were over sixty years old.

Report of Two Cases of Afebrile Typhoid. By Dr. Charles J. Whalen.—The author gives two interesting cases of this affection which were brought to the attention of the profession by Liebermeister. He is convinced that the disease occurs in an endless number of types, and that the typhoid of to-day is not the typhoid of von Niemeyer, Trousseau, Flint, and others, for they portrayed a disease having a fairly constant train of symptoms, a fever with a characteristic course, and other equally important conditions varying. Certainly ambulatory and afebrile types of the disease must have been very rare or else were not diagnosticated in the practice of the older authors.

Philadelphia Medical Journal, February 2, 1901.

Scurvy, not Rheumatism. With a Report of Sixteen Cases of Infantile Scurvy. By Dr. J. P. Crozer Griffith.—The author's experience would seem to indicate that this affection is far more common in childhood than is generally supposed. Many of his cases bear out the common experience that rheumatism, more than any other disease, is erroneously diagnosed when scurvy is really the condition. Pain somewhere, generally in the legs, is oftenest first seen, and many diagnostic errors are due to this fact. There is no one dietetic fault which can be held responsible as the cause of scurvy, though it is oftenest found that commercial foods fed to scorbutic children constitute a powerful ætiologic factor. The treatment is simple and consists of a proper alteration of the diet; even without this, the administration of pure fruit juice is sufficient to work a cure. Only in cases where debility has grown extreme, or where intercurrent maladies exist, which possibly interfere with treatment, need a fatal result be feared. The diet should not be altered too quickly simply because of scurvy; a curable scurvy is preferable to a fatal diarrhœa—the result of a diet which may precipitate these.

Whey-cream Modifications in Infant Feeding. By Dr. Franklin W. White and Dr. Maynard Ladd.—The authors conclude that by the use of whey as a diluent of creams of various strengths, we are able to modify cow's milk so that its proportions of caseinogen and whey-proteids will closely correspond to the proportions present in human milk. The emulsions of fat in whey, barley water, gravity cream, and centrifugal cream mixtures were the same both macroscopically and microscopically. The authors assert that whey-cream mixtures yield a much finer, less bulky, and more digestible coagulum than plain, modified mixtures with the same total proteids.

Proper Methods of Handling Milk for Infant Feeding. By Dr. George Thomas Palmer.—In a brief and practical paper the author asserts that clean milk is far more important than any amount of modification, and he believes that such milk most certainly can be procured in all the large cities. Such a milk is far better than cooked milk. The methods in use at a certain Illinois farm are then detailed. The author is convinced that sterilization is simply a bridging-over of faults that should not have been committed. After trying a raw milk with the infants of the poor during a terribly hot season, and after having seen what can be done toward the preparation of a clean, pure milk, the author would banish forever sterilization or pasteurization on the same ground that he would banish formaldehyde or any milk preservative—on the ground that they are both injurious and unnecessary.

The Importance of Instruction in Medical Schools on the Modification of Milk for Prescription Feeding. By Dr. Andrew H. Whitridge.—The milk laboratories that have been established in many cities of the United

States have done much to further the scientific feeding of infants. However, as only a limited number of physicians can reach these laboratories with their prescriptions, the author makes an appeal for special instruction in this work.

Intracranial Hæmorrhage in the Newborn. By Dr. V. Reynolds Wilson.

The Causes and Treatment of Urgent and Serious Conditions in the Newborn. By Dr. Samuel Wolfe.—In a supposititious case the pulse is almost imperceptible and the skin and lips are ashen-gray or slightly dusky. When the child is handled it either does not cry at all or there is only a plaintive and pitiable sound. Under such circumstances the author has found the most gratifying results from the administration of atropia or nitroglycerin. Improvement in the complexion, the pulse, and the respiration can often be noted within an hour of the first dose. For such medication the author asks a careful trial in enabling a weak heart to gain power, and lessening the resistance in a collapsed lung, and incompletely expanded systemic capillaries.

Otitis Media in Children and its Treatment. By Dr. H. V. Würdemann.—This paper demonstrates the necessity for examination of the ear and care of aural inflammation in all cases of grave disease in children. The paracentesis knife should be used by the general practitioner as freely as the hypodermic needle, and he should be familiar with the reflecting mirror and aural speculum, at least for the purpose of diagnosis.

A Critical Review of the Literature of Mastoid Disease and its Complications. By Dr. Seymour Oppenheimer.

Diseases of the Ear in Relation to General Medicine. By Dr. Nathan G. Ward.—The author asserts that if dissections of the temporal bone are more frequently made at autopsies, and the findings compared with the symptoms before death, diseases of the ear that are now not recognized will be readily diagnosticated and successfully treated.

Infantile Colic and Colic in Infants. By Dr. H. Holloway.

The Diagnosis and Treatment of some Functional Forms of Defective Speech. By Dr. G. Hudson Makuen.

The Summer Cold: Swimming Pools as an Ætiologic Factor. By Dr. Lawrence F. Flick.

British Medical Journal, January 26, 1901.

Series of Original Communications on Tropical Diseases.

Summary of Researches on the Propagation of Malaria in British Central Africa. By C. W. Daniels, M. B.—The chief agent in the distribution of malaria in East and Central Africa is *Anopheles funestus* (Giles). The author allowed this mosquito to feed upon the blood of patients having malarial fever, and found that 47.5 per cent. became infected, zygotes being found in their stomachs. Several other species of *Anopheles* were found in Central Africa, but feeding experiments were negative. *A. claviger* apparently does not occur. The intermediate host of the malarial parasites appears to be man only. Examinations of the blood of rats, bats, birds, monkeys, etc., were uniformly negative. In certain localities sixty-eight per cent. of all children two years old and under have enlargement of the spleen. So that there is every reason to consider that quite a sufficient proportion of the natives have been, at one time or other, hosts of the parasite to infect the small proportion of the numerous *Anopheles* requisite to produce the amount of "fever" present in the country. Preventive measures group themselves under four main heads:

1. *Diminution in the Numbers of Anopheles.*—Where it is practicable this will be the best method.

2. *Protection from Mosquitoes.*—This can be attained and is effective, as shown by the experiments of Sambon and Low. But *A. claviger* appears to be more strictly nocturnal in its habits than *A. funestus,* and therefore the method would not be of much service in Central Africa.

3. *The Extermination of the Malarial Parasite in its Intermediate Host, Man.*—This method, by the free use of quinine, would be expensive, and to be of value must be continued indefinitely.

4. *Isolation of European Settlements.*

No one method is, or can be, of general application to the exclusion of others. It is requisite that, regarding each species of *Anopheles,* direct proof should be obtained whether the human malarial parasites develop in them or not; in only a few is the proof at present conclusive, and it is being too hastily assumed that the whole genus is implicated.

Notes on the Life-history of "Anopheles Maculipennis" (Meigen). By Dr. L. W. Sambon.—The life-history of *A. maculipennis* has been chosen by the author as a good type to illustrate the biology of malaria-bearing mosquitoes, as in Europe it is certainly the chief propagator of malarial fevers. *A. claviger* (Fabricius) and *A. quadrimaculatus* (Say) are identical with *A. maculipennis.*

1. *Ovum.*—The egg of *A. maculipennis* is about 0.7 millimetre long by 0.16 millimetre broad, and is fusiform in shape. About one hundred eggs are laid, which float horizontally close to each other, forming irregular clusters. They usually hatch on the second or third day, the larva escaping by opening a lid at the extremity corresponding to its head.

2. *Larva.*—When full-grown the larva measures from seven to eight millimetres in length. It lies usually extended at the surface of the water with the penultimate segment just awash, so that the breathing stigmata may open freely at the surface. Its parallel attitude with the surface of the water is of great value in distinguishing it from the larva of *Culex,* which holds its body at an angle of sixty degrees with the surface.

3. *Pupa.*—The pupa is small as compared to the full-grown larva. Its head and thorax are closed within a transparent shell, through which can be traced the antennæ, legs, and wings of the perfect insect. The abdominal segments remain free and serve to propel the insect through the water. The pupa of *Culex* floats in a more perpendicular attitude than that of *Anopheles.* The duration of the pupal stage is about two days. The pupa case splits longitudinally through the middle of the back, and the imago extricates itself.

4. *Imago.*—In its perfect state, the insect may measure from seven to ten millimetres in length. The antennæ of the male are beautifully plumose, the hairs being very thickly set, by which the sex may be readily recognized. The palpi in both sexes are black and nearly as long as the proboscis; they at once distinguish the *Anopheles* from all species of *Culex.* The wings are brownish, with four dark spots. A very complete and thorough description of the blood-sucking apparatus and its mode of operation is given.

5. *Resting Attitude.*—*A. maculipennis* usually sits with its body at an angle of about thirty degrees. The position is midway between the perpendicular position of *A. pseudopictus* and the horizontal position of *Culex*. A valuable point is that the head, thorax, and abdomen of *Anopheles* form a straight line; the head and thorax of *Culex* form a decided angle with the abdomen.

6. *Breeding Grounds, etc.*—In Ostia the larvæ of this particular insect may be found in almost every water collection. The adult insects are found in great numbers in the houses and stables of the district.

The article is accompanied by a beautiful chromolithographic plate, showing most graphically the various stages of development of *A. maculipennis*.

Malaria and Mosquitoes in Zealand. By A. van der Scheer and J. B. van Berlekom.—The authors report the results of their studies of mosquitoes (*A. maculipennis*) infected with blood from persons suffering from malarial fever. On allowing healthy insects to suck malarial blood, it was found that infection took place only where the blood contained, not only the so-called febrigenous parasites, but also gametocytes, which are destined to undertake sexual functions in the mosquito's stomach and to form vermicules (zygotes). The first stage in the mosquito appeared two days after infection as a little egg-shaped body lying between the cells of the stomach wall. It was from nine to ten micromillimetres long by from seven to eight broad. These bodies increased in size and became pigmented; by the sixth day the pigment had again disappeared and the bodies had become spherical, having a diameter of from sixteen to eighteen micromillimetres. On the sixteenth day the capsules could be seen to contain thousands of thread-like bodies, which a few days later could be found in the salivary glands. The earliest period at which they were found in the glands was the twenty-first day. Sporozoites could not be detected in other organs than the salivary glands.

Whilst in tropical malarial diseases the gametocytes persist a long time after the paroxysms have ceased, in the tertian fever they disappear shortly after the last attack; never longer than one day after recovery. When *Anopheles* sucks blood two days later than the last paroxysm, infection never takes place. The presence of quinine in the blood seems to be no obstacle to the formation of vermicules in the stomach of the mosquito.

Preliminary Note on an Unclassified Type of West African Fever. By S. W. Thompstone, F. R. C. S., and R. A. Bennett, M. B., with an addendum by Dr. H. E. Annett.—The authors describe a form of fever observed by them on the West Coast of Africa, which is distinguished from malarial fever by the absence of malarial plasmodia and leucocytic pigmentation, and which they provisionally call "hyperpyrexial fever." It is ushered in by slight fever, followed by profuse perspiration and a fall in the temperature to 99° F. After an afebrile period of twenty-four hours, the temperature rises again, slowly at first and then rapidly, until it reaches 107° F. on the second day. For fourteen, or even thirty, days thereafter there is no tendency for it to fall. The skin acts very slightly and antipyretics are useless. The mind remains clear, and there is no disturbance of the urinary or digestive functions. The treatment may be summed up in one word—baths. Cold baths once a day will bring the temperature down to 99° F., and it may be kept down by cold packs at hourly intervals. If recovery is to take place, some change for the better is to be looked for at the end of the third week. But fully fifty per cent. of the cases die.

Observations on Fifteen Cases of Hæmoglobinuric Fever in British Central Africa. By H. Hearsey, M. B.—Hæmoglobinuric fever may be defined as an acute febrile disorder, most probably of malarial origin, and characterized by the occurrence of an extensive and rapid hæmolysis. The duration of the hæmoglobinuria is usually about sixty hours, but it may be much shorter. The skin and conjunctivæ are distinctly jaundiced. In favorable cases the patient is usually well in a week. In fatal cases the vomiting continues, there is suppression of urine and the patient passes into an algid condition. If the urine is copious from the onset, the prognosis is good; if the quantity passed is suddenly diminished and the urine is of a dirty brown color, depositing much sediment, the prognosis is bad. Persistent severe vomiting is also a bad symptom. Treatment is mainly symptomatic. Quinine is entirely withheld throughout the illness.

Note on the Staining of Flagella. By J. B. Smith, M. B.—The author recommends a modification of Pitfield's method, which he describes in detail.

A saturated solution of perchloride of mercury made by boiling is poured, while still hot, into a bottle containing an excess of crystals of ammonia-alum, and allowed to cool. To 10 cubic centimetres of this fluid 10 cubic centimetres of a fresh 10-per-cent. solution of tannic acid are added, and 5 cubic centimetres of carbol fuchsin. These are mixed and filtered. Cover-glasses are cleaned in a strong solution of hydrochloric acid, wiped, and heated over a flame. The bacilli are placed upon the hot cover-glass, fixed, and the mordant solution dropped on. The specimen is then heated until steam rises. It is then well washed in distilled water and the stain added, and heated in the same way for three or four minutes. The stain is made by adding 1 cubic centimetre of a saturated alcoholic solution of gentian violet to 10 cubic centimetres of a saturated solution of ammonia-alum.

The Prophylactic and Curative Treatment of Plague. By A. Lustig and G. Galeotti.—The mortality among the patients treated with the serum introduced by the authors may be placed at about fifty-three per cent. while the general mortality for plague for the same period was about ninety-four per cent. They compare their results with those attained by the use of the sera of Yersin, Haffkine, Roux and others, and claim that their serum is the only one which has given satisfactory results in Bombay.

Dysentery in South Africa. By J. J. Day, M. R. C. S.

Notes on the Lesions Produced by Oxyuris Vermicularis. By Dr. M. A. Ruffer.—At the *post-mortem* examination of an Egyptian who had died from chronic cirrhotic disease of the liver many small worms (*Oxyuris vermicularis*) were found in the contents of the large intestine. Many encysted calculi of varying sizes were found in the walls of the intestine, which consisted of an amorphous yellowish-brown substance, containing numberless typical eggs of *Oxyuris vermicularis*.

A Filaria Found in Sierra Leone? Filaria Volvulus (Leuckhart). By W. T. Prout, M. B.—The author describes a filaria which he found in a tumor on the buttock of a frontier policeman. On dissection, the cyst was found to contain only two worms, one male and one female. The male worm was about 3.025 centimetres long, white in color and somewhat flattened. The female worm was about 40.4 centimetres long, the body being striated from end to end. The author gives a table showing the characteristics of the various forms of

lariæ, and concludes that the one described by him robably corresponds to *Filaria volvulus* (Leuckhart).

Remarks on the Apparent Immunity of Asiatics rom Enteric Fever. By Dr. F. W. Clark.—During the en years, 1890-99, only fifty-one deaths of Chinese from yphoid fever in Hong Kong were registered as against xty-five deaths among other than Chinese, although ie Chinese form ninety-four per cent. of the total population. The author's theory to account for this is that ie Chinese are so fully exposed to infection with the isease during the whole period of their existence that iey almost always contract it during infancy or early iildhood, when, if they recover, the disease will have een practically unnoticed, while, if they succumb, the eath will be attributed to diarrhœa, convulsions, or me other symptom. Observations at the Government ortuary go far to confirm this view.

Revue de chirurgie, November 10, 1900.

Technics of Colostomy.—M. H. Hartmann describes s technique of performing inguinal colostomy for inerable tumors of the rectum, by which he avoids the ual accidents of incontinence, cicatricial stenosis, and olapse of the intestine. The peculiarity of the operaon consists in the careful separation of the muscular anes of the abdominal wall.

Exclusion of the Intestine. By M. Terrier and M. osset. (*Continued article.*)

Technics of Exploratory Craniotomy.—M. A. Codilla describes an apparatus of his own device for the teoplastic resection of the skull. Rapidity, certainty, d a minimal scar, with maximal field of operation, are e chief virtues of the operation.

Resection of the Median Nerve in the Forearm.—M. Péraire and M. F. Mally describe an operation of is kind which was rendered necessary by a lipoma that integrated the nerve at the site where it grew. The tient recovered functionally well.

Phelps's Operation for the Cure of Hernia.—Dr. M. Phelps describes the technique of his operation d for the closure of wounds of the abdomen and muss by means of the use of a network of silver wire.

Nassilov's Operation of Œsophagotomy. By M. A. Llobet.

Cancer of the Large Intestine, except the Rectum. M. R. de Bovis. (*Continued article.*)

Gynécologie, December 15, 1900.

Enucleation of Fibroids by the Vaginal Route.—A. Doléris reports four cases in which he enucleated urine fibroids from below. Three of the patients suffed from a renewed growth of the tumors, and the irth, although a young woman, never became pregnt. He does not favor the operation, since the hæmosis is not perfectly under control and septic infection is easier than when a hysterectomy is performed, and because recurrence is possible, since all the growths may n be removed. Hysterectomy is the operation of ice. Vaginal enucleation may be performed under ry limited indications.

Subcutaneous Grafting of Ovaries.—M. P. Mauchre has made a number of experiments on dogs by grfting their own and other ovaries under the skin. H has performed the operation seven times in women. H says that the transplanted ovary will thrive if it is aseptic when it is grafted. The ovaries thus grafted mlify menstrual anomalies and relieve the ovarian insiciency following unilateral or bilateral oöphorectory. In the case of fibroids or cystic ovaries, if the ovaries cannot be left in the abdomen, they may be grafted under the skin. The grafts can be made after either an abdominal or a vaginal operation. In the latter case, if one of the removed ovaries appears to be healthy, it may be subcutaneously transplanted if there are no adhesions or other evidences of previous infection. If after twenty-four hours there is a febrile movement, it had better be removed. The grafts may even be made after the menopause to secure for the patient the effects of the socalled internal secretion of the ovary.

Appendicular Inflammation Complicating Affections of the Uterus and Appendages.—M. Henri Delagénière writes of the pathology, symptoms, and treatment of appendicular inflammation, when complicating other pelvic diseases in women. He records twenty-six cases, four of acute, five of obliterating, five of calculous, ten of chronic, and two of cancerous, appendicular inflammation. Treatment is entirely surgical, the author making a median cœliotomy.

Ovarian Cysts Complicating Pregnancy and Labor. By M. Bossi.

Total Abdominal Castration.—M. G. Nance says the abdominal is to be preferred to the vaginal route when the uterus and its appendages are to be removed, for the operation is easier since it provides greater space, temporary hæmostasis is not necessary, and one can go wide of the disease, rendering recurrence less likely. It is the true surgical procedure, he thinks, since one can see well what one is doing.

Archiv für pathologische Anatomie und Physiologie und für klinische Medicin, October 8, 1900.

Adenocarcinoma of the Liver with Ciliated Epithelium.—Dr. Alexis Sokoloff describes a case of this character with minute details of the histological findings. The presence of the ciliæ he does not absolutely account for, although he is inclined to ascribe it to a rapid proliferation of the cells of the tumor, with a gradual development of ciliæ. The metastases also presented ciliated epithelium.

Epibronchial Pulsating Diverticula. By Dr. Anton Brosch.

Theoretical and Experimental Studies on the Pathogenesis and Histogenesis of Malignant Tumors.—Dr. Anton Brosch lays down as the first "genetic" axiom: Normal tissues react to influences which overleap the tolerance of their cells, in a productive process; secondly, productive processes react to influences which overleap the tolerance of their cells, by a heightening of their reproductive rapidity and, if this potentialization is unlimited, by degeneration. For malignant degeneration, that is, for the genesis of malignant tumors, the preexistence of embryonal germs is not essential, as they, as well as normal tissues, can degenerate malignantly if they enter a process of tissue production which is disturbed by injurious influences (irritants) in its course. The congenital tumors are not arguments in favor of the embryonal or of the "irritation" theory of the genesis of tumor formation.

Calcified Glomeruli of the Renal Cortex. By Dr. E. W. Baum.

Pathology of the Serous Surface Cells. By Dr. Max Borst.

Cartilage and Bone Formation in Heart Valves. By Dr. Paul Rosenstein.

Spontaneous Rupture of the Œsophagus. By Dr. Anton Brosch.—An elaborate experimental study.

Traumatism and Infection. By Professor Virchow.—An address delivered at the Thirteenth International

Congress. The mass of detail renders it impossible to abstract; but it will repay reading.

November 7, 1900.

Morphology of Milk. By Dr. Michael Cohn. (*Continued article.*)

Nucleoli.—Dr. R. A. Reddingino describes a new method of staining nucleoli in cells, spermatozoids, malignant growths, and normal tissues. The tissues are best cut in celloidin after hardening in alcohol. From absolute alcohol, the specimen is placed for from a few seconds to three minutes in Lœffler's methylene-blue, and is then washed in running water. It is next placed in a saturated alcoholic solution of picric acid until it is free from water. It is then placed in a watch-glass containing oil of origanum until it is transparent, and is mounted in Canada balsam. The pictures resulting from this process are very beautiful, the nucleoli standing out distinctly.

Immunity against Malaria.—Dr. Max Glogner, who accompanied the German malaria expedition to Sumatra and Java, concludes from his studies that an attack of malarial disease does not give immunity, but renders the individual even more disposed to the disease.

Relations of Cataract to Nasal Disease. By Dr. C. Ziem.

Sarcoma of the Œsophagus.—Dr. Hugo Starck says that this is a very rare disease, is infrequently diagnosticated even when it exists, and is rapidly fatal, death usually ensuing in six months. Pain and dysphagia are prominent symptoms, but may be absent. When pain is present, it is intense and of a stabbing character, and is more intense when the stomach is empty, therein differing from the pain of carcinoma.

Case of Leucæmia Complicated with Miliary Tuberculosis.—Dr. Jünger reports a case of this kind. The blood count at various times showed an increase in leucocytes of from 40,000 to 120,000, and a change in the relation of white to red of from 1 to 95 to 1 to 25.

Pathogenesis of Inflammation, Hæmorrhage, and Multiple Fat Necrosis of the Pancreas.—Dr. Max Leonhardt reports such a case in which the tissues of the pancreas were almost entirely replaced by fat. Evidences of previous inflammation, such as cellular infection, hæmorrhage, and increased connective tissue, were present. In the pancreas and its neighborhood were multiple foci of fat necrosis. No normal pancreas tissue was found. Staphylococci and streptococci were found, which came from a duodenal ulcer; in other words, a septic infection of the pancreas had taken place.

Deformity of the Skull. By Dr. Martin B. Schmidt.

Gazzetta degli Ospedali e delle Cliniche, December 9, 1900.

Hyperleucocytosis and the Bactericidal Power of the Blood in Animals Deprived of the Thymus Gland. By Dr. Andrea Cosentino.—As the result of a series of experiments upon animals in which he had performed thymectomy, the author concludes that the removal of the thymus gland is followed by a well-marked hyperleucocytosis, and that the increase of the bactericidal power of the blood takes place in proportion to this leucocytosis. The explanation given of these phenomena is as follows: The thymus gland neutralizes a part of the toxines introduced into or developed in the body. When the thymus is removed, it is natural that the organism should seek to defend itself against the toxines in some other way—in other words, by hyperleucocytosis. The presence of toxic substances in the blood of these animals after the thymus gland has been removed, stimulates the blood-forming organs to activity beyond the normal, and thus the increase of white cells takes place. The fact that the hyperleucocytosis is the more marked the younger the animal, also supports this theory; for the thymus gland is more active in young animals than in adult organisms.

The Blood of Cancerous Subjects. By Dr. Dario Maragliano.—The author has studied the bacteriologic features of the blood of cancerous subjects, and has reviewed the work of other observers in this field. He has examined, and has prepared cultures from, the blood of thirty-three persons affected with malignant growths. In the majority of cases the blood was taken from the cephalic vein. After a thorough disinfection of the skin, a cannula connected with a glass tube of about twenty cubic centimetres capacity was introduced into the vein. The first portion of blood that flowed into the tube was rejected, and the remainder was added to various culture media. The author has experimented with a great variety of media and with a variety of temperatures of incubation. In addition, he has examined the freshly drawn blood with the aid of different stains. He sums up his results as follows: In no case has the cultivation of blood specimens or of material obtained from the tumors given rise to the development of blastomycetes or of micro-organisms analogous to those described by Bra and by Chevalier. Many of the patients under investigation were in advanced stages of malignant disease, and there is no doubt that they were affected with carcinoma; for in the majority of cases the pathological report had confirmed the clinical diagnosis. The author cannot explain the difference between his own results and those of M. Bra and M. Chevalier, as the conditions surrounding the investigations of the latter observers were identical with those prevailing in his own case.

A Case of Resection of the Posterior Roots for Intractable Sciatica. By Dr. Davide Giordano.—The patient was a man, aged twenty-six years, who had suffered for a long time with severe attacks of sciatica. All forms of palliative treatment had proved ineffectual, and the author decided to attempt intradural resection of the roots of the sciatic nerve in a manner analogous to that which has already been practised in connection with the brachial plexus. The sensory roots of the nerve were exposed by making an osteoplastic resection of the posterior arches of the eleventh and twelfth dorsal and the first lumbar vertebræ. The dura was opened and the cerebrospinal fluid escaped in considerable quantities. The lumbar enlargement was found to be normal and the sensory roots were cut with a pair of scissors, each having been seized and elevated in turn with forceps. The wound in the dura was closed with catgut and the osteoligamentous flap was replaced, a strip of gauze having been introduced for drainage at the side of the wound. The soft parts and the skin were then sutured in layers. After the operation the patient was able to move his limb perfectly well, but sensation was practically abolished. On the second day a neuralgia of the right internal saphenous nerve appeared, and had to be treated with injections of cocaine. Evidently the author omitted to cut one of the sensory roots through its entire diameter. The pain, however, disappeared after a time. The patient rose from his bed without any pain on the twentieth day, but was not perfectly satisfied because the affected limb "seemed dead." Sensory com

munication was, however, gradually re-established, and in a few months the patient resumed his occupation, free from pain and discomfort.

A Contribution to the Methods of Fixation in Fractures of the Lower Jaw. By Dr. Giuseppe Piersantelli.—The method here described is an invention of Signor Bertoli, a dentist in Bologna. The author reports a case of compound comminuted fracture of the lower jaw in which he tried this method with such success that he was encouraged to publish the procedure. The apparatus devised by Bertoli should not be applied until a day after the injury, in order to give an opportunity for thorough washing and disinfection of the injured parts. It can be used in both simple and compound fractures of the lower jaw, and prevents the formation of a deforming callus or malposition of the fragments. It may be applied and worn without interfering with the motion of the jaw or with mastication. The patients tolerate the apparatus well; the more so because by means of a screw they can regulate the amount of pressure exercised upon the bone. The apparatus is illustrated by a number of cuts accompanying the article. It consists of a cap of silk or linen fitting the top of the patient's head and provided with chin straps with buckles, passing in front of the ears and fastening under the jaw. The chin straps are also provided with rubber elastic bands which tend to hold the cap taut when applied. The straps passing from the cap are attached to a nickel-plated metallic chin piece or shield, which is adjusted in front of the lower jaw, is padded so as to adapt itself perfectly to the chin, and is provided with two elastic straps passing horizontally backward and clasping in the back to the neck, thus preventing a forward displacement of the chin piece. To the front part of the chin piece is soldered a horizontal metallic bar, which can be lengthened or shortened at will by loosening a screw which holds an extension-piece entering into the hollow portion of this bar. By means of another screw a vertical bar is attached to the first, passes upward and terminates in a curved arm passing over the teeth and provided with a small screw. A dental splint of the regular horseshoe pattern constitutes the last part of the apparatus. This splint is made of hard rubber and its under surface is re-enforced with a plate of perforated metal. Into the hollow of this splint Stent's paste is poured, after having been melted to a sufficient degree, and the splint is applied over the teeth, care being taken to see that the line of teeth is regular. The paste must not be too hot, for otherwise it may injure the soft tissues; nor too cold, for in that case it will not adapt itself perfectly to the line of teeth. The little screw is next screwed into the plate which has been affixed to the top of the middle portion of the hard-rubber splint. The other screws (of the vertical bar and horizontal bar) are then adjusted to regulate the compression exercised from below upward in front of the chin piece, pressing the teeth with their splint toward the point of the chin. The results obtained by the author in this case leave no doubt as to the utility of Bertoli's apparatus.

Epiploitis Following a Radical Operation for Strangulated Epiplocele. Laparotomy. Recovery. By Dr. Latis.

Twin Pregnancy with a Trilobate Placenta Intermedia. By Dr. Donato De Francesco.

A Contribution to the Use of Suggestive Therapeutics in Hysteria. By Dr. C. Rinoldi.—The author reports three cases of hysteria in which he used the following method with marked success: He gave the patients some pills of methylene-blue, and with "a certain air of mystery" told them that this was a rare and new remedy of extraordinary efficacy, and that if their urine should become colored blue they would know that the poisons which caused their disease had been eliminated from the body. This method of treatment was introduced by Pittres a few years ago. The present author thinks very highly of it, and reports complete success in the three cases in which he has employed it.

Rassegna d'Ostetricia e Ginecologia, December, 1900.

A Contribution to the Treatment of Genital Prolapse by Chiarleoni's Method. By Dr. G. Prunas-Tola.—Professor Chiarleoni rejects hysterectomy in the operative treatment of genital prolapse, except in cases in which there is a new growth in the prolapsed uterus. He has obtained good results in fifty cases operated on by his method, and eighteen additional cases of prolapse were reported by Cucca and Unargo as cured after operation according to Chiarleoni's procedure. The author reports two cases in which Chiarleoni's operation was performed with marked success. During an experience of five years in gynæcological hospital practice the author has had ample opportunities for observing the results obtained by the radical operations for uterine prolapse, and has been forced to conclude that hysterectomy should not be performed in these cases, but that plastic vaginal operations are sufficient. That of Hegar seems to him the most suitable operation for the purpose of supporting the fallen womb. In the two cases reported here, however, he employed Chiarleoni's method. According to the opinion of Mangiagalli, who insists on hysterectomy, the author should have removed the uterus in both cases, as, in one, there was an enormously hypertrophied womb, and in the other, a bilateral laceration of the cervix. In the first case the operation was followed, not only by a perfect replacement of the uterus, but by a return of regular menstruation. In the second case the patient passed successfully through a normal labor after the operation without any return of the prolapse.

The Principal Alterations in the Organs of the Macerated Fœtus. By Dr. A. Cosentino. (*Concluded.*)

Second Statistical Report of the Annunziata Maternity of Naples. By Dr. S. Buongiorno. (*Concluded.*)

Vratch, December 16 (O. S. 28), 1900.

On the Physiology of the Cœliac Plexus. By Dr. L. V. Popelsky.—The difficulties surrounding the investigation of the functions of the cœliac plexus will be apparent when we remember the deep situation of this part of the nervous system, and when we consider the fact that it is almost impossible to reach it in the living animal without infecting the peritoneal cavity. In the investigations conducted by the author, special attention was therefore paid to asepsis and antisepsis in operating upon the animals under observation. The author carefully removed the whole mass of nervous tissue between the cœliac and superior mesenteric arteries, cut away all nerve filaments from both these arteries and from their branches, and severed the nervous connections of the cœliac ganglia with the suprarenals and with the inferior mesenteric vein. The operation was performed on seventeen dogs, of which five were still living after a period varying from three months and a half to seven months, while the others perished in a space of time varying from twenty-four hours to twenty-five days.

The results of the operation were diarrhœa and intestinal hæmorrhages, especially during the first two weeks after the operation. After a while the fæces became more concentrated, and assumed a whitish color. In some dogs the evacuations were liquid with whitish masses floating about, or the fæces assumed a jelly-like appearance, and contained masses of epithelial cells and blood corpuscles. After a month or two the fæces again became normal in appearance, but from time to time there were evacuations of semi-fluid, steel-gray or whitish masses. The evacuations were abundant and had a very foul odor. In spite of all these disturbances on the part of the intestines, the dogs continued to eat well and were to all intents normal in every respect. In spite of the good appetite, however, some of the dogs perished from exhaustion as a result of the diarrhœa, but the autopsies showed no traces of peritonitis—nothing more than a severe anæmia. At the autopsies, the author found quantities of bloody fluid in the stomach and intestines. The mucous membrane of the stomach, as well as that of the upper and lower portions of the small intestine and of the upper part of the large gut, showed the presence of extravasations of blood and very severe hyperæmia. In three dogs there were many large ulcers in the duodenum, the stomach, and in the upper portion of the small intestine. The source of the hæmorrhages, which occurred several weeks after the operation, was therefore to be sought in these ulcers, and the dark or steel-gray color of the fæces was to be attributed to the admixture of partly digested blood from the upper parts of the tract. The Peyer's patches were found to be atrophied. (*To be continued.*)

Concerning the Significance of Mental Depression in the Origin of Disease. By Dr. A. K. Federolf.—The author has asked himself the question: What is the nature of that condition of diminished resistance which is said to render the organism receptive for disease? It is a well-known fact that mental depression produces a diminution of sensibility on the part of the sensory organs and a diminution of the reflexes—in other words, a depression of the activity of the entire organism. The products of metabolism, which under ordinary conditions are eliminated or destroyed in the body, are retained and absorbed in the presence of mental depression. The author believes that in such cases there is a narcotization of all the elements of the body, including the nerve-cells. The products of metabolism, collecting in the blood, act as narcotics upon the protoplasm of the cells, render the sensitiveness of the phagocytes less acute, and thus interfere with the important defensive functions of these elements. In addition, the second physiological function of the phagocytes—the elimination of the alexines which act as antidotes to the toxines—is also diminished by the products which thus accumulate. Furthermore, in mental depression there is always anorexia and a lowering of the nutrition of the cells.

Comparative Estimation of Various Methods of Studying Syphilis in Villages; House-to-house Examinations of the Population; their Significance and the Methods of Organizing them. By Dr. A. I. Efimoff.

A Rare Case of Placenta Succenturiata. By Dr. V. N. Orloff.—The placenta in this case consisted of one central portion and four placentæ succenturiatæ. The funis was attached to the central mass—not to the middle of it, but between the central mass and the additional portions. The umbilical vessels were continuous from the point of insertion to the appendices. The author believes that the cause of the development of the placentæ succenturiatæ in this case was the existence of endometritis, which prevented the development of placental tissue in the regular way.

Letters to the Editor.

OPINIONS ON THE BELL BILL.

63 EAST SEVENTY-NINTH STREET,
NEW YORK, *February 2, 1901.*

To the Editor of the New York Medical Journal:

SIR: The profession must know, of course, that a bill has been introduced into the legislature of this State, the purpose of which is to enable those who are empowered to do so to enforce the medical laws. As at present interpreted, these laws can only be enforced against illegal practitioners who give medicines. If a person desires to evade these laws all it is necessary to do is to adopt some peculiar title, such as Christian Scientist, osteopath, hydropath, faith-curist, or even no name, and refuse to give medicines or drugs; although such a person may treat disease, there has been, as yet, no lawyer who will advise action against such illegal practitioners. The law as at present enforced is an incentive to uneducated people to adopt some of these peculiar names or methods, and they can practise medicine with impunity and without molestation.

The bill under consideration was objected to in the beginning by manufacturers of proprietary articles, opticians, and others, who maintained that its enactment would prevent a person from recommending a dose of pepsin or some equally simple remedy to a friend, and would interfere with the sale of patented articles, and in this way interfere with newspapers advertising such articles. The framers of this bill had no such intention in drawing the measure, and agreed to alter its phraseology, which has been done. As it reads now, the bill declares that any person shall be regarded as practising medicine who shall give treatment to any other person, by any method whatsoever, for the relief or cure of disease, excepting in an emergency. There can be no valid reason for objections to this bill on the part of patent medicine manufacturers, wholesale or retail druggists, truss or instrument makers, or any other person who does not make a business of treating disease. Retail druggists have no right now to treat disease, except in an emergency, and this bill will not alter their position or curtail their rights in any way. The legitimate business of an optician will not be interfered with in any way. This bill is designed to give an increased protection to the public, which is the only reason for the existence of any medical laws. The effect of the bill will be to compel Christian Scientists, osteopaths, and others who treat disease to comply with the medical laws, after which they can continue their peculiar methods if any one can be found to endorse them, or if they continue to believe in these methods themselves. There is no desire to interfere with free thought or religious liberty. There is no desire to prevent any person from practising any method his or her intelligence tells him or her is the best method. We only desire that every person who treats disease shall demonstrate to the State board of medical examiners his or her ability to tell whether a disease exists and to distinguish the disease which may exist, and then the matter of treatment must be left to individual judgment.

The battle is on, and will be won by those who believe in protecting the community, if all who so believe will write to the Hon. Nelson H. Henry, chairman of the assembly committee on public health, giving their names and addresses and urging the enactment of the bill. Will you not urge your readers to do this?

FRANK VAN FLEET, M. D.,
Chairman of the Committee on Legislation of the Medical Society of the State of New York; Chairman of the Board of Censors of the Medical Society of the County of New York.

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119 EAST ONE HUNDRED AND TWENTY-EIGHTH STREET,
NEW YORK, *February 3, 1901.*

To the Editor of the New York Medical Journal:

SIR: The noble dictum *Audiatur et altera pars*—let the other side also be heard—though it originated two thousand years ago, has never found general or wide acceptance until the latter part of the nineteenth century. It is only now that a large majority of people are ready to lend a willing ear to every claim, no matter how absurd; it is only now that we are ready to examine with an open mind different theories and hypotheses regardless of the obscurity of their paternity; and at no time in the history of the human race were people so careful not to condemn any theory, doctrine, or system without giving it an impartial, unbiased hearing. And, though in our desire to be fair and judicial some of us are apt to go rather too far, I hold that this, so to speak, expectant attitude is preferable to the intolerance and dogmatism of olden times.

Though Christian Science came with the ear-marks of fraud on the very face of it, I decided not to condemn it until I had heard all its advocates had to say in its favor. For the past three years I have taken special pains to hear both sides of the question, and this careful and impartial study has led me to the conclusion that this so-called science is an amalgamation of fraud and imbecility—fraud so contemptible and imbecility so shallow that it is questionable whether the world has ever before seen anything like it offered up as a "system." As to the followers of this system, while I do not like to classify them *all* as either fools or knaves, or a mixture of both, I can honestly say this: I have not met one Christian Scientist capable of fair, rational, and consistent reasoning. The word *logic* seems to have become completely eliminated from the vocabulary of the followers of that creed.

I am not a paternalist, and do not believe in hedging the individual all around with laws and statutes, but the line must be drawn somewhere, and I believe that the State has the right, nay, it is its duty, to protect the health and the lives of its citizens, particularly of the young and innocent, who have no voice in the matter. The attempt of the Christian Scientists to trifle with the lives of the people should be strenuously opposed. Their contention that they give no medicines, consequently they do not practise medicine, is both flimsy and dishonest, because *negative* treatment is just as much treatment as positive treatment is. If a man's heart is failing, and we fail to give him anything to sustain it, we treat him, or rather we mistreat him, just as much as if we gave him the wrong drug. Anybody who professes to treat disease—be the means material or spiritual—is practising medicine, and it would be a sad state of affairs, indeed, if all any quack or charlatan would have to do, in order to avoid the restrictions of medical laws, would be to allege that he was not a drug-giving physician. A law like the one contemplated by the Bell bill is, therefore, a necessity, and the said bill should be supported by physicians generally.

But the language of the Bell bill is too sweeping, and in my opinion the bill needs some amendments.

The feature which affects the pharmacists so that they cannot recommend a headache powder or a quinine pill is especially objectionable—objectionable and short-sighted—because it will have an effect opposite to the one expected. If the framers and supporters of the bill think that forbidding the druggists to sell little things for slight ailments—a privilege they have enjoyed from time immemorial—will have the effect of throwing more patients into our offices, they are mistaken. You cannot compel a man to pay one or two dollars for every little ache and pain; and it would be rather funny if people had to consult a doctor before they could get a corn cure, or toothache drops, or a hair tonic. So the only effect this feature would have would be to drive people still further to self-medication, to newspaper medicine, and to the use of patent nostrums. And then what talk there would be about medical trusts and medical monopoly! I know whereof I speak.

WILLIAM J. ROBINSON, Ph. G., M. D.

Proceedings of Societies.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Twenty-second Annual Congress, Held (in Conjunction with the Congress of American Physicians and Surgeons) in Washington, on Tuesday, Wednesday, and Thursday, May 1, 2, and 3, 1900.

The President, Dr. SAMUEL JOHNSTON, of Baltimore, in the Chair.

(Continued from page 172.)

Bullous Enlargement of the Middle Turbinated Bone ("Concha Bullosa").—Dr. J. PAYSON CLARK, of Boston, read a paper with this title. (See Vol. lxxii, page 670.)

Dr. JONATHAN WRIGHT, of Brooklyn: This paper is certainly a very clear exposition of the subject, but there is one criticism to make with reference to the ætiology, and that is, that the enlargement of the middle turbinate is developed from fœtal life without any inflammatory action connected with it. I do not know that Dr. Clark meant to state that, but in some of the remarks in the paper I should judge that was the tenor of it. I doubt very much whether this is true. I have seen two or three cases in my clinical work, and have examined seven or eight others microscopically, and I have come to the conclusion that there is a pre-existing cavity in the end of the turbinate bone to start with, and the subsequent development is in all probability due to an osteitis. Without going into the pathology, which the author has stated clearly, there is one point that he did not touch upon, and that is with reference to the peculiar location of the osteoblasts and the osteoclasts. They are respectively the cells which form bone and which absorb bone, and the histologist, as you know, says they are interchangeable; that is, the osteoblasts can be changed into osteoclasts. They are of a little different shape, but by careful study one can recognize them. If we study them carefully, we nearly always find that the osteoblasts are larger, rounder, and fuller cells. The osteoblasts are usually situated upon the convex surface

of the cavity. There is a bulbous cavity like this (indicating); we find the osteoblasts arranged around the outside of the bone. The cells on the inside of the concavity are of different shape and correspond closely to what are called osteoclasts. It occurs to me that there is probably an osteitis set up in the walls of the preexisting cavities, and by this unequal growth the osteoblasts form bone upon the outside and the osteoclasts absorb bone on the inside; beneath the lining of the embryonal mucous membrane there is this enlargement in these cavities going on.

While I am not perfectly sure of my observations in these cases, because it is hard to distinguish between osteoclasts and osteoblasts, it seems to me a plausible explanation of the formation of these cavities. I do not believe that these cases exist in children, or until a considerable time after puberty. If they did exist, we should see them. They would give rise to symptoms, so that at least a few cases would be seen.

As I remember the literature of the subject, I think Dr. Clark has overlooked the report of a few cases. I had a number of cases some few years ago, and when I looked up the literature at that time, there were eighteen or twenty cases on record. It seems to me that there are more cases than that on record now. It is certainly very interesting to know how this peculiar condition arises. It seems to me that it requires a good deal of imagination on the part of MacDonald to advance such a theory as he has. The question of sex in these cases is interesting. Why they should appear in women almost exclusively, or why they should appear in women only after the age of puberty, is certainly a very remarkable thing. We have notable examples of sex in nasal pathology, and atrophic rhinitis, of which we speak, is one. This is another. This feature is entirely inexplicable; yet there must be some cause for it.

Dr. CLARK: I have only one or two points to consider in reference to what Dr. Wright has said. I am not a histologist, and I have to take the word of others as regards the presence of inflammatory action; but the gentleman who examined the specimens for me distinctly stated in his report that there were no evidences whatever of inflammatory action. I must say that the growth of such large bodies as these would seem to require some sort of chronic inflammatory process, and what Dr. Wright has said is very interesting and pertinent to the matter. As regards the number of accounts of cases which I have found, I found many more, but I felt compelled to exclude them because they were incomplete, or did not seem to me to answer the description of the cases that I have detailed.

Cyst of the Vocal Cord.—Dr. CLARK presented this case also.

Fibroma of the Larynx.—Dr. A. B. THRASHER, of Cincinnati, read a paper thus entitled. (See Vol. lxxii, page 588.)

Dr. W. K. SIMPSON, of New York: Did the microscopical examination of the tissue that you removed at the time of operation agree with the first microscopical examination, so that the case could be put under the head of fibroma?

Dr. THRASHER: The examinations were practically similar in character.

Were these Unusual Cases of Partial Paralysis of the Vocal Bands Caused by Over-use of the Telephone?—This was the title of a paper by Dr. CLARENCE C. RICE, of New York. (See Vol. lxxii, page 452.)

Dr. SAMUEL W. LANGMAID, of Boston: We are greatly indebted to Dr. Rice for calling our attention to this subject. I have never been able to ascribe such trouble to the use of the telephone. I do not recall any such case whatever, and it is possible that this cause has in many instances been overlooked. I think his clear description of the latent condition of the larynx is worth calling attention to.

Dr. T. AMORY DE BLOIS, of Boston: It might be pertinent in this connection, as I did not hear all of the paper, to speak of a case which I saw last winter at the hospital. A man slipped down from a ladder, striking on the bottom rung on the back of the head. As a result, the muscles of the larynx were very much compressed. He had marked hoarseness and inability to approximate the vocal cords for several weeks. This condition passed off with rest. I attributed this to sudden muscular strain.

Dr. WILLIAM E. CASSELBERRY, of Chicago: I have no recollection of any cases in which the telephone itself could be assigned as the cause of paralysis of the vocal cords; but I recollect distinctly a case in which similar conditions produced paresis of the vocal cords, which subsided when the conditions were modified. The case was that of a clergyman who spoke with frequency, and had the habit when preaching of getting into a high state of nervous excitement, so much so that his voice would mount into a high falsetto key, which was evidently a great strain upon the vocal organs and a disagreeable feature to his audience. After some years of this method of preaching he appeared for treatment with marked paresis of the vocal cords, such as was described in the second case reported by the author. His voice had become so weak that he could preach only with great difficulty. There was paresis of both vocal cords, but it was more marked upon the right than the left side. I explained to him the nature of his difficulty, pointed out its serious character, and urged him to modify his method of preaching. First, I prescribed absolute rest for a time, then a modification in his method of preaching, and urged him to avoid the nervous excitement into which he threw himself while preaching, and to maintain a low, composed tone of voice. This he has since practised with persistence and success as regards both the pleasant character of his speaking and the alleviation of his laryngeal paresis.

Dr. JAMES E. NEWCOMB, of New York: I have had one or two cases of telephone girls who came to me with slight ear troubles. They get along as well as they think they should, considering the nature of their business. You will remember that the transmitter is hung directly before them, so that they sit back in a chair with perfect ease, and in talking assume almost an ideal position for the muscles of the neck, so that the expenditure of force is no greater than is absolutely necessary. There too, we have all noticed that, in conversing with the central office, the speakers say no more than is absolutely necessary.

A Case of Pin in the Larynx.—Dr. A. W. ROALDES, of New Orleans, reported this case. (See Vol. lxxii, page 589.)

A Peculiar Case of Migratory Foreign Body.—This case was presented by Dr. D. BRADEN KYLE, of Philadelphia. (See page 89.)

Dr. LANGMAID: Dr. Kyle has referred to a case; the specimen I have here in a bottle. The specimen was extracted whole, but became broken. My case was sim

ilar in many respects to the one described by Dr. Kyle. I described what I thought was a granulation tumor on the walls of the pharynx, extending over the arytænoids and preventing a view of the glottis. This pin (specimen) was in the larynx, having been sucked in three months before I saw the patient. Its length is of interest because it is one of the old-fashioned brass pins, such as we rarely see nowadays. The patient was a cashier in a factory and had used this pin to fasten money together. Dr. Knight happened to be in my office when the patient came in. By means of escharotics I picked off the tumor, and after a time I could see the larynx, but the left side was swollen. The arytænoid and the ventricular band were swollen so that I could not see the cord at all. The woman was much emaciated, having lost eight or ten pounds, and was afraid of tuberculosis. At the end of three months more she came back to me with a black spot on the ventricular band. In another week I was able to see the point of the pin, and then made a diagnosis of a foreign body. With reference to the extraction of these foreign bodies, Dr. Kyle said that one should use strong instruments and be careful to extract the foreign body at the first attempt. In my case, the first time I put the forceps on it was not strong enough. It yielded and I was not able to extract the body. I then applied a more powerful forceps and succeeded in extracting the pin. This case occurred in my practice in 1889, and a full account of it will be found in our *Transactions*. It was the second case I had had. I simply referred to the first case because of the remarks of Dr. de Roaldes as to the exact situation of these foreign bodies. The first case was that of a little girl who had accidentally put into her mouth a pin which had slipped down into the throat. I was called by the family physician and found the pin in the side of the larynx. What Dr. de Roaldes has said in regard to the manner in which the pin gets into the larynx may be true in many cases, but it would seem that this method would not have been applicable to my own case. Here, the pharynx was perforated by the head of the pin and, in the act of swallowing, it was gradually carried farther into the tissues, this process being continued until it was fairly embedded in the cellular tissue behind the back wall of the pharynx. By the further act of swallowing, rotation took place with the head of the pin down.

Dr. Thrasher: I desire to emphasize the advantages which are to be derived from one of the manipulations referred to by Dr. de Roaldes in the removal of these foreign bodies, namely, the introduction of the finger into the vestibule of the larynx for the purpose of assisting in the removal of the object. I had occasion a number of years ago to remove a pin that had been embedded in the larynx for a number of years. The patient was a child. The child was very refractory, but under the influence of chloroform I could with perfect ease touch the foreign body with the tip of my finger, and with the aid of a forceps its removal was easily accomplished. Fortunately, in this case the head of the pin had fallen beneath the epiglottis, the point having transfixed the posterior portion of the right arytæno-epiglottic fold. Foreign bodies in the ventricle of the larynx or above the vocal cords can be touched by the point of the index finger and valuable assistance derived in this way. I am very glad to know that some one else has taken advantage of this little manipulation, and it might have been used as a diagnostic measure in the case I had. No one had been able to see the pin in my case or to determine that a pin was there, except possibly a very skilled laryngologist (?) in a neighboring city, who said that he had discovered it in the right apex of the lung with the aid of the microscope! The presence of prolonged coughing and the fact that the case was rapidly passing into what was considered consumption induced the parents finally to bring the child to me.

Dr. J. E. Boylan, of Cincinnati, Ohio: The surprising difficulty at times experienced in extracting pins from the larynx, referred to by the author, recalls to my mind an experience of my own. In my case the pin was not within the larynx, but deeply embedded in the fold between the base of the tongue and the epiglottis, and very effectually hidden, so that it could only be seen with the laryngoscope when the tongue was well drawn out. The symptoms were referable to the larynx and for this reason it escaped observation for quite a while during inspection. About one third of the point end of the pin had penetrated the lateral glosso-epiglottidean fold, while the head was pressed deep into the median fold—so that about a third of the pin was visible, lying transversely in the recess at the base of the tongue on the right side. The only suitably curved forceps that I happened to have at hand was a large and rather clumsy œsophageal one, and yet even that slipped, to my surprise, when traction was made in an effort to dislodge the pin. At the next attempt the point of the pin was pushed still farther into the issue by a lateral bolt-like movement, which disengaged the head from the median fold, after which the extraction was very simple.

Dr. F. Peyer Porcher, of Charleston, S. C.: I wish to lay stress on the necessity of having a good forceps for the extraction of these foreign bodies. It has been my fortune to remove two pins from the larynx within the last few months, and I find that Schroetter's tube forceps, as made by Hajeck, of Vienna, is most excellent for that purpose. Most of us who have studied under Schroetter will remember old Frau Daly, who used to permit the students to insert a china bead into her larynx and extract it for a small pecuniary consideration. It was here that I learned the use of this forceps. Of course, thorough cocainization of the larynx is necessary to control the spasm, but in very young subjects the removal of these foreign bodies would at best be difficult to accomplish. With your permission, I will take this opportunity to show a fish-bone which I took out of a patient's throat. There is nothing remarkable about this bone except the vicious character of it. As will be seen, it consists of two spines connected by a thin lamella of bone in the shape of a triangle. The apex of the triangle was sucked down into the throat and the two spines were buried in the laryngeal mucous membrane, so that the sharp edge of the lamella was the only thing visible in the mirror. I examined the man for half an hour before I could detect anything at all, and then I saw what looked like a crack in the glass, but the crack moved, so that I knew it must be a foreign body. The alligator grip of the forceps readily took hold of it, and it was easily extracted.

Dr. T. M. Murray, of Washington, D. C.: I have seen two cases of pins in the larynx, although one of them was really not in the larynx when first seen, but was sticking in the lower part of the pharynx with the head down. I found some difficulty in removing it. The forceps, though strong, slipped, dropping the pin into the larynx. Its removal was successfully accomplished in the second effort.

Dr. SIMPSON: Our experience with foreign bodies or pins in the larynx is sometimes discouraging, and it is well for us at the outset to be careful not to let the forceps slip. We must be sure of the location of the foreign body, having the larynx thoroughly cocainized, and we should be able, if possible, to extract it the first time. A very valuable little point is to try the forceps one is about to use upon a pin or needle before introducing it into the larynx, giving it all the pulling one possibly can, to see whether it will slip or not. I believe in these cases we should use a sharp-end forceps. The ordinary rough forceps will slip. It is surprising what sharp forceps can be used on a pin or needle without breaking it. I prefer the use of Schroeder's tube-forceps.

Dr. CASSELBERRY: In reference to the use of the x-ray and the burn that was produced, I should like to ask Dr. Kyle as to the time of exposure, and whether these burns may possibly be avoided by shorter exposures.

Dr. DE ROALDES: I should like to say, first, that it seems to be pretty well admitted that the removal of pins from the larynx, especially if embedded, is not so easy as it may seem. The great trouble is that we do not always know the exact position of the pin, and particularly the relative position of the point to the head. In answer to Dr. Langmaid, I should say that in the majority of cases reported the head of the pin was lower than the point, seeming to indicate that generally the pin slips down head foremost, as a result of its original position between the teeth or lips with the head in the mouth and the point externally, for fear of pricking the tissues, or, again, as a result of an inversion of the pin in its descent by an adaptation of its centre of gravity. On the contrary, if the pin is inhaled with its point foremost, the latter is very apt to become stuck in the tissues, with the head upward. Furthermore, we must remember that the position at first occupied by the pin in the larynx may be materially modified by the spasmodic contraction of the parts. In one case the observer mentions that the pin was seen at first with its head resting against the posterior surface of the epiglottis and the point pricking slightly the interarytænoid tissues. Nothing was done for a few hours, but subsequently the patient was examined again, and it was found that the head had been pushed backward by the epiglottis, and that the pin had transfixed the soft parts. With reference to the use of cocaine preparatory to the extraction of these foreign bodies, I deem it the anæsthetic *par excellence* in adults and in docile patients, in whom the parts are not too irritated or swollen. This anæsthetic, however, will be found more than once disappointing in children, especially in cases of long standing, in which the pin is embedded in inflamed or swollen tissues and there exist constant pricking sensations in the throat, with abundant secretions. Under these conditions, cocainization is a real operative act, which, as a result of fear, or of actual pain, is strongly resisted by the little patient. In such cases general anæsthesia is preferable, particularly if, as is sometimes indicated, one has to make use of the index finger of the left hand to steady the larynx while the right hand holds the pin in a firm grasp of the forceps.

Dr. KYLE: In reply to the question of Dr. Casselberry as to the time of exposure in this case, I will say that Dr. Prince had charge of the x-ray apparatus during this exposure in which a burn was produced, and I do not recall the exact time of the exposure. I believe that it is not so much the long exposure that produces a burn as it is the peculiar idiosyncrasy of the individual. Some patients have been exposed almost an hour, with no burns whatever. I know that the exposure in this particular case was much shorter than in some of the others, so that I do not believe the time of exposure has much to do with it.

(To be continued.)

Book Notices.

A Text-book of Histology, including Microscopic Technique. By A. A. BOHM, M. D., and M. VON DAVIDOFF, M. D., of the Anatomical Institute in Munich. Edited with Extensive Additions to both Text and Illustrations by G. CARL HUBER, M. D., Junior Professor of Anatomy and Director of the Histological Laboratory, University of Michigan. Authorized Translation from the Second Revised German Edition by HERBERT H. CUSHING, M. D., Demonstrator of Histology and Embryology, Jefferson Medical College, Philadelphia. With 351 Illustrations. Pp. 7 to 501. Philadelphia: W. B. Saunders & Company, 1900. [Price, $3.50.]

A PERUSAL of this book speedily shows the immense advance that has been made in recent years, not only in our knowledge of the finer structure of the tissues, but also in the technics of microscopical work. Especially is this true in the reading of the chapters on the cell and on the central nervous system. The latest researches are here embodied and, with the clear, and therefore valuable, illustrations, impart an immediate sense of their didactic importance.

The book opens with fifty pages devoted to microscopic technics. This is followed by twenty pages on the cell, especially well illustrated. The minute study of the tissues in general is then considered, and the remainder of the work is devoted to the histology of the special organs. The size of the book but emphasizes its thoroughness; and it is safe to say that it has no superior in the English language.

The translation is capitally done into idiomatic English, and the book-making is of the highest order. The illustrations are beyond reproach.

Hernia: Its Ætiology, Symptoms, and Treatment. B W. MCADAM ECCLES, M. S. (Lond.), F. R. C. S (Eng.), Assistant Surgeon, West London Hospita etc. Pp. xiv-231. New York: William Wood Company, 1900.

THIS book, while not purporting to be an exhaustiv review of the entire subject of hernia, covers the field ex ceptionally well. The special anatomy of each variet of hernia is thoroughly discussed, and its ætiology, sym toms, and treatment are considered. In operating f inguinal hernia, the author closes the canal by suturin the internal oblique and transversalis muscles to Po part's ligament, leaving the spermatic cord above t canal, somewhat after the method of Halsted and Ba sini. The various recognized operations for radical cu are each briefly discussed, while full consideration given to the rarer forms of hernia. The author believ that it is wise for those who perform heavy labor to we a truss after an operation.

The book is printed on heavy toned paper, and is ve

well illustrated by photographs and drawings. Every surgeon will be interested in reading it, and we believe it to be one of the few books well suited for students' use.

A Practical Treatise on Genito-urinary and Venereal Diseases and Syphilis. By ROBERT W. TAYLOR, A. M., M. D., Clinical Professor of Venereal Diseases at the College of Physicians and Surgeons (Columbia University), New York, etc. Second Edition, thoroughly Revised.. With 138 Illustrations and 27 Plates in Colors and Monotone. Pp. 5 to 722. New York and Philadelphia: Lea Brothers & Company, 1900.

OUR high opinion of this work was expressed at the ime of the appearance of its first edition, and certainly t is the ablest of the modern treatises upon venereal dis-ases. Of the second edition it need only be said that it presents the good qualities of its predecessor together vith the revision and correction that three years have re-quired. One who pretends to keep in touch with the ubjects of genito-urinary and venereal diseases will carcely be without Dr. Taylor's book.

A Manual of Syphilis and the Venereal Diseases. By JAMES NEVINS HYDE, A. M., M. D., Professor of Skin, Genito-urinary, and Venereal Diseases, Rush Medical College, Chicago, etc., and FRANK HUGH MONTGOMERY, M. D., Associate Professor of Skin, Genito-urinary, and Venereal Diseases, Rush Medical College, Chicago, etc. Second Edition, Revised and Enlarged. With 58 Illustrations in the Text and 19 Full-page Lithographic Plates. Pp. 9 to 594. Philadelphia: W. B. Saunders & Company, 1900. [Price, $4.]

THE second edition of this work finds it increased in he number of pages and in many parts rewritten. The ntire portion devoted to the subject of gonorrhœa has een revised and is as modern and scientific as is to be ound in any treatise on the subject. The chapters on yphilis, too, have been subjected to correction and mendation, and are in themselves complete and all-mbracing. The attitude of the authors that syphilitic isease does not prove fatal in nearly the proportion of nstances in which tuberculosis does, will, we think, re-eive professional sanction.

A number of new illustrations have been added to the ook, rendering it more attractive. For the specialist, he student, and the practitioner we consider this work ne of exceptional usefulness.

A Practical Treatise on Medical Diagnosis for Students and Physicians. By JOHN H. MUSSER, M. D., Professor of Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia and the Presbyterian Hospitals, etc. Fourth Edition, Revised and Enlarged. Illustrated with 250 Woodcuts and 49 Colored Plates. Philadelphia and New York: Lea Brothers & Co., 1900.

IN his fourth edition the author brings the subject to s most recent development. Marked as it is by some onsiderable revision and addition, it may be said that he work is a very valuable exposition of modern diag-ostic methods. The book, we believe, is by this time ell known, but to those unfamiliar with it we may afely commend it as most reliable and exhaustive.

Saunders' Pocket Medical Formulary, with an Appendix. By WILLIAM M. POWELL, M. D. Sixth Edition, thoroughly Revised. Philadelphia: W. B. Saunders & Company, 1900.

THIS work, intended to be carried about by the physician, contains 1,844 prescriptions, mainly from recognized authorities, arranged in alphabetical order according to diseases. An obstetrical table, a diet list, methods of treating asphyxia, a table of incompatibles, a "surgical remembrancer," and other data of a similar nature are also contained in the book. We have no doubt that a work of this kind will find a useful field, for it is well done and can be made of practical service by any medical man.

New Inventions, etc.

A NEW AURAL SYRINGE.*

BY J. H. BRYAN, M. D.

THE syringe which I have the pleasure of showing you to-day is an extremely simple one, consisting of a glass barrel with metal attachments. It is devoid of the many drawbacks which are common to the various instruments thus far placed on the market, in that it can be kept thoroughly aseptic, and it does not leak after boiling, a defect so frequently met with in the ordinary ear syringe.

The new composition fastening of the metal and glass is firm, and it can be boiled, as well as the composition packing of the piston.

The piston can be tightened or loosened by drawing the piston-rod clear up where the bracket on the packing plate locks between two brackets on the inside of the top cap. By turning the piston-rod to the left the packing is screwed together, which expands it, while by turning to the right the packing is loosened. It is desirable when the instrument is not in use to keep the packing loose.

*Shown at the Twenty-second Annual Congress of the American Laryngological Association.

Miscellany.

The Significance of the Hydrostatic Test of Still Birth.—Dr. T. Dilworth writes to the *British Medical Journal* for December 1st to report the case of an inquest held recently on the body of a female illegitimate child, which was exhumed after being buried ten days. The evidence at the inquest went to show that the child was born rather precipitately, but the woman was attended by some neighboring woman first, then by a medical man, and finally by the parish nurse, who all saw the baby alive, though weakly. The child lived about five hours.

At the post-mortem examination, which was done by Dr. Dilworth, assisted by the medical man who attended the mother, they found that the body presented the appearance of a child born at full term, and fairly well developed. On opening the chest the lungs were found collapsed, not filling the chest cavity, and in a state of complete "atelectasis." They resorted to the hydrostatic test, and found that the lungs sank when both were immersed together, when immersed separately, or even when small portions were thrown in; in fact, they gave the indications of a still-born child.

Dr. Dilworth says: "I was obliged to confess to the coroner that had I not the indisputable evidence of five different people on oath that the child lived five hours, I should be compelled to swear that the child was still-born, and had never breathed. The only explanation, I suppose, is that the infant kept its feeble hold of life by whatever aeration the blood received through the trachea and the larger bronchi."

A Bill to Regulate the Relation of Gas Companies to the Public Health.—A bill has been introduced in the assembly at Albany by Mr. Harbruger providing that gas companies in the State shall make sworn reports twice each year to the State board of health of the amount of gas made and sold, in cubic feet; amount of gas consumed in works or offices, in cubic feet; amount of gas unaccounted for, in cubic feet; length of mains in use; gas unaccounted for per mile of main, in cubic feet; percentage of gas unaccounted for to total output.

Every report shall also show for the period covered by it what claims for damage to persons or property resulting from the leakage of gas in distribution have been adjusted, compromised, or settled out of court, by or on behalf of the companies; also, what judgments for loss or damage resulting from gas leakage have been entered against them; also, what suits against them, based on the allegation of damage to persons or property from gas leakage, are pending.

It shall be the duty of the State board of health to transmit copies of such reports to the mayors of cities and the boards of health of towns in which the companies operate, accompanied with such suggestions as the board may consider necessary for the public welfare and the better protection of life and health. It shall also be the duty of the State board of health to report to the Governor, from time to time, such measures for the regulation of gas distribution as may be warranted by information before it.

Cigarettes and Insanity.—Dr. Carlos MacDonald, in the trial for murder at White Plains, N. Y., of Burnz, stated in rebuttal of the defence set up (viz., that the accused was insane as a consequence of excessive cigarette smoking) that during the past thirty years he had examined upwards of fifty thousand persons as to their sanity, and he had never found a single case of insanity which was in any way attributable to cigarettes.

The Danger of the Eclipse of Quinine in Malarial Disease.—Mr. A. H. Hanley, F. R. C. S. I. (*Journal of Tropical Medicine,* December, 1900), fears that the present attention to the mosquito may cause people to neglect quinine. Any one who goes to Southern Nigeria and expects to steer clear of fever by use of the mosquito net at night will, he fears, in many cases, be soon disillusioned. The anopheles here attack one both day and night. In his practice out there he has had to do long journeys in a boat at night, and for twenty-six miles has been exposed to the attacks of mosquitoes and other pests; but, thanks to ten grains of quinine, taken either when starting or on arrival, he has for years escaped fever. After fifteen years' experience of Southern Nigeria, he cannot speak too strongly of quinine as a prophylactic, and he still advises all comers to take quinine as heretofore till such time as the place in which they reside is free from anopheles. He deprecates the tendency to put the quinine bottle on one side and depend on the mosquito net. The people who do that either do not believe in quinine as a prophylactic, or fail to see that the mosquito net at night confers but partial protection.

Extremes Meet.—The *Medical Record* for January 26th reports the case of twins, born, respectively, a few moments before midnight on December 31, 1900, and a few moments after midnight on January 1, 1901. Twins are occasionally born with a long interval between them, but a century! oh! Perhaps, after all, this is only a plant—a century plant. If there is to be any doubt as to their names, we would suggest Fin-de-siècle and Up-to-date.

The Temptation of Forceps.—According to the *West London Medical Journal* for January, Professor A. R. Simpson is responsible for the following story:

An old practitioner, Dr. Gideon Gray, and his son set out one day on a long round of some fifty or sixty miles, with the possibility of the latter being left in attendance on a shepherd's wife. Just at starting the following discussion took place: "What's that ye're pittin' i' the gig, laddie?" "It's the forceps." "Did ye say your prayers this morning?" "Yes; why did you ask that?" "Why? My man! because it's nae guid praying 'Lead us not into temptation,' if ye tak' forceps wi' ye tae a midwifery case."

The First Woman M. D. in Germany.—The *Medical Age* for January 10th tells us that it was in the year 1754 that the degree of M. D. was first conferred on a woman in Germany. The *Vossische Zeitung* for July 18, 1754, mentions that the medical faculty of the University of Halle had granted the degree of M. D. to Mrs. Dorothea Christiana Erxlebin after she had passed the examination with distinction. This lady had been an apprentice of her father, a well-known medical practitioner at Quedlinburg, and as she could not matriculate at a university, she learned medicine by reading only. By a royal decree of Frederick the Great she was then recommended to the faculty of Halle as a candidate for graduation, but she presented herself only after the death of her husband. She also published an essay on the utility of learning for the female sex.

Original Communications.

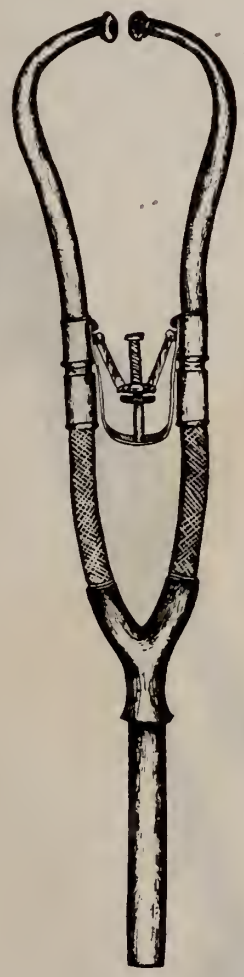
STETHOPHONOMETRY.

By ALBERT ABRAMS, A. M., M. D.,

SAN FRANCISCO, CAL.

To those of us habitually engaged in the examination of the chest, it has no doubt been a source of regret that we are in the possession of no accurate means of registering the intensity of the heart sounds in health and disease, as well as the auscultatory lung phenomena.

There are different factors which normally determine the loudness of the heart tones. One factor is the varying conductivity of the different structures in the chest wall and between the thoracic wall and the heart. The chief factor, however, is the strength of the heart's action. Auscultation of the heart tones in the conventional manner not infrequently affords us no indication of cardiac



strength, if reliance is to be placed on the intensity of the tones in their selective propagation to different parts of the chest.

I have often been struck by the loudness of the heart tones in emaciated individuals in whom the action of the heart was found to be feeble, as determined by the sphygmomanometer and sphygmograph. In convalescents from typhoid fever, the foregoing fact has been specially emphasized in not a few instances. In anæmics, we often hear very loud tones, even though the blood pressure is low; and again in dilatation of the stomach, when that organ approximates the cardiac area, the tones by mere resonance are loud, even though the strength of the heart is reduced. In many emaciated persons it often happens that the heart tones are conveyed to the interscapular region, to the epigastrium, and even to the head without any corresponding increase in the force of the heart. In such instances the thorax is practically a resonator. If then, in certain instances, auscultation is no trustworthy index to the force of the heart, have we not in the sphygmomanometer and sphygmograph clinical instruments of sufficient reliability to gauge the blood pressure? Unfortunately, in the application of these instruments we must contend with the objectionable personal equation, and content ourselves with the determination of the blood pressure in the systemic circulation only. When the phonograph was first introduced, I thought I saw in that instrument the consummation of my hopes, but after considerable experimentation it proved useless. In my *Manual of Diagnosis** the results are expressed as follows: "In my investigations, which were varied in every manner possible, the recording of heart sounds was practically impossible. The fault rests with the phonograph. There is no question about the sensitiveness of the diaphragm for recording even the feeblest sounds, but the difficulty lies in reproduction. Even loud sounds emanating from the chest are with difficulty detected by an ear accustomed to the phonograph. When the reproducing needle is adjusted to the revolving wax cylinder a hissing sound is heard, the result of friction between the needle and the wax. It is this sound which interferes with proper reproduction. If this objection were obviated, the phonograph would prove an ideal instrument in physical diagnosis."

Subsequently I reported† the following two methods for measuring the heart tones: "The following method is suggested for its simplicity. It is only relatively accurate, and is based on the simple physical principle that the intensity of sound varies inversely as the square of the distance from the sounding body, hence the distance to which a heart sound may be heard depends upon its intensity, ignoring of course those adventitious causes of propitious conductivity. Between the area auscultated and the stethoscope a medium is interposed. Experiment has taught me that one of the best media is partially vulcanized rubber in the form of a rod, and just sufficiently soft not to interfere with convenient manipulation. Such rods may be purchased in any store where rubber goods are sold. The circumference of the rods must equal the calibre of the pectoral end of the stethoscope in which they are to be inserted. The degree of insertion must be regulated by a notch cut into the rubber. The

* *Manual of Clinical Diagnosis.* Third edition, 1894.
† *Medical News*, July 8, 1899.

object of this regulation is to insure uniformity of results in the examination of individual patients. The rods may be of different sizes, varying in length from six to twenty-six centimetres, or even of greater length. Before auscultating the heart tones by this method, we must first mark on the chest the different points in the præcordial region where the heart tones are heard with the maximum degree of intensity. Over each ostium, we auscultate with the rod inserted into the end of the stethoscope, beginning with a rod of medium length and gradually increasing the length of the rod until one is attained through which the heart tones are no longer conducted. The tubes are numbered, and a record may be made in our case book after the following formula:

Mitral I tone	6
" II tone	5
Aortic I tone	4
" II tone	5
Tricuspid I tone	6
" II tone	4
Pulmonary I tone	4
" II tone	5

According to the foregoing formula we conclude the following: That with a rod (No. 6) which is twenty-six

centimetres in length, we may still be able to hear the following tones: Mitral systolic and tricuspid systolic tones. A similar interpretation may be deduced from the other numbers. These figures possess no value for general application, as the degree of transmission is dependent on the character of the stethoscope as well as on the length of the rod employed. Each observer must cut his own rods of different lengths. With some kinds of stethoscopes the first mitral and tricuspid tones are still heard with rods fully thirty centimetres in length, whereas, with other kinds, a rod of half the length will no longer transmit the same tones.

In some instances another method may be adopted. It is less reliable than the former method, especially in thin persons, owing to the increased conductivity of the thoracic tissues. As before, one marks on the chest wall the different situations where the heart tones corresponding to each ostium, are heard loudest, and then proceeds in different directions until the sounds are no longer audible. The distance to which the sounds are propagated is marked and measured. The directions in which the sounds are auscultated have been determined empirically as follows:

Mitral tones: Auscultate along a line on a level with the apex beat to the left axillary region.

Tricuspid tones: Auscultate along a line extending from the point of auscultation to the right axillary region.

Aortic tones: Along a line on a level with the point of auscultation to the right axillary region.

Pulmonic tones: From the point of auscultation to the left axillary region. The tricuspid and mitral tones are best conducted downward by the liver, but as a distinction between the mitral and tricuspid tones over the hepatic region is impossible, this direction cannot be employed. I will mention, parenthetically, that the liver is an excellent conductor of the heart tones, and that when they are no longer audible by auscultation we can safely

conclude that the lower border of the liver has been reached."

A reasonable experience with the methods just cited demonstrates the inconvenience and impracticability of the rod method, and the relative inaccuracy of the second

method. Attempts were therefore made to simplify stethophonometry by the construction of a stethophonometer,* which is herewith illustrated.

It is constructed on the disc valve principle, weighs about two ounces, and is composed wholly of hard rubber. There are three perforated discs in close apposition, the middle disc being made to revolve by means of a handle attachment, so that its opening may be made to approach or recede from the opening in the two other discs. The greater the encroachment on the opening by the middle disc, the greater will be the resistance offered to the transmission of the sound waves. On the face of the disc nearest the auscultator, is a scale by which the intensity of the chest sounds may be measured. On one side of the discs, the bell of the stethoscope is affixed, and, on the other side, a plug, the size of which may be varied to fit any stethoscope. This plug is perforated, and in the perforation may be fitted a rubber cork, if necessary, to offer still further resistance to sound. The latter expedient, however, is rarely necessary. The stethophonometric attachment can easily be removed when it is found necessary to carry out the conventional method of auscultation.

The employment of such an instrument will no doubt serve to add greater scientific value to our clinical examinations in recording the intensity of the acoustic phenomena associated with the heart and lungs. In determining the relative loudness of the breath sounds, for instance, over the pulmonary apices, it will prove invaluable. Another index to its employment in lung auscultation is the following: After gauging the instrument so that the vesicular murmur is no longer heard, auscultation is successively practised over different areas of the thorax. It follows that if breath sounds are conducted to the ear at some particular area, we have at that area, either exaggerated breathing, bronchial respiration, or some other anomalous acoustic phenomenon. Such deductions necessarily postulate familiarity with the varying degree of breath sounds in different parts of the chest. No matter how well trained the ear may be in auscultation, it can never replace a carefully gauged instrument.

By aid of the stethophonometer, I can confirm the work of Dr. S. R. Creighton, extensively reported in the recent admirable work of Cabot on Physical Diagnosis, viz.: That the relative intensity of the pulmonic second sound, when compared with the second aortic sound, varies a great deal at different periods of life. The observations of Creighton are important, as they serve to correct the popular error current in text-books, that the aortic sound in health is always louder than the pulmonic second sound. At present, I am at work with the stethophonometer in an attempt to establish a distinction between purely cardiomuscular and valve tones. This much I am prepared to say, viz: That in gauging the vigor of the failing myocardium, the greatest reliance is to be placed on the early evanescence of the first tones over the pulmonic and aortic areas respectively. In using the stethophonometer, the mode of auscultation must be uniform. This relates to the position of the patient, as well as to varying conditions which, in the physiological and pathological states, necessarily modify the intensity of the heart sounds.

*Made for me after an original design by the Shoenberg Electrical Company, E. Spreckels Building, San Francisco, Cal.

SEPTICÆMIA IN YOUNG CHICKENS.

By LEO F. RETTGER, M. A., M. D.,
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In the *New York Medical Journal* for May 26, 1900, I published the results of some observations I made on a peculiar case of septicæmia in young chickens. In this article I shall briefly summarize the facts as given, and in addition give the results of a later investigation of the same subject.

The disease occurred among young chickens from two to three weeks old. Of a brood of seventeen chicks all

but three were sick, and of these all but three died. Grown chickens were immune. The symptoms were the same in each case. There was a loss of appetite and the chick grew sluggish; the feathers became rough and diarrhœa prevailed. Later, the chick stood with drooping wings, the neck and legs appearing unusually long and slender. Finally it lay on its side, with outstretched wings. The mouth and throat seemed normal and there was no visible sign of pain. On post-mortem examination, the chick was very poor; the crop was empty; the intestines were pale and almost empty; the liver was pale, with the exception of a few dark-red patches and streaks. From the liver a pure bacillus culture was obtained. This organism is a motile, non-liquefying, non-chromogenic, aerobic, and facultative anaerobic bacillus with slightly rounded ends. When grown on agar, it is from one to two micra long, from 0.3 to 0.5 of a micron broad, and usually occurs singly. It grows rapidly on ordinary media, best at incubator temperature. It stains with the

ordinary aniline dyes, but not by Gram's method. Four chicks from two to four weeks old were inoculated subcutaneously with a bouillon culture of the bacillus. In about two days after the inoculation there were symptoms of disease resembling those of the original brood. Two of the chicks recovered in a few days; the remaining two died, the one in four, and the other in a little less than five days. The same organism was obtained from the blood as originally found.

Thus far my observations were confined to this brood of seventeen chicks. Whether the disease was common and ever became a real epidemic, I was unable to say, as these were the only young chickens in that vicinity, and there was little chance of spreading the disease.

While at Winona Lake last summer, Mr. Bass, a gardener, called my attention to a disease which was rapidly exterminating his young chickens. Of forty chicks (four broods), all died but five. They were attacked, and died, while between one and four weeks old. Of those that were sick, only one recovered. They were given fowl cholera treatment, and were moved frequently into new boxes which had been washed with lime. The disease took its course, however. Another brood of fifteen chicks began to show symptoms of the same disease when hardly a week old. All but three died before they were three weeks old. Soon afterward two broods of thirty-three chicks contracted the disease, and in less than three weeks all but ten succumbed.

At about the same time, two farms adjoining that of Mr. Bass became a prey to this epidemic. Of a large number of young chickens that were attacked, about eighty per cent. died. On one of these farms hogs were allowed to run practically at large. They all remained entirely immune. Neither did the epidemic visibly affect any of the chickens which were more than four or five weeks old.

The symptoms corresponded almost perfectly to those of the case originally observed. The only differences which I could note were these: In the first stages of the later infection the chicks seemed to be feverish and more or less thirsty; and, secondly, the progress of the disease was more rapid than in the first case observed.

From the liver of the chicks I obtained a bacillus, which, on examination, corresponded in almost every detail to that obtained from the original brood of seventeen chicks. The development, however, on artificial media, and especially on potato, was more rapid than that of the first culture. This was due, in all probability, to the greater virulence and vigor of the newer bacillus.

With a pure culture of this bacillus I inoculated two chicks scarcely two weeks old, subcutaneously. A third chick of the same age was kept separate, for control. Within two days both of the inoculated chicks appeared sick. The disease progressed rapidly, and in about three days the chicks died. The disease took the same course as the epidemic, except that it was a little more rapid in its progress. (The accompanying photograph was taken from thirty to forty-five minutes before the chicks died.) From the liver of these chicks I obtained a pure culture of the bacillus in question.

That this disease is an epidemic whose importance cannot be easily overlooked, there is no doubt; and the problem of combating it is one of vital interest to the farmer and others who are engaged in poultry raising.

A NEW PORTABLE AND INEXPENSIVE OPHTHALMOMETER.*

By WILLIAM F. AIKEN, M. D.,

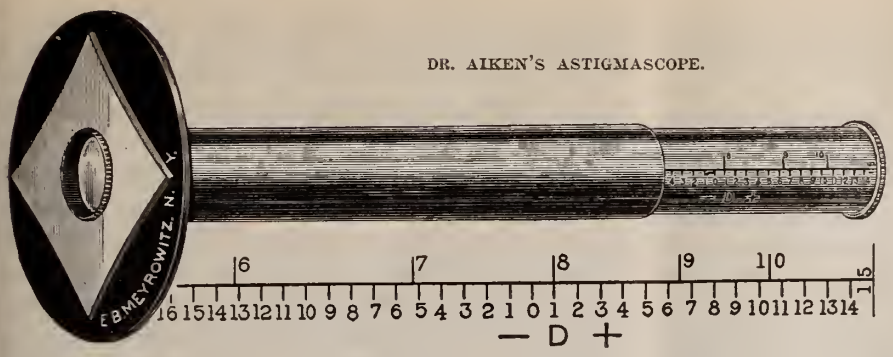
SAVANNAH, GA.

It is a fundamental principle in physics that the refinement of an instrument of precision beyond that point where attainable results are useful is both needless and extravagant. Machines and instruments of all kinds must, like organisms, compete with rivals for survival; and, in this contest, economic as well as technical principles are involved. Therefore, in designing any piece of mechanism, an attempt should be made to nicely balance these two principles in the organization of the machine.

With these truths in mind let us consider briefly the utilities and economics of the prevailing types of ophthalmometer, noting especially those heavy instruments requiring a supporting table or similar fixed stand, and let us study them solely with reference to routine refraction work in the office or dispensary. They are constructed to measure with great nicety the corneal curvature by means of mires of considerable size, movable along an arc of considerable radius, the reflected images being examined through a telescope of considerable length wherein doubling of those images is accomplished by means of an expensive prism. Moreover, all these instruments carry attachments, some of them involving flat or curved discs of large size, whereby the axis of an astigmatism may be read in degrees of the circle. The total bulk and weight are materially augmented by these attachments, not to mention expense of construction.

Here, then, is an elaborate apparatus for very exactly measuring corneal astigmatism, and for showing the axes upon a graduated circle of such great radius that a single degree of variation might be detected thereon. All these refinements, which almost suggest those of a transit instrument, add bulk, entail labor in manufacture, and sacrifice time in manipulation. And to what end? That a painstaking observer shall be able to secure a reading which he can be reasonably sure is not more than one and a half dioptres out of the way as compared with the actual glass needed by the patient, and an indicated axis for that glass not more than, say, fifteen degrees at variance with the requirements of the patient's eye. The instrument is more accurate than its results are applicable,

*Read in part before the Georgia Medical Society, December 4, 1900.



in short. And the gratuitous perfection is obtained at the cost of bulk that in turn means an immovable instrument to which both light and patient must be brought and attached—another shifting around of the patient, another lot of instructions and explanations, and time lost. We are all familiar with the demonstrating ophthalmo-

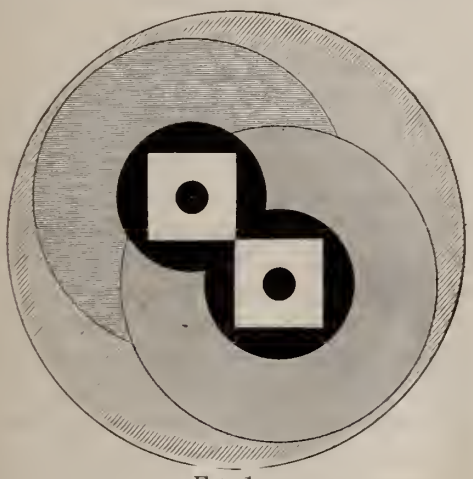


Fig. 1.

scope of Mr. Brudenell Carter, with its chin-rest, lenses, lamp, and mirror arranged on a four-foot table, as figured in Dr. Bull's edition of Soelberg Wells, but we do not avail ourselves of it in our office routine, preferring a small hand instrument.

The principle I wish to emphasize is this: that several

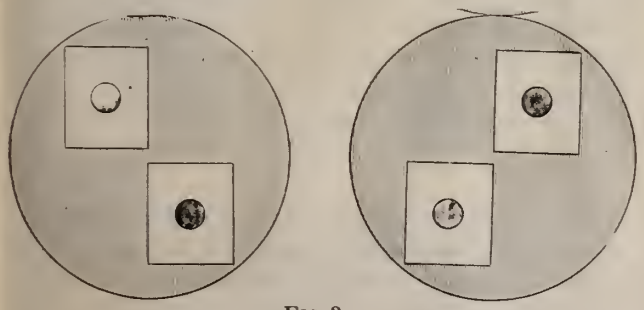


Fig. 3.

features of the type of ophthalmometer we have been considering may be dispensed with, in so far as they add nothing to the useful information supplied, thereby diminishing the size of the instrument to such an extent that it may be made portable and freed from the drawbacks aforementioned. Thus, if positive determination of axis to within less than an angle appreciable by the unaided eye is impossible, the entire axis measuring equipment may be done away with; if smaller mires closer to the cornea will yield results approximating as nearly to the astigmatism to be corrected as do large mires on an arc of longer radius, we may employ profitably the small mires, dispensing with the large arc, etc. The same will hold good for a shortened telescope and simplified prism. In other words, we can thus make an instrument of no less *practical* accuracy and with the added advantages of portability and facility in its employment, an ophthalmometer adapted strictly to the work of fitting glasses, while leaving to the larger instrument the wide field of scientific ophthalmometry in the truest sense. I may best illustrate my meaning by comparison. A linen merchant does not use a compound microscope with oil immersion objective as a thread counter, neither does a mariner employ an astronomical altitude and azimuth instrument in lieu of his less delicate but more adaptable sextant.

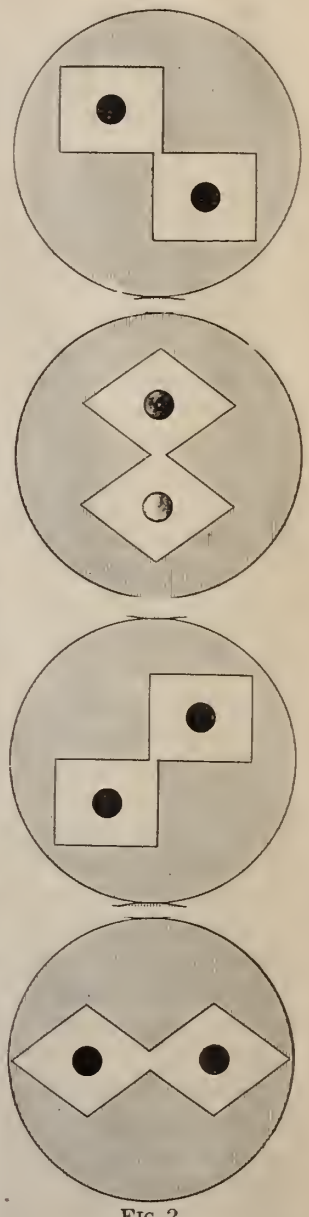


Fig. 2.

An instrument organized on the lines indicated in the foregoing analysis, I have been maturing for a considerable time. As first conceived, it was for use merely as a rapid guide and time-saver preliminary to the truly accurate methods of the shadow test and trial lenses. Constructed for me by Mr. E. B. Meyrowitz, it proved more than I had expected when I named it an "astigmascope" in modest avoidance of the more ambitious "-meter" ter-

Note.—In Fig. 2 the second diagram should show the obtuse angles just in contact, not overlapping. In Fig. 3 the vertical alignment is correctly shown, but the rectangles should be elongated horizontally instead of vertically as depicted. All six positions in Figs. 2 and 3 represent astigmatism "with the rule."

mination. As a matter of fact, it has proved in my hands perfectly reliable as to measurements of the corneal convexity. The accompanying cuts, for which I am indebted to Mr. E. B. Meyrowitz, will explain themselves, the principle being that of doubling a square image in the direction of one diagonal, causing opposite corners to touch, and thereby making opposite sides of the square serve as mires forming a cross of perfect figure in the absence of astigmatism in the reflecting surface, and demonstrating any astigmatism by a faulty alignment of one pair of sides, when the other pair at right angles thereto are correctly aligned. The large, brilliant images facilitate the detection of even slight displacements, while no counting of "steps" or other minute spaces is called for, a scale on the draw-tube giving the reading for each axis when the arms of the cross lying in that meridian are in line. It is as if four mires were used at once, two in each of two meridians at right angles to each other, whereby it is possible to compare the two principal meridians of an astigmatism as seen at the same time in one picture.

The range of the instrument as a spheromcter is from a curvature like that of a large bicycle-bearing ball ($r = 5.5$ millimetres) to a sphere larger than the globe of the eye ($r = 13$ millimetres). It may thus serve to measure many conical corneas at the centre and to make ophthalmometric records of microphthalmus, etc. The astigmascope is so constructed that the mire and ebonite disc are detachable, allowing the instrument to go in a pocket case of 6x3x1 inches inside measurement. It is used with the patient in the position for ophthalmoscopy, the light being placed a little more to the side. Thus, one may complete both ophthalmoscopic and astigmascopic examinations without changing the patient's position. The images are made to come together by advancing the mire toward the cornea, at the same time elongating the drawtube to suit the changed proportions of the conjugate foci of the objective, thereby changing the scale reading to that which indicates the corneal curvature of shorter radius necessitating such advance; the reverse is true when the images have to be separated. As I had originally designed, I prefer readings from positions of alignment of the sides of rectangular images, but the scale is so calculated that it reads correctly from positions of contact of the acute and obtuse angles of the rhomboidal figures obtained when the diagonals of the mire lie along the principal meridians of an astigmatic cornea; only, in that case, accurate contact is slightly harder to note than the alignment of the long brilliant sides of the rectangles forming the "cross."

The incurved sides of the mire are calculated to neutralize the ellipsoidal bulging that a square mire would suffer when reflected in the cornea. Being adapted for a region of some 12 D. about the 7.8 millimetre point, there exists some slight curving at the ends of the scale, but this in nowise affects the scale readings for the angles. Irregular astigmatism will produce distortions easily understood. The rotatable black ebonite disc serving as a background for the ivory mire also acts as support for the front of the instrument, being encircled by the observer's thumb and forefinger of the hand farthest from the light, the remaining fingers of the same hand forming a screen for the patient's other eye, while the little finger rests between the patient's eyebrows. This hand moves the mire nearer and farther as regards the cornea under examination, the other hand grasping the draw-tube and maintaining a clear focus while rotating the instrument; at the same time this hand shields the observer's eyes from the light. A little "knack" is requisite and may be acquired in about as many days as the ophthalmoscope takes weeks for mastery. The facility with which the requisite skill may be attained, and the low cost of the instrument ($15), make a practical ophthalmometer available for every student of ophthalmology and for the general practitioner whose location at a distance from an ophthalmic surgeon necessitates a critical selection of those cases of headache, etc., which he shall refer to the latter. For the busy ophthalmologist it will serve as a ready indicator of the defect sought and the approximate glass, saving much guesswork at the outset when using the trial lenses, and consuming less time than the larger ophthalmometers. Simple, portable, saving time and office space, independent of light connection, inexpensive, and yet possessing an accuracy yielding utility of findings commensurate with that of the larger instruments, it will, I hope, prove of considerable service to my fellow practitioners.

I should add that the only other portable ophthalmometer with which I am personally familiar, that of Reid, possesses, I believe, as many advantages as my astigmascope, except that its more complicated construction entails greater expensiveness. I desire further to state that the scale on the astigmascope has been empirically verified at a number of points from zero to the extreme ends, to insure correction for the ellipsoidal form of the corneal image, for the separation of the prisms from the objective, thickness of glass, etc., while spherical and chromatic aberration are practically eliminated by the neutralizing effect of the prisms placed with bases ou behind the biconvex objective, all of these problems hav ing been given much time and consideration.

228 OGLETHORPE AVENUE, E.

COMBINED SURGICAL OPERATIONS IN FEMALE SUBJECTS AT A SINGLE SÉANCE.

BY R. STANSBURY SUTTON, M. D., LL. D.,

PITTSBURGH, PA.

A QUARTER of a century ago it was customary, ex cept probably in the Woman's Hospital in New Yorl when a female patient presented herself with a lacer tion of the cervix and perinæum, to repair the cervi and hold her over for repair of the perinæum at a lat period.

If a female patient required four or five distinct surgical procedures, until within a very recent period she was four or five, or even six, months under the care of a surgeon, and about two thirds of the time in bed. However, as time progressed, it became customary to curette the endometrium and repair a lacerated cervix and perinæum at the same time.

During more recent years it has become the habit with some, probably encouraged more by Edebohls, of New York, than any other American operator, to clean up a case without regard to the number of procedures required.

It is a fact gained by experience that, in a patient in fairly good condition, a long wound will heal with about as much safety and expedition as a short one, provided asepsis has been maintained with reference to both wounds. A multiplicity of short wounds is equivalent to a long wound, provided they involve similar tissues, but in multiple operations dissimilar tissues are involved. Yet it has been found that the long wound composed of dissimilar tissues heals quite as readily.

The next question involved is that of anæsthesia. Some men operate rapidly, while others are "slow as molasses in winter." The former class may complete a series of operations within safe limits for anæsthesia, while the latter class would probably require two days' rations in the operating room.

Collating the facts, that multiple wounds heal kindly, and that manual dexterity can be acquired which enables an operator to complete a series of operations within safe limits of anæsthesia, we are enabled to deduce the warrant for such surgical conduct when a case requiring multiple operations presents itself.

Some years ago our English cousins, as represented by the *British Medical Journal,* almost went into hysterics over the publication by Edebohls of an article on multiple operations at a single *séance.* This is one of those practical subjects which is better demonstrated than theorized upon, and I have selected the cases of fifteen women out of a great many who have undergone multiple operations at my own hands. These cases will now be recited, and the time consumed in each individual case will be given. I may add that, in each instance, a time-keeper was appointed, and the reports are therefore correct.

Case I.—*Present,* Dr. Stone, Dr. Hunter, and Dr. Ohail. *Name,* Mrs. P., aged forty-two years. *History:* Married twenty-four years; has borne seven children at term, and has had three abortions. She is now a chronic invalid, confined to the bed, and is brought to the hospital on a stretcher. *Operations:* 1. Curettage of the endometrium. 2. Trachelorrhaphy, bilateral. 3. Perinæorrhaphy. 4. Divulsion of the sphincter ani muscle for anal fissure and rigidity of the muscle. 5. Short median incision in the abdominal wall, and removal of the ovaries and tubes from both sides. Wound closed by three or four interrupted silk-worm gut sutures. *Time:* Thirty-six minutes. *Result:* Recovery, with complete restoration to health a few months later.

Case II.—*Present,* Dr. Stone, Dr. Hunter, and Dr. Ohail. *Name,* Miss A., aged twenty-seven years. *History:* Has recently had an attack of appendicitis. Severe dysmenorrhœa. Uterus retroversed. Almost constant pain in the right iliac region. *Operations and pathology,* October 25, 1894: 1. Dilatation of the cervix uteri and curettage of the endometrium. 2. Two-and-a-half-inch median incision; right ovary and tube and adherent appendix brought into the wound. Ovary and tube were much inflamed. Small patches of lymph were seen over the distal half of the tube. 3. Appendectomy. 4. Removal of the right ovary and tube, followed by careful wiping out of the pelvic cavity with moist sterilized gauze, hot water being poured into the cavity from a pitcher to assist in the cleansing process. 5. Anterior fixation of the fundus uteri with one deeply buried silk-worm gut suture. Wound closed. *Time:* Forty minutes. *Result:* Recovery.

Case III.—*Present,* Dr. Sutton, Zanesville, Ohio; Dr. Holden, of Ohio; Dr. Stone, and Dr. Hunter. *Name,* Mrs. K., aged twenty-six years. *History:* Laceration of the cervix and introitus vaginæ. Menorrhagia. Painful anal fissure. Has an almost constant uneasiness in the right iliac region. Suffers much from nausea. The appendix is tender upon pressure. *Operations,* November 18, 1894: 1. Curettage of the endometrium. 2. Bilateral trachelorrhaphy. 3. Perinæorrhaphy. 4. Divulsion of the sphincter ani muscle. 5. Appendectomy. *Time:* Forty minutes. *Result:* Uneventful recovery.

Case IV.—*Present,* Dr. Stone, Dr. Hunter, and Dr. Kniffler. *Name,* Mrs. S., aged thirty years. *History:* Multipara. At her first labor she sustained a bilateral laceration of the cervix and a laceration of the introitus vaginæ. For two years her general health has been breaking. Present condition, endometritis, menorrhagia, proctitis with anal fissure, retroversion of the uterus, obstinate insomnia, and melancholia. *Operations,* January 12, 1896: 1. Curettage of the endometrium. 2. Trachelorrhaphy. 3. Perinæorrhaphy. 4. Divulsion of the sphincter ani muscle. 5. Anterior fixation of the fundus uteri by laparotomy. *Time:* Forty-five minutes. *Result:* Recovery, with eventual restoration to health.

Case V.—*Present,* Dr. Stone, Dr. Hunter, and Dr. Babb. *Name,* Mrs. W., aged forty-eight years. *History:* Multipara. Some years ago she incurred a laceration of the cervix and introitus vaginæ. In addition, at the present time, she has retroversion, also a proctitis with an anal fissure. *Operations,* April 10, 1896: 1. Curettage of the endometrium. 2. Trachelorrhaphy. 3. Perinæorrhaphy. 4. Divulsion of the sphincter ani muscle. 5. Short median incision followed by anterior fixation of the fundus uteri, at and below the lower angle of the wound, by two buried silk-worm gut sutures. *Time:* Fifty minutes. *Result:* Recovery.

Case VI.—*Present,* Dr. Stone, Dr. Hunter, Dr. Babb, Dr. Whitten, and Dr. Van Kirk. *Name,* Mrs. C., aged forty-two years. *History:* Multipara. Chronic invalid. Endometritis. Laceration of the cervix; uterus prolapsed and retroverted, and the introitus vaginæ lacerated. *Operations,* April 25, 1896: 1. Curettage of the endometrium. 2. Bilateral trachelorrhaphy. 3. Perinæorrhaphy. 4. Anterior fixation of the fundus uteri by laparotomy. *Time:* Thirty minutes. *Result:* Recovery.

Case VII.—*Present,* Dr. Stone, Dr. Hunter, and Dr. Babb. *Name,* Mrs. J., aged fifty years. *History:*

Quartipara. Uterus prolapsed and retroverted. Vesicocele. Rectocele, with laceration of the introitus vaginæ and cervix uteri. Menorrhagia. *Operations,* March 18, 1897: 1. Curettage of the endometrium. 2. Trachelorrhaphy. 3. Anterior and posterior colporrhaphy. 4. Median abdominal incision. 5. Myomectomy. Interstitial fibroid in the fundus uteri. 6. Anterior fixation of the fundus uteri. All wounds during the operations closed with catgut known as "Edebohls' forty-two-day catgut." *Time:* One hour and fifteen minutes. *Result:* Recovery, with complete restoration to health.

CASE VIII.—*Present,* Dr. Stone, Dr. Hunter, Dr. Babb, and Dr. Kimmel. *Name,* Mrs. B., aged twenty-four years. *History:* Bipara. Sustained at her last labor a bilateral laceration of the cervix and a laceration of the introitus vaginæ. She also suffered severely from repeated attacks of biliary colic. *Operations,* September, 15, 1897: 1. Curettage of the endometrium. 2. Trachelorrhaphy. 3. Perinæorrhaphy. 4. Cholecystotomy. Oblique incision, parallel with the right costal border, exposing the gall-bladder, sausage-shaped and containing no fluid, but containing three large gall-stones, set in a row and closely invested by the walls of the gall-bladder. The latter was drawn into the wound, incised and emptied, and the wound stitched into the abdominal wound, and a rubber drain-tube introduced into the gall-bladder. *Time:* Fifty-two minutes. *Result:* Recovery, with complete restoration to health.

CASE IX.—*Present,* Dr. Stone, Dr. Hunter, Dr. Babb, and Dr. Hazlett. *Name,* Mrs. D., aged forty-one years. *History:* Tripara. Youngest child eleven months old. Examination revealed a bilateral laceration of the cervix uteri. Laceration of the perinæum down to the sphincter ani muscle. Tenderness at McBurney's point. A movable something which can be carried back toward the right renal region, possibly a kidney. Gall-bladder felt; quite tender. She has had biliary colic. *Operations,* January 4, 1898: 1. Curettage of the endometrium, irrigation of the uterine cavity, and swabbing out the same with a saturated solution of iodized phenol. 2. Trachelorrhaphy. The cervical flaps were denuded and the clefts of the lacerations were cleaned out with Schroeder's catlin knife. The denuded surfaces were united with catgut suture. 3. Perinæorrhaphy, with posterior colporrhaphy. A curvilinear triangular surface, the apex resting half an inch above the vaginal crest, the sides extending obliquely to the carunculæ myrtiformes; the latter, united by a curvilinear incision through the junction of the skin and vaginal mucosa, were denuded with Schroeder's knife. The edges of this triangle, from its apex to the caruncles, were united by interrupted silk sutures, eight to the inch. With a long, curved needle a deep binding suture of silk was passed in the following manner: The point of the needle was entered three eighths of an inch from the edge of the external incision, and carried upward through all the tissues on the right side of the wound. With a turn of the wrist, it was sent through the corresponding tissues of the opposite side, and made to emerge through the skin three eighths of an inch from the opposite edge of the wound, the point of entrance and exit being directly opposite one another. This binding suture was, for the moment, left untied, the needle having been removed. A few interrupted sutures now closed the external wound, and the deep binding suture was tied. The vagina was now thoroughly irrigated with hot water, mopped dry with small cotton balls, and loosely filled with iodoform gauze. The sphincter ani muscle was divulsed, and the pelvic operations were completed. 4. Exploratory laparotomy. The patient was now placed in the extended dorsal decubitus, and, to determine the enigma concerning the appendix, a short median incision above the pubic symphysis was made, and the fingers were introduced into the peritoneal cavity. The appendix was located, and decided to be normal. But, peeping over an imaginary line drawn across the abdomen transversely to McBurney's point, steadied somewhat by the superimposed hand on the abdominal wall, could be felt the lower end of a thin projection of the right lobe of the liver and the lower end of the gall-bladder. This projection of the lobe of the liver hung down like a small apron, and was that "something" felt in the examination, which could be carried toward the right renal region, suggesting a floating kidney. The wound in the abdominal wall was now closed. 5. Cholecystotomy. A free incision was carried vertically or longitudinally through the right rectus muscle at its upper extremity, and the gall-bladder was drawn into the incision. It was of the shape and thickness of an ordinary sausage, and about five inches in length. The thin projecting edge of the right lobe of the liver hung down over it like an apron, an hepatic abnormity which was to me a curiosity. The gall-bladder contained no liquid of any moment. It was split open at its dome and five large gall-stones were extracted. They averaged three quarters of an inch in diameter, were set in a row and were all fasciculated. The opening in the gall bladder was stitched to the deeper layers of the abdominal wound at its upper angle. A soft rubber drainage tube was inserted into the gall-bladder, and the remainder of the abdominal wound was closed. *Time:* One hour and thirty-five minutes on the operating table. *Result:* Recovery, with complete restoration to health.

CASE X.—*Present,* Dr. Stone, Dr. Hunter, and Dr. Ahlers. *Name,* Mrs. H., aged thirty-seven years. *History:* Multipara. Uterus retroverted. Endometritis with bilateral laceration of the cervix and laceration of the introitus vaginæ. Painful anal fissure. *Operations:* 1. Curettage of the endometrium. 2. Trachelorrhaphy. 3. Perinæorrhaphy. 4. Division of the sphincter ani muscle. 5. Laparotomy, followed by anterior fixation of the fundus uteri. *Time:* Forty-five minutes. *Result:* Recovery, with restoration to health.

CASE XI.—*Present,* Dr. Stone, Dr. Smith, and Dr. Wilson. *Name,* Mrs. P., aged twenty-eight years. *History:* Bipara. Uterus retroverted. Endometritis, with menorrhagia. Bilateral laceration of the cervix. Laceration of the introitus vaginæ. Painful anal fissure. *Operations,* March 7, 1899: 1. Curettage of the endometrium. 2. Bilateral trachelorrhaphy. 3. Perinæorrhaphy. 4. The edge of the knife drawn through the base of a painful fissure and the muscle divulsed. Laparotomy, followed by anterior fixation of the fundus uteri. *Time:* Forty-six minutes. *Result:* Recovery with complete restoration to health.

CASE XII.—*Present,* Dr. Stone, Dr. Babb, Dr. Rankin, and Dr. Bippus. *Name,* Mrs. K., aged thirty-five years. *History:* Quartipara. One abortion. Last confinement four years ago. Has been in bad health for ten years. Chronic endometritis, salpingitis, and ovaritis. Bilateral laceration of the cervix uteri. Laceration of the perinæum. Painful anal fissure. *Operations,* September 9, 1899: 1. Curettage of the endometrium. 2. Trachelorrhaphy. 3. Perinæorrhaphy. 4. Divulsion of the sphincter ani muscle. 5. Laparotomy, followed by removal of the uterine appendages. *Time:* Forty-

eight minutes. *Result:* Recovery, with restoration to health.

Case XIII.—*Present,* Dr. Stone and Dr. Hunter. *Name,* Mrs. D., aged thirty-six years. *History:* Septipara. Endometritis. Slight laceration of the cervix. Deep laceration of the introitus vaginæ. One large, painful hæmorrhoid. *Operations,* September 11, 1899: 1. Dilatation of the cervix with Ellinger's dilator, followed by curettage of the endometrium and a puncture of the body of the uterus, at the fundus, through which the curette can readily be passed and felt through the abdominal wall. 2. Perinæorrhaphy. 3. Divulsion of the sphincter ani muscle and removal of the hæmorrhoid. 4. Laparotomy, followed by the closure of the wound in the fundus uteri with Lembert sutures and anterior fixation of the fundus. *Time:* One hour on the operating table. *Result:* Recovery, with complete restoration to health. At the time of this writing, January 24, 1901, the patient is two months pregnant.

Case XIV.—*Present,* Dr. Stone, Dr. Hunter, Dr. Stewart, and others. *Name,* Mrs. I., aged thirty-five years. *History:* Bipara. Last labor five years ago, after which she developed hystero-epilepsy. Laceration of the introitus vaginæ. Bilateral laceration of the cervix. Chronic endometritis, salpingitis, and ovaritis, with adhesions. Anal fissure. *Operations,* April 12, 1900: 1. Curettage of the endometrium. 2. Trachelorrhaphy. 3. Perinæorrhaphy. 4. Divulsion of the sphincter ani muscle. 5. Laparotomy, followed by the removal of the uterine appendages on both sides. *Time:* Forty-five minutes. *Result:* Recovery, with future restoration to health.

Case XV.—*Present,* Dr. Stone, Dr. Foster, Dr. Hall, and others. *Name,* Mrs. D., aged thirty-one years. *History:* Feeble. Chronic invalid. Anal fissures. Laceration of the introitus vaginæ. Uterus retroverted. Bilateral laceration of the cervix. Chronic endometritis, salpingitis, and ovaritis, with adhesions. *Operations,* October 3, 1900: 1. Curettage of the endometrium. Swabbing out the uterine cavity with a saturated solution of iodized phenol. 2. Trachelorrhaphy. 3. Perinæorrhaphy. 4. Divulsion of the sphincter ani muscle. 5. Laparotomy, followed by the removal of the uterine appendages. 6. Anterior fixation of the fundus uteri. *Time:* Forty-five minutes. *Result:* Recovery.

This, gentlemen, finishes the demonstration which is respectfully submitted to your honorable body.

THE NORMAL DECLINATIONS OF THE RETINAL MERIDIANS.

By GEORGE T. STEVENS, M. D., Ph. D.,

NEW YORK.

With the advance in practical knowledge of the subject of declination which arises from continued observation and experience, the importance of the subject is seen to be increased in proportion as acquaintance with it becomes more accurate and more extensive. It is not necessary to compare the science of declination with heterophoria, but it is important to know that the subjects are so intimately associated and that they are so mutually interdependent that the study of one cannot be successfully pursued except by the help of the other.

In my earlier contributions to the subject I have emphasized many of the disturbances, both visual and general, which may arise from anomalous declinations. A larger experience and more adequately devised measures for the correction of such anomalies have served to confirm the view that these conditions are of vital importance, not only in local ophthalmology, but in the realm of general affections of the body.

Experience has also shown that a practical exercise of a knowledge of this subject has a wider field of application than could have been shown at an earlier stage of the investigation.

So essential, therefore, does the subject appear to be to a proper understanding of many local and more general disturbances, that a statement of the present stage of its evolution is proper and necessary.

In order to make as nearly as practicable a concise and connected exposition of the topic, I shall take the liberty of repeating, to some extent, matters which I have already published. It is by no means the purpose here to make simply a restatement of what I have already written; I propose, rather, to make a new statement of a subject which has been rapidly developed on important lines and has assumed added significance since my former communications.

Definition.—To those who have not followed the previous discussions of the subject a definition will be necessary at the outset. By "*normal declinations of the retinal meridians*" is meant a deviation of the vertical, horizontal, or any given meridian of the eye from the corresponding meridian of external space when the line of regard of the eye is directed parallel to the median plane and in the horizontal plane, the head being exactly erect or, more technically, in the primary position.

To make the definition less technical, the following diagram may be of service.

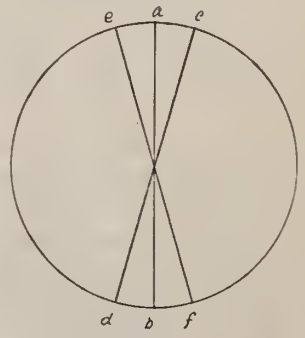


Fig. 1.

Suppose the circle *eae, fbd* to represent the equator of the eyeball, and the line *ab* to represent the normal position of the vertical meridian of the eye, the line of regard being directed as stated. If this line corresponds with the vertical meridian of surrounding space, there is no declination of it and consequently none of any meridian.*

*But Helmholtz believed that the horizontal meridian might be coincident with the horizon, while the vertical meridian was only an "apparent" one and deviated.

But, should the eye be rolled upon its anteroposterior axis so that this vertical meridian would correspond with the position *cd* or *ef*, it is evident that in either case the vertical meridian—and all other meridians—of the eye would no longer correspond in position with meridians of the same name in surrounding space. In either case there would result what I have called a *declination*. If in such a case the top of the meridian line *cd* leans toward the temple, it is termed a *positive* (+) declination, while if the line *ef* leans toward the nose, it represents a *negative* (—) declination.

There are normal declinations and declinations from disease or injury. It is therefore necessary to know what a normal declination is not. It is not the tilting of the meridians which results from any paralysis, paresis, or insufficiency of any eye muscle or set of muscles. In other words, it is not a disease. It is a normal, though unfavorable, condition. It should be called an *anomalous* in contradistinction to a *pathological* declination. And, since anomalous declinations are frequent and pathological declinations are rare, the term "declination" when used alone should apply to the first class only, while to designate the tiltings from disease or injury the limiting term "pathological" should be added. Nor should the term "declination" be confounded with the term *torsion,* which has been applied to the rotations of the meridians when the eye passes from the primary and horizontal position to some position in which the line of regard is directed to some point not in the primary position or horizontal plane.

These anomalous positions of the meridians are extremely common and are found in as many different classes of persons as are the anomalous refractive conditions of the eyes.

It is too early to state technically the precise physical conditions on which declinations depend. As a general statement, it may be said that they are peculiarities which are, doubtless often if not always, dependent upon the special conformation of the orbit in the individual case.

INSTRUMENTS FOR DETERMINING DECLINATIONS.—The crude, indefinite, and inaccurate methods which were in vogue for determining the approximate directions of the tiltings of images in cases of paralysis or injury of the eye muscles previous to the introduction of the clinoscope find no place in the examinations necessary to a correct determination and evaluation of normal declinations.

The visual act must be confined to the test line alone, and all view of objects outside the tubes of the instrument must be excluded, in order that the eyes may be free from the instinctive, or automatic, effort to adjust themselves with reference to the position of external objects. The lines of sight of the two eyes must be absolutely in the same horizontal plane, and these sight lines are to be neither in convergence nor divergence, except to meet certain special contingencies.

These and other important conditions are met in the use of the clinoscope.

The clinoscope (Fig. 2) is composed essentially of two hollow tubes, each of which has at one end a minute pinhole opening through which the eye can look, and at the other end a translucent disc on which is drawn a line,

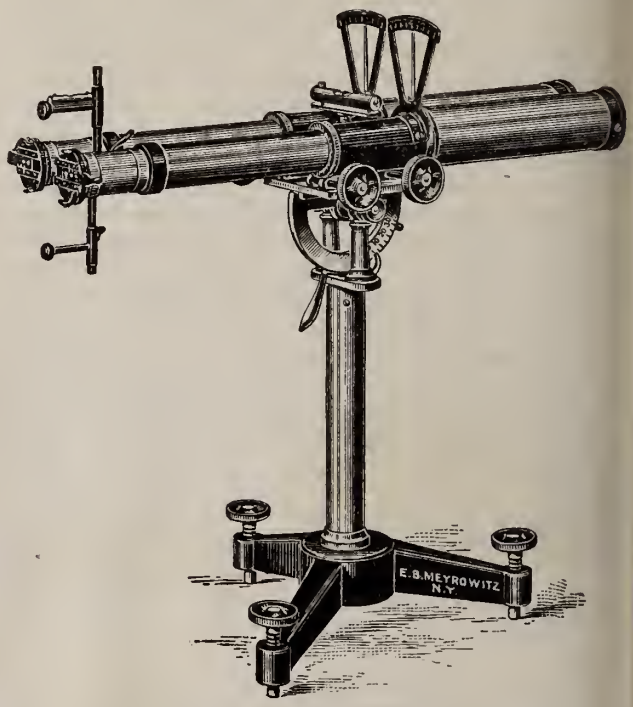


FIG. 2.—The clinoscope.

in the case of one tube from the centre straight up, and i that of the other tube straight down.

These tubes are so adjusted on a standard that the can be placed and maintained in the same horizont

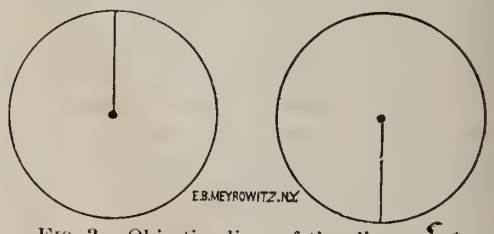


FIG. 3.—Objective lines of the clinoscope.*

plane, which is indicated by a spirit level, but from er to end they can be directed horizontally or up or dow They can, as above intimated, be made to converge diverge to meet certain contingencies.

The tubes rotate on their long axes, and a pointer tached to each tube indicates on a scale the extent which the tube is rotated. The small sight openings a so adjustable that the distance between them may suited to the interpupillary distance of different perso For the accommodation of those who, on account of pr byopia, myopia, or any high degree of refractive err

*For purposes of physiological research objective diagra of many designs may be connected with the clinoscope, but practical purposes the above is sufficient, and it is import not to disarrange the working objectives.

cannot see at the distance of the test objects from the eyes, there are clips in which refracting glasses may be placed. The sight openings being very small and exactly in the same horizontal plane, there can be no doubt as to the erect position of the median plane of the head when the two eyes are seeing, each through its appropriate sight opening, any existing hyperphoria being corrected.

Any device for testing declination which does not provide for the exclusion of surrounding objects from the field of view and which does not also secure an absolutely erect position of the head is worse than worthless, since it must be misleading.

To meet the exigencies of cases of greater or less degrees of amblyopia, as in squint or extreme myopia, it was found necessary to devise what I have called the "lens clinoscope," an indispensable instrument, but one which cannot take the place, in ordinary cases, of the clinoscope.

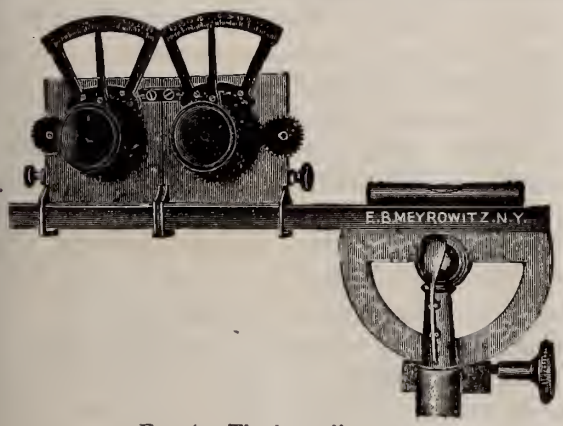


Fig. 4.—The lens clinoscope.

Method of Using the Clinoscope.—The instrument is to be so adjusted in respect to height that the sight-holes will be on a level with the eyes of the examined person when sitting erect. This is best accomplished by the use of an adjustable table. The tubes may be exactly parallel or they may, in certain cases, be made to converge very slightly, thus making the distant point at 8 or 10 feet instead of infinite distance. Under other exceptional circumstances they may be made to diverge. The tubes must be brought to an exact level with each other as shown by the spirit level.

Unless the subject of the examination is unable to see the test lines of the tubes, on account of presbyopia or high refractive error, no glasses should be used, and when glasses are necessary the weakest that will enable the person to see the lines clearly should be placed in the clips. A prism for the correction of hyperphoria may also be required. *The glasses should not be worn,* since, if a strong glass should not be held exactly at a right angle with the axis of the tube, the lens would itself induce a declination of the image.

The examiner must be sure that the examined person sees through both openings simultaneously and that the view of both images is maintained throughout the examination, otherwise there can be no certainty that the head is precisely erect.

When the examined person has secured a good view of both the test lines he should endeavor, if they do not at once unite, to induce them to do so as in a stereoscope. Some people do not succeed in this, in which cases the examination may go on with the images separated, but it is less satisfactory.

When the apparent vertical position of the lines has been attained, the examiner should move them more or less backward and forward, in order that the true position may be more positively located. Few people can arrive at a satisfactory conclusion regarding the position of the lines at the first trial, but after a day or two the tests become, for nearly all intelligent people, remarkably uniform.

Results of Examinations.—Previous to the investigations by the clinoscope a belief had prevailed among physiologists that there was, in healthy eyes, a fixed and definite position for the meridians of the eye, and that this position was general, if not universal. Helmholtz, Donders, Volkmann, Meissner, and others had devised means for the investigation of the facts, all of which means were imperfect and misleading, and most of these investigators agreed that normally there existed, for the vertical meridian, a leaning out of about $1\frac{1}{4}°$, while the horizontal meridian was supposed to coincide exactly with the real horizon.

One of the first results of the investigations by the clinoscope was the demonstration that the positions of the vertical and horizontal meridians leaned, when either leaned, in corresponding directions and to an equal extent. What was of far greater importance, it was found that the leanings of the meridians were as varied and as characteristic of the individual as the refraction of the eyes.

The clinoscope shows that in some persons the vertical meridian of one eye corresponds with an exact vertical line, while that of the other eye leans from one degree to many degrees. In other cases the vertical meridian of each eye leans in the same direction, that is, each to the right or each to the left, and this leaning is nearly equal in the two eyes. In still other cases the meridians lean in opposite directions, that of one eye to the right, that of the other eye to the left. In extent there is great variation, some cases showing the meridian of each eye very nearly erect, while others will show the meridians in both eyes leaning as much as six or even ten degrees.

It is these leanings which I have called declinations. They are not, as has already been said, *torsions,* which term has a well-established meaning, the phenomena to which it refers being widely different from those under discussion. Torsion results from an active adjustment of the eye and corresponds to the position to which the eye is moved. Declinations, on the other hand, are purely passive states to be determined when the lines of regard are fixed in the primary position.

In normally healthy eyes the leaning of a meridian may vary according to the automatic tension which may

be exerted. Hence it is found that very high degrees of declination are more frequently manifest in persons who have passed fifty years of age than in those who are younger. Hence also there is sometimes a variation which appears to depend on the physical condition of an individual at different times.

I have compared these anomalies of declination to those of refraction. As there are few eyes without some error of refraction, so there are few in which the insertions of the muscles are so ideal that there is no declination; and, as slight refractive errors may be disregarded, so slight declinations may have little practical significance. Even high degrees of declination seem in certain instances, like certain cases of high-grade hypermetropia, to exert no appreciable injurious influence. Yet, as a rule, as in refraction, the higher the grade of the anomaly the greater the resulting nervous disturbance.

SOME OF THE RELATIONS BETWEEN DECLINATIONS AND HETEROPHORIA.—Long before the principles of declination were recognized I became impressed with the belief that many of the phenomena of heterophoria and heterotropia were secondary to some other condition than the condition which was most manifest. Thus, for several years I had often expressed in my writings the thought that there were few, if any, cases of original exophoria, and I diligently endeavored to learn the true nature of the anomaly. Certain cases, too, of hyperphoria seemed to me not to be essentially such, and many cases of esophoria were so contradictory in their phenomena that there seemed to be demanded a further element to account for them.

The clinoscope has thrown a remarkable light upon these questions. A few of them are answered with ease, since the relations between the revelations by the clinoscope and those of the phorometer appear to be quite simple. In other cases these relations are much more complicated, yet, in general quite susceptive of explanation.

The relationship between declination and exophoria is perhaps the most easy to comprehend, and a study of these relations is most interesting. In exophoria there is, as a rule, positive (+) declination of both eyes, and the extent is nearly equal in each. The exceptions to this rule are rare, and even these apparent exceptions are, after close investigation, usually found not to be exceptions at all. On the other hand, positive (+) declination of both eyes is strongly suggestive of exophoria.

In the rotation of the eyes upon their long axes, in the effort to effect parallelism of the vertical meridians, each eye is forced downward and outward. The downward movements, if they are equal, have little influence in inducing heterophoria, but when the declination to be corrected is considerable, the effect upon the outward swing of the eyes may be very considerable. As each line of regard is forced outward the parallelism of the lines of regard is sacrificed to that of the vertical meridians and exophoria results.

It will be seen also that, if the leanings of the meridians are each positive but unequal, one eye would be forced outward and downward more than the other, and hyperphoria would result. These theoretical views of the adjustments correspond exactly with the results of practical experience when the phorometer and the clinoscope are used together. The manifestations of heterophoria are not always present when the inducing causes exist.

When operating for exophoria by slight tenotomies before the use of the clinoscope, I observed that, as a rule, the tendon of the externus was rarely, if ever, found tense. It was hard to believe that the exophoria could be the result of the predominance of force of this muscle, which was so often found much relaxed. Later, when the tropometer was brought to the attempted solution of these questions, it was found that there was, in most cases, no excess of rotating power in the externi or any deficiency of rotating ability in the interni. It was noticeable also that it was no uncommon thing that what was apparently a successful correction of the exophoria was only a temporary one, and that the defect was apt to return in a few weeks or even after a few days in almost as high degree as before the operation. It was in many cases deemed better to leave uncorrected a marked degree of exophoria than to reduce the rotating ability of the externi, either by tenotomy or by a contraction of the interni, to an extent sufficient to permanently abolish the exophoria. With the advent of the clinoscope much light was thrown upon this whole subject. With a knowledge of the declinations and their effects we may now look for a relief from exophoria without restricting the action of any muscle and with a reasonable expectation of permanency of result.

The hyperphoria which may result when there is somewhat unequal leaning of the meridians in the two eyes has been referred to above. In many cases of hyperphoria a declination of several degrees may be found for one eye while the other will be either without declination or with very much less than the first and usually of the same sign. An example of this will not be out of place here.

In a case of long-standing vertical diplopia there was, during four successive days' testings: Right hypertropia 10° in the primary position with increased hypertropia looking down 30° or up 20°. In alternate exclusion the deviation appeared even greater than that shown by the phorometer. The rotation up, as shown by the tropometer was, for the right eye 40° and for the left 36°. It would seem that this was preeminently a case for a tenotomy of the superior rectus of the right eye. Yet, as there was declination (+) 6° of the left eye and only (+) 1° of the right, I determined to do an operation on the *internus* of the left eye with only the declination in view, for there was no marked exophoria or esophoria. The operation was successful in correcting the declination to within 2°, and on the following day I had the satisfaction of finding that there was easy single vision with less than

2° hyperphoria and with no esophoria or exophoria. Although many weeks have passed since this operation, the hypertropia has not again manifested itself.

Such a case is of much interest in illustrating the dominating influence of declination even in extreme hypertropia. It is also interesting as an illustration of the daily experience in removing the conditions of heterophoria and even strabismus by the simple correction of declination. The example also shows how even the upward rotation may be influenced by the declination, for after the operation on the internus the upward rotation of the two eyes was nearly equal.

In esophoria declination is almost uniformly found in both eyes, and the leanings of the meridians are homonymous. If the declination is plus for the right eye, it is minus for the left, and most frequently the leanings are approximately of the same extent. The greater the extent of declination, usually, the greater the degree of esophoria.

Thus it appears that the different forms of heterophoria are associated with different forms of declination, and experience has shown that in a large proportion of cases a relief to the declination is followed at once by a relief to the heterophoria. In certain unusual cases it will be found that each eye will rise many degrees when a screen is placed before it. Even when any excess of upward rotation has been corrected the phenomenon remains. Here the upward turning is due to the declinations of the opposite eye and it will remain even after the eyes are both too low, unless the declination is corrected.

Heterotropia or Strabismus and Declination.—The principles which apply to the relations between heterophoria and declinations apply also to strabismus. The conditions differ in respect to the degree of declinations and also, in general, in respect to the vertical rotations. The causative conditions of heterotropia are usually, not only exaggerations of those of heterophoria, but the conditions are also more complicated.

After some experience in the use of the tropometer I found that in nearly every case of converging strabismus there was not only excessive upward rotation of the eyes, but that this rotation was, in fact, in most cases extravagant. For example, instead of a rotation up of about 33°, which investigation and experience had shown was the most favorable, in cases of converging strabismus it was not uncommon to find the upward rotation as much as 50° or even 55°. A reduction of this excessive upward rotation, this anophoria, served, in a number of cases of marked squint, to relieve the defect without interference with the laterally acting muscles, and there seemed to have been found a condition a modification of which promised a relief in strabismus without an unfavorable restriction in the action of any muscle. A larger experience showed that, while there was in this thought an important truth, there remained an element of uncertainty with respect to results which was of great practical importance.

With the introduction of the clinoscope new observations were made, and it was soon found that in nearly all cases in which there was a very excessive range of rotations in the vertical direction there were also unusual degrees of declinations. Applying these new facts to those which had been previously observed, there arose the reasonable hypothesis that the excessive declinations combined their influence with the excessive vertical rotations to induce the strabismus.

Close observation and added experience have confirmed this hypothesis, which, in the light of abundant practical facts, has now become a demonstrated proposition. It will be seen as we proceed that it supplies a rational method for the cure of converging or diverging strabismus without the disability which has invariably resulted to the tenotomized (or contracted) muscles in the older methods of operating for squint.

It may be said that, as a rule, there is in convergent squint excessive upward rotation with extreme homonymous declination, that is, with positive declination for one eye and negative for the other, or, rarely, the declination for both may be of one sign but differing greatly in degree. In some of the cases of the latter class there is alternating squint. If the eye with the extreme positive declination is fixed upon the object, there will be converging squint, while when that with the less declination is in fixation a divergence occurs.

If also, as it sometimes happens, there is little or no declination for one eye with great declination for the other, we have the important elements of intermittent strabismus. If the eye with little or no declination is in fixation, there may be no deviation of the eyes, but if that with the extreme declination is the fixing eye, strabismus occurs.

We have thus for the first time a logical and a uniformly applicable explanation for all the various forms of so-called concomitant strabismus. With a good understanding of the principles of rotation and of declination there is no longer a necessity for a new theory for each form of strabismus.

Without entering upon the details of all the elements inducing diverging squint, it may be stated that there will be found the same class of declinations in exotropia as are found in exophoria, but in high degrees. So in hypertropia the conditions are similar to those of hyperphoria, but, as in the cases of esotropia and exotropia, these conditions are extreme and usually combined with anomalies of the vertical rotations.

Local Symptoms of Declinations.—Many of the symptoms of declinations are similar to or the same as those which are attributed to heterophoria. But since the study of the former class of anomalies has placed the whole subject of heterophoria in a new light a considerable number of the symptoms which appeared to result from heterophoria can now be directly associated with the definite disturbing cause as it was not possible to do before.

One of the most common and persistent of the local symptoms is dryness of the eyelids with smarting of the eyes and a sensation of grit in them. The chronic hyperæmia of the lids which is so annoying to many patients and so difficult to cure is in most cases the direct result of the pressure of the lids against the eyeball, a pressure exerted to hold the eyes steady in resisting the tendency to roll incident to the inclination of the meridians. The hyperæmia disappears without direct treatment when the declination is corrected. I have elsewhere* shown the importance of the condition of anophoria as an ætiological element of trachoma, and this condition is the more important in its ætiological effects in proportion as it is complicated with pronounced leanings of the meridians.

Another symptom, less local, is the habitual pain in and over the brow of one eye or those of both eyes. If the brows are carefully observed, it does not require minute inspection to see that one or both brows are strongly arched, or that one brow is flattened against the eye while the other is arched. Above the arching brow there are to be seen in many cases folds in the skin showing the tension of muscles beneath.

The pain above the brow in these cases is not a reflex disturbance, but the immediate and legitimate suffering of the muscles acting to elevate or depress the brow. This is shown when the declination is relieved, for the brows then at once assume a gentle curve and the pain vanishes in a day.

(To be concluded.)

A STUDY OF BUBOES AND THEIR TREATMENT.

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In speaking of a bubo, an inflammatory condition of one or more of the inguinal lymphatic glands, with or without involvement of the adjacent cellular tissues, is implied in this article, with an especial reference in diagnosis and treatment to chancroid as a cause.

The superficial fascia made up of loose areolar tissue is, in the groin space, divisible into two distinct layers, between which are found from six to ten or more lymphatic glands arranged; the "horizontal series" along Poupart's ligament, and the "vertical series" along the internal saphenous vein. The deep glands, about four in number, situate in the crural canal along the course of the femoral vein, are connected with the superficial glands by means of lymphatic vessels running through the saphenous opening. Each gland is made up of a number of lymphatic nodules (oval masses of adenoid tissue) surrounded by a delicate membrane, forming, by the partial fusion of the nodes, trabeculæ of connective tissue, the whole bound together and enveloped by a capsule of fibrous tissue, amongst whose fibres in the larger glands are found bundles of involuntary muscle. The presence of muscle fibre and the inherent property of elasticity in the gland explains the power of extreme distensibility possessed by it. Opposite the most convex surface, the capsule dips deeply into the substance of the gland, forming the hilum. Here enter blood-vessels and nerves for its nutrition. Glands have comparatively large arteries and yet larger veins supplying them, all intimately connected by cellular tissue.

Joining with each lymphatic gland and forming an intersecting system of canals, peculiar in that, in anastamosing, the vessels do not unite to form larger trunks, but keep the same size after union as before, are the lymphatic vessels. These lymphatic vessels, which go to make up the great lymphatic system, are characterized by the great number of valves which they contain. The vessels running to the gland (afferent) enter with additional blood-vessels at points over the surface of the capsule and open into channels between the masses of adenoid tissue and the framework (trabeculæ), forming lymph sinuses. Lymph sinuses reform at the hilum into the outgoing (efferent) vessels. Every lymphatic gland is an organ, having, as we have seen, each its own blood supply and a nerve supply with functions to perform, one of the most important of which is to act as a filter. An abrasion or traumatism of the skin with the introduction of some form of pus organism will call this function into action.

The superficial lymphatic vessels from the scrotum, penis, labia majora and perinæum, terminate in the upper, or horizontal, series of glands. Thus, chancroids located on the penis, an infected wound on the prepuce or the penis, cancer of the scrotum, abscess in the perinæum, or any infection of the integument or superficial structures of these parts, will cause enlargement of this set of glands; whereas, any infection taking place on the lower extremity will involve the lower, or vertical, series of glands. This distinction is only of secondary importance, however, as the sets of glands have so many routes of intercommunication that no positive diagnosis should be made until the source of the infection has been found. The lymphatic vessels, the feeders to the glands, are in turn derived from networks of finer collecting lymphatic capillaries. The superficial lymphatic vessels of the penis commence in a plexiform network of lymph-spaces found in the corium and the papillae of the skin; also from about the hair follicles and sebaceous glands. Thus we have an explanation of the formation of a chancroid without there having been any maceration or break in the skin, absorption having taken place directly through lymph spaces connected with a hair follicle or a sebaceous gland. This is further explained when, in addition, if the sore be on the glans or inner side of the prepuce, we have uncleanly habits associated with a tight foreskin, having thus at once two of the cardinal conditions for germ development, heat and moisture, and lacking only the one most easily supplied, the presence of the inoculat-

*Proceedings of the British Medical Association, 1897, *Ophthalmic Review*, September, 1897.

ing pus organisms. The superficial lymphatic vessels of the penis, with which we are most concerned, are divisible into three sets, those from the skin covering the glans end in a vessel which runs along the dorsum of the organ to the pubis. The vessels from the rest of the penis unite to form (one on either side) two vessels which join with the dorsal to form a short common trunk at the pubis, which almost at once divides again into two vessels, one going to the right, the other to the left group of inguinal glands. Thus we can understand why at times a sore on one side will give rise to a bubo on the opposite side; or, the site of the sore being on the dorsum of the glans or in the sulcus, it gives rise to a bubo on one or the other side, or more rarely both sides. The rule is for the bubo to be on the side on which the sore is found, but the arrangement of the lymphatic vessels before uniting with the glands will explain this diversity.

Buboes may be classified according to the source from which they have sprung as: 1. Simple inflammatory bubo; *a.* Bubon d'emblée; *b.* Gonorrhœal; *c.* Balanitic; *d.* Herpetic; 2. Chancroidal (true bubo); 3. Syphilitic; 4. Bubonocele; 5. Tuberculous; 6. Cancerous; 7. Plague.

1. *Simple inflammatory bubo.*—That produced by pyogenic infection somewhere about the lower extremity, more often about the foot or toes, as the infection resulting from ulcerating tissue about an ingrowing toe nail.

Under this head Dr. Nagel, an English naval surgeon, describes what he calls provisionally a "climatic bubo," which he encountered along the east coast of Africa. It is not of malarial origin, he says, as quinine has no effect upon it; and, in an epidemic which broke out on his ship while in these waters, though no landings had been made, of one hundred and twenty-three cases, in no instance did the temperature rise above 102.2° F. and but few suppurated.

a. Bubon d'emblée, due to traumatism. False bubo, so-called, of the older writers, who stated that a bubo might develop without any initial lesion. Under this head may be placed an inguinal adenitis which might arise from injury during coitus, or that following the passage of a sound or other urethral instrument.

b. Gonorrhœal bubo, here usually of pyogenic origin secondary to the gonorrhœa.

c. Balanitic bubo, secondary to the infection on the glans penis.

d. Herpetic bubo, of like origin following the herpetic ulceration.

2. *Chancroidal (true bubo).*—The absorption of the products of the virulent mixed forms of pus micro-organisms, which gives rise to this form of bubo, constitutes what in the general acceptance of the term is meant when bubo is described in genito-urinary work.

3. *Syphilitic bubo,* due to the specific virus. Buboes arising from the mixed infection of syphilis and chancroid, partake of the nature of each as when found alone.

4. *Bubonocele,* a term referring to any lump in the groin, or, more particularly, a small or beginning inguinal hernia where but a portion of the mesentery or omental fat only is presenting.

5. *Tuberculous bubo,* caused by the reaction of the gland to the tubercle bacilli.

6. *Cancerous bubo,* due to extension from cancer foci from a near-by part, as cancer scroti.

7. *Plague buboes* may be merely mentioned, as they are only of importance in this relation where the question of diagnosis arises.

Pathology.—The reaction of lymphatic vessels and glands to micro-organisms is characterized by an outpouring of leucocytes, lymphocytes, and round cells, with proliferation from the endothelial lining of the gland vessels. The infected gland becomes juicy, red and enlarged, with capillary hæmorrhages scattered through it, especially about the periphery; then, if resolution sets in, absorption takes place of the products of inflammation, the gland becomes pale from pressure on the blood-vessels, then again becomes red (splenified) from secondary congestion after removal of inflammatory exudate, and gradually returns to its normal appearance. If degeneration takes place, which is usually by suppuration, the gland becomes filled with minute yellowish points that first cause the gland to harden, and later, to liquefy; and the contents, breaking out through the capsule, infect the surrounding cellular tissue and become an abscess which, breaking externally, leaves a granulating tract. Where the infection is more virulent, as from a chancroid, there is at times a simultaneous reaction in the cellular tissue, and the whole becomes rapidly glued to the skin and the superficial fascia, with a consequent increase in the inflammatory reaction and rapid abscess formation. The cellular tissue at times liquefies first, leaving the gland mass. If it is allowed to open by pointing or by incision ulcerating sinus tracts are left which show little tendency to heal. If syphilis is the cause, the gland hypertrophies, taking on an increase of leucocytes and lymphocytes, but the main feature is the fibroid change (induration), so called, which takes place by an overgrowth of the connective tissue elements in the trabeculæ, or framework, of the gland. Suppuration rarely takes place. There is always a vestige of induration with some hypertrophy of the gland. Tuberculous degeneration, here as elsewhere, is the same. First, the deposit of tubercle bacilli giving rise to irritation, formation of giant cells, and infiltration. Secondly, coagulation necrosis giving rise to the gray tubercle. Thirdly, liquefaction necrosis causing yellow tubercle. Fourthly, the continued action of the bacilli causes the change into the puriform mass, which becomes pus (mixed infection) when pyogenic organisms gain entrance. Cancerous infiltration is most often secondary to cancer of the penis or scrotum. The infiltration consists of an unlimited proliferation of the lining cells which become polymorphous and burst through into the connective tissue. Sarcoma rarely affects lymphatics. In plague, there is rapid infiltration and suppuration

of gland tissue, with specific bacilli and pus organisms found free.

Diagnosis.—The chancroidal bubo comes on most often near the close of the third week of the infection from which it has developed, though it may appear with the chancroid or at any time during its course. Puche has reported the development of a bubo three years after the original chancroid. Here, I think, we have an example of an infected gland which lay dormant during the period stated, during which time no inflammatory reaction was noticeable. In the case of my own, the patient had had the year before a "sore," followed by a bubo, which, under treatment, aborted, leaving a small, painless "lump" in his groin. One month ago he contracted a chancroid, and at the same time a bubo developed, or rather the already infected gland became an abscess, liquefying within the course of two weeks. The infected gland may sometimes be traced from the source of infection by a corded vessel (lymphangeitis) directly. The patient will first be made aware of the oncoming infection by a slight, though increasing, restriction of full extension of the thigh (a developing bubo will be first made apparent by tenderness over the affected gland, and pain when the thigh is fully extended); or else he will feel a hardening lump about the size of a small chestnut, freely movable under the fingers and slightly tender to the touch. Usually within the course of a week it will be fully developed as a hot, dusky red, painful, somewhat irregular, caked, tumor-like mass in the groin, varying in size from a pigeon's to a goose's egg. When fully developed, softening of the mass takes place, and the skin covering it becomes mottled and livid, ofttimes scaling. The tenderness becomes a throbbing pain, and fluctuation and suppuration with discharge through one or several openings prove the presence of an abscess. The pain of a developing bubo varies; it is often very severe and of a sharp, lancinating character; it will suddenly cease, which is explained by the rupture of an over-distended, infected gland capsule.

Associated with the formation of pus in a ripe bubo are the constitutional symptoms of fever, usually but moderate in degree. As a rule, the patient will not take to his bed, though, by restricted movement, he will protect and ease the bubo as much as possible. Turning back the foreskin, on the dorsum of the glans penis, in the sulcus back of the corona, or about the frenum will most generally be found the source of the bubo, as a chancroidal sore rapidly healing or extending.

The number of sores and the condition in which they are seem to have no effect on the presence or course of a bubo. Oftentimes the patient will be unaware of the presence of the sore.

In a case I have seen, in which the patient applied for treatment for "gonorrhœa" in addition to his bubo, he explained that, in spite of the discharge which had lasted for a week, he was suffering from no pain on urination. On exposing the glans, which he had not done for some time previously, I discovered a chancroid in the sulcu which was freely discharging. The urethra was norma The chancroid may be on the foreskin, on the body of tl penis, on the scrotum, or at the penoscrotal junctio Two cases in which I believed the sores to be primai chancroids about the anus in subjects whom, from tl history, the total ignorance of the patients (who arouse my suspicion by their extreme innocence), and the relaxa tion of the anus (conical), I considered sexual pervert I was unable to study carefully; as in one instance tl patient appeared but twice, the other patient I saw bu once.

This bubo is usually monoganglionic, but one glan being involved, unilateral, and is on the same side as tha on which the sore is found. Chancroidal buboes, thoug hey at times abort, tend to abscess formation.

Syphilitic buboes are bilateral and are made up of on or several glands, grouped together or in a chain of thre or four (polyganglionic). They may come on from few days to three or four weeks after induration of th primary sore has taken place. There is little or no in volvement of the subcutaneous areolar tissue. They ar freely movable under the skin, not painful to the touch and show but a moderate degree of swelling. The ten dency is toward resolution, though there is always vestige of induration with some hypertrophy of the gland making up the bubo. Under specific treatment, muc decrease in size takes place. It has been stated that whe all induration of the glands has passed away the patien may be on exposure reinfected with syphilis.

Chancroidal bubo may be diagnosticated from simpl inflammatory bubo, bubon d'emblée, gonorrhœal, balani tic or herpetic bubo, by the history of a traumatism or a infected wound of the lower extremity. In simple in flammatory bubo the rapid development of the bub within the course of two or three days, with an associate inflammation at times of the lymphatic vessels from th point of infection (lymphangeitis), demonstrated as tender red line, will serve for diagnosis. Bubon d'emblé is to be recognized by the mildness and absence of posi tive history. A gonorrhœal bubo may be inferred when after close examination, neither chancroid nor herpeti sores are found, nor balanitic inflammation associate with the urethral discharges.

If a phimosis exists, a positive diagnosis as to the na ture of the concealed trouble cannot be made.

The diagnosis of bubo from hernia or bubonocele i made from the history and from the fact that reductio and disappearance are made possible by manipulation Tuberculous bubo, a cold or psoas abscess, can be recog nized from a chancroidal bubo by the history of the cours of the disease and the accompanying tuberculous diathe sis. Cancerous bubo is diagnosticated by the history, th stony hardness of the growth when palpated, and the ir regular outline due to involvement of the lymphatic ves sels as well as the glands. In plague, the history will aid in determining the diagnosis.

Undescended testicle retained in the canal, with an accompanying inflammation, may simulate a bubo, but the absence of the testicle on that side will clear the diagnosis at once. A varix of the saphenous vein as it comes from the crural canal may be mistaken for bubo of the groin. The presence of other varicosities, and the fact that by pressure the tumor disappears and refills when released from below, will aid in diagnosticating its true nature.

Aneurysm of the common femoral artery as it comes out from under Poupart's ligament may be mistaken for chancroidal bubo, as in a case I have seen in the person of a colored man, aged forty-three years, who applied for treatment for a sarcomatous growth on the opposite femur. On examining him, a lumpy tumor of the size of half a small orange was to be felt which could be squeezed flat like an atomizer bulb. The blood column being pushed out, returned after two or three pulsations. The man said that he had "had that lump for twelve years" without any change. A bubo had been diagnosticated and opening advised on a previous occasion.

Inflammation of the cord complicating gonorrhœa may simulate a bubo, but as it is rare for this to be present without an accompanying epididymitis, the diagnosis should be clear.

Until one has gained a reputation as a healer in matters venereal, the surgeon will find no class of patients who require greater tact in their management than these. On general principles a specific prescription should never be given to a genito-urinary patient.

Most of this class of patients have either been to another doctor or they have a friend who has "had the same disease," so the patient comes with notions of his own as to what is to be done. One patient who had contracted an uncomplicated, though extensive, chancroid, after two weeks of treatment with but slow improvement, was honest enough to tell me that he doubted the sincerity of my methods. He stated that he had on a previous occasion cured himself of a sore worse than this with caustic silver, in a few days, and that if I would use that it would get well. I gratified him, with the result that he left with a black eschar covering the site of the chancroid. He returned in two days penitent, and with the sore much inflamed from renewed infection having taken place under the crust which the silver had made. The class of young men, mostly clerks and those on weekly salaries, who become patients from these forms of disease, are such as can ill afford to give up work for a stay in bed, were it required, as is the case after open incision and free dissection or curetting of a bubo.

Treatment of a chancroidal bubo naturally implies treatment of the chancroid from which it sprang, as, while it lasts, it is a continual source of danger and may at any time give rise to renewed infection. The sore, thoroughly exposed, is first to be gently washed with warm water and castile soap, forming a lather as carefully as when shaving, using absorbent cotton to thoroughly soften and remove, without causing bleeding, all scabs and discharge (a chancroid should never be allowed to crust over, otherwise, while apparently healing, the retained discharge will cause extension and rapid re-infection; then, with cotton swabs on toothpicks, the sore is to be thoroughly dried. With an atomizer, a strong spray of hydrogen dioxide is to be thoroughly applied directly to every interstice; if the foam becomes blood-tinged the spraying should be discontinued. The forcible application of this drug seems to give it greater value than when it is simply washed on. The foam is now to be mopped off and a thin wisp of cotton containing a few drops of the same drug is to be laid on the sore, then, with one steady movement, the retracted foreskin is to be drawn over the glans. The patient must be specially taught how to do this, otherwise the cotton which he applies will either roll up back of the corona or be pushed aside, leaving the chancroid entirely uncovered and giving rise to renewed infection on all sides. Cotton is better to use than gauze or lint; it is less bulky and irritating. As there is evidently some movement of the foreskin over the glans in walking (slight as this may be), the rough threads of the gauze or lint do not decrease the friction over an inflaming chancroid. Ordinary rolled cotton can be separated like the leaves of a pamphlet, and it is one of these thin, torn fragments that will cause the least friction and absorb equally well with a tuft. As half of the treatment of a chancroid lies in what the patient does while he is away from you, these minor instructions will serve a good end. Where a phimosis or infiltration prevents retraction of the foreskin, or if there is much pain, the penis may be given baths of hot water of five or ten minutes' duration, when possible, several times daily, by inserting the organ into a can of water as hot as can be borne. If, after repeated efforts, the phimosis cannot be overcome, the foreskin is to be laid open with the median incision as for the operation of circumcision. We must assume the risk in these cases of infection of our wound taking place. The patient is to be given an ounce or two of lotio hydrargyri nigra (black wash), of which, after each washing and thorough drying, he may apply a drop or two on cotton, leaving it in contact with the chancroid. As the object of treatment is to dry up the sore, too much of the wash must not be applied at one time, otherwise the virtue which lies in its slightly astringent action is lost by the maceration caused by too much moisture, from the saturation of the applied wisps of cotton. The cotton should be changed at least every two or three hours; the washings and applications night and morning will be sufficient, as it is important that the patient should take no washes or medicines to his work to excite suspicion as to his ailment. He should, also, be warned against talking about his disease. This applies to all genito-urinary diseases. In three instances in which I have neglected these warnings, I can now recall that patients have been discharged for having evidences of their disease about the shop.

At times I have found a sluggish sore do well under blue ointment (unguentum hydrargyri), applied daily as the wash was used. Under these modes of treatment improvement should become apparent and progressive within the first day or so, and only after a thorough trial should we turn to escharotics. Internal medication, aside from general hygienic treatment, and keeping the bowels freely open, as irritation may be increased by straining, is not often necessary, though it has been said, and I have found it to be the case, that iron as in the form of Blaud's pills or the elixir of iron, taken twice daily, or more often if need be, is ofttimes of value. As a bubo is, until pus formation takes place, a local affection, our aim in early treatment should be toward the prevention of this change by the employment of abortive measures. The application at bedtime of an ice bag, or of a towel wrung out in boiling water, or a flaxseed poultice (which last, after all, is not such a mass of septic organisms as many surgeons believe, since it is rendered sterile by the heat and boiling in the making), will, if carefully carried out with energetic treatment of the origin of the infection, allay the trouble in fully one-third of the cases.

A daily application of the following salve:

℞ Unguenti hydrargyri,
Unguenti belladonnæ, } .....equal parts.
Unguenti ichthyolis,
M.

will often do good. I think it acts by lubricating and softening the skin and subcutaneous tissues. It should always be applied with a soft stroking movement, as rough handling will crush the already diseased gland tissue and hurry suppuration. The earlier a bubo comes on after the sore which caused it, the more likely it is to go on to abscess formation in spite of efforts to prevent. After the formation stage has become well advanced, instead of endeavoring to avert an abscess, we should direct our energies to hurry this result by continuing the fomentations as often and as hot as possible. Pain becoming unbearable, suppuration demonstrated by fluctuation, are alike the determining factors for active treatment. The indications are now the relief of tension and the withdrawal of septic matter. The question of whether or not the abscess contains micro-organisms is an open one. Martin states that repeated microscopic examinations of the contents of suppurating buboes have absolutely failed to show the presence of any micro-organisms, and, again, the evidence is strong, though not conclusive, that, in certain exceptional cases, not only the irritating products of the micro-organisms, but even these micro-organisms themselves are carried directly to the lymphatic gland. Be this as it may, the question of whether we have to deal with micro-organisms or toxines is but of secondary importance. After a thorough cleansing with warm water and castile soap, followed by shaving of the parts on the side affected, a guarded, keen-edged, curved bistoury is to be plunged into the swelling until all sense of resistance is lost, or until the centre of the glandular mass is judged to have been reached. The site of puncture is denoted by the point of greatest tension, a pale area surrounded by deep purplish red coloration or one of darkest-colored hue. When the first gush of fluid has ceased, a blunt probe or a grooved director should be swept around the cavity and through the honey-combed tissues, thus opening up channels of exit. The amount of pain that this will cause will be readily borne by the patient, following so close on to the relief given by the opening. In cases where the puncture is made early for relief of pain only, and the infected gland will not discharge, five or ten drops of pure carbolic acid are to be injected through a hypodermic syringe into the centre of the gland or masses of hardened cellular tissue. Should the action be too great, alcohol, 95 per cent., will neutralize the effect if injected within a few minutes after the acid. A spray of ether or of ethyl chloride or a piece of salted ice wrapped about with a towel, may be used to anæsthetize the point of opening, though usually no anæsthetic will be required. I saw a rather ingenious method of anæsthesia applied for such a case in one of our hospitals by a resident physician. With a swab saturated with pure carbolic acid he made a sweep some two inches long for its anæsthetizing effect, following it with an incision of a scalpel. The writhings of the patient meanwhile proved to me the impracticability of the procedure. Finally, further loosened necrotic tissue should be removed by pressure gently but firmly made with a dossil of cotton or a piece of gauze held in each hand, a thorough syringing should be practised with hydrogen dioxide, pure or diluted with from one to four parts of water, according to the amount of pain caused. This should be followed by the insertion of a loosely twisted strip of rubber tissue, a wisp of horsehair, or a twist of catgut, to act as a drain. It has been stated that hydrogen dioxide causes renewed infection at times by its gases of decomposition forcing infected matter deeper into the spaces of the surrounding tissue. I have not found this to be the case in my own experience of the drug. If, however, this should occur, a simple dilution would remedy such action. The dressing is completed by dry, loose, sterile gauze and a snug spica of the groin. If the discharge is free, and, drying in the dressing, crusts and causes pain, it may be relieved by the patient himself pouring a portion of a cup of boiled water down in the inner dressing. This is, as often as not, unnecessary, and a better result will be obtained by keeping a dry dressing, by which a possible source of infection—viz., moisture—is removed. Only enough dressing is to be applied to absorb the discharge. Large dressings will keep the parts, especially in summertime, too heated, and macerate the tissues. Walking will do no harm; it rather helps by squeezing out the infiltrated tissues. The patient should be cautioned to exercise ordinary care when at work as to lifting or straining, however. Herniæ secondary to bubo operations are not common, however; puncture, with practically no resulting scar, will take

away this predisposing cause. The next dressing and washing out with hydrogen dioxide should be done in twenty-four hours. Nothing will drain pus perfectly. If we had any perfect method of drainage, it would never be necessary to wash out pus cavities. So-called drains act after the first capillary ooze has ceased by keeping the aperture open. Perfect drainage is obtained when the abscess cavity is washed out sufficiently often to induce continuous contraction and the cavity has not time to refill. Dressings at intervals of from two to four days thereafter should be made. The hygiene of the patient should be looked after; alcohol, fried, greasy, and indigestible foods are to be avoided. The bowels should be kept loose by teaspoonful doses of Epsom salts taken every other evening.

Sometimes a bubo will remain stationary at some early stage of development; it may then be treated actively by fomentations and poultices while the chancroid is healing. But when the sore is well, stimulation of the bubo should cease, as very often it will cause no further trouble; the patient is to be advised that, if it should ever through injury give rise to abscess formation, it can be readily removed at that time.

The advantages of the treatment for buboes which I have described, are twofold. The patient is not forced to bed and the time of total treatment is appreciably shortened. I have seen buboes incised, curetted, and dissected out totally, the wound, varying from three to five inches, closed only to see the total area again break out as one sore, taking six or eight months to heal, besides the two weeks in bed required after the operation.

An average case by puncture is as follows:

W., aged twenty-five years, single. A chancroid on the corona centrally situated, incubation of seven days. During the third week the sore healed rapidly; meanwhile a bubo developed on the right side, and was punctured on the tenth day and treated as described, with an entire cure in one month and four days.

A case of simple bubo from traumatism was in a patient in whom, on examination, I found a left-sided bubo well developed, and a healed sore on the outer (left) side of the foreskin. I removed the scab, a thick crust, from the site of the sore, but found no infection beneath it. It had about healed, and became perfectly glazed over during the following few days. The patient informed me that the sore had followed the scratch of a nail while he was climbing on to a raft while bathing some three weeks before. The bubo which followed formed rapidly and was fluctuating, though deeply seated when I saw it. The patient called for the relief of his pain. The pain was cured instantly, and the abscess entirely healed in twenty-one days from the time of puncture.

An uncommon case I consider the following:

C., aged twenty-one years, three chancroids on the glans, not actively discharging. A bubo developed during the month on the right side, two sets of glands being involved, which I reached by two punctures within the time of total treatment, notably seven months and a week. The patient, however, never lost a day, nor did he ever suffer much discomfort. After eighteen months, and a suspicious connection, he called to see if he was reinfected or if there was danger of the "old trouble coming back" at the site of the former infection. I found the small puncture scars not noticeable, no indurated glands were felt, and the skin scar was not bound down to the subcutaneous tissues. After two visits he was willing to be discharged, still cured.

In such a case as this, if dissection had been practised, general anæsthesia would certainly have been required, which in itself is a detriment.

In another case in which I operated a year ago, the patient returned to ask if an acne eruption on his face was not a sign of "it" (syphilis, I suppose, he meant) "getting in his blood." In two weeks I relieved his mind on this score.

Between these limits, inclining mostly toward the former, will the period of time required for treatment be found to lie. The treatment of puncture for buboes was first suggested to me by Dr. Edward Martin, while I was working in his clinic in Philadelphia; but very lately, in reviewing some of the literature on the subject, I found in a lucid article by Auspitz that he was the author of a mode of treatment as follows: As soon as he can feel and grasp the hardened gland, he presses it between the thumb and forefinger of the left hand toward the skin, then with a sharp, narrow bistoury he penetrates the skin only, and following it with a blunt-pointed probe, he enters into the substance of the gland; then, with a prying motion in all directions, he tears up the connective tissue, causing but moderate pain. Usually but one tearing up is needed, though it may be repeated if necessary.

I cannot, therefore, present this method of treatment as wholly original, but simply give it my approval and trust that others will be as successful in what seems to be a rational mode of treatment as I have thus far been.

HYSTERICAL ANÆSTHESIA AND ANALGESIA.*

By B. C. LOVELAND, M. D.,

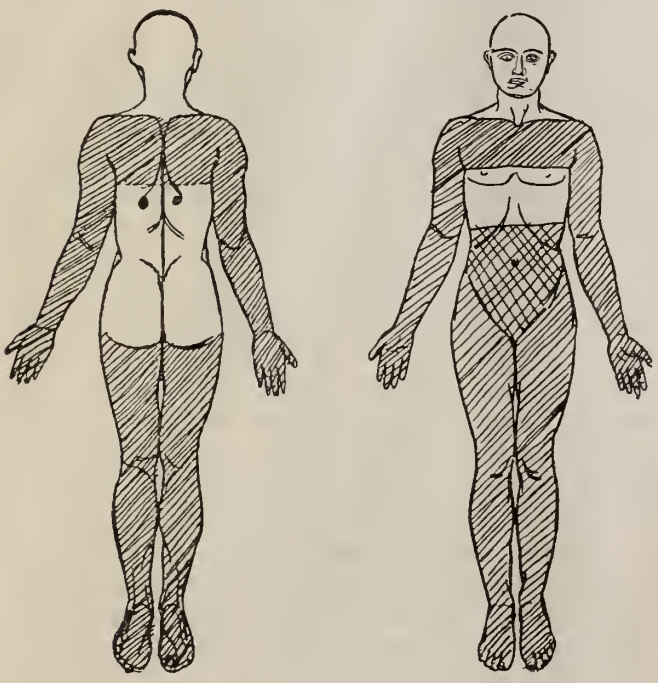
SYRACUSE, N. Y.

Miss M. M., twenty-four years of age, unmarried, came under my care on May 20, 1898. Her menstruation, always irregular, began at fourteen, and usually recurred at intervals of about five weeks. She had typhoid fever at sixteen, and rheumatic fever at twenty-two years of age. Her heredity was good. She was subjected to a nervous shock two or three years before I saw her, on the death of her father, which occurred suddenly from apoplexy while she was alone with him in the house. She had also been under a nervous strain for some years by reason of an unsettled love affair, which was the subject of much difference of opinion on the part of various members of the family, and which she had finally set-

*Read before the Medical Society of the State of New York at its ninety-fifth annual meeting, held in Albany on January 29, 30, and 31, 1901.

tled by breaking off the engagement. This had occurred about three weeks before I saw her, and was followed by a severe hysterical crisis, in which, so the nurse who was with her said, she acted as if she had lost her reason and started to leave the house only partially clad, but was prevented. At my first interview she was unable to give a correct account of the past three weeks, but by the aid of the nurse I learned that she had been at first very much excited, sleepless, and wanted to get away from her friends, for she thought they had all turned against her. She also complained of numbness in her limbs, which was less noticeable after a few days. She never complained of *globus* except when faradaism was applied to some spots on her back, which are described later as hysterogenic zones.

Her condition at the time of the first examination was as follows: Body generally well nourished, though muscularly weak; pulse 60, irregular; temperature normal;



The white areas show normal sensation, the diagonal shading shows total anæsthesia, the crossed shading indicates hyperæsthesia, and the black spots mark hysterogenic zones.

blood, hæmoglobin 100 per cent., red corpuscles 6,080,000; reflexes slow; pupils dilated, and such tenderness on pressure over the abdomen that an investigation of the abdominal organs was postponed. Later examination of the abdominal and pelvic organs showed them to be normal. A diagnosis of hysteria major was made, and after a few days my attention was called to a lack of sensation in her limbs by a masseuse who had made her black and blue while administering a treatment. The patient was, until this time, unaware of the anæsthesia. A map of her heat, pain, and tactile sense areas was made, which was as follows: Normal sensation over the head and neck: tactile, thermic, and pain anæsthesia from the collar bone to just above the nipples in front, and over an equal area on the back, both shoulders, arms, and hands being included in the anæsthetic area. On the front of the body, sensation was normal from the nipples down to a line across the body at the tenth ribs, where an area of extreme hyperæsthesia began and extended to the groins. On the back, normal sensation extended from the lower angles of the scapulæ to the gluteal folds, except at two small points just below the scapulæ, which are shown in the diagram, and were extremely sensitive—in other words, were hysterogenic zones; electrical stimulation of these spots would immediately develop a hysterical attack. The limbs, including the feet, were void of all sensation of heat, cold, contact, pain, or location, a deep puncture with a large needle producing no evidence of feeling, the upper limit being the groin in front and the gluteal fold on the back. Contrary to what is usual in such cases, puncture with a surgical needle was followed by some blood and by ecchymosis, though the skin presented the usual pale appearance. All the lines between the sensitive and insensitive areas were very sharply defined, and there was no tapering off of sensitiveness.

In the course of recovery, sensation first returned in the palms of the hands and the fingers, then in the dorsal surface of the feet. There was a gradual extension of sensitiveness from the extremities toward the body, but there was not the frequent change in outline of the anæsthetic areas which so often marks the hysterical type. Electrical stimulation would produce contraction of any group of muscles, but at first the patient could not tell which limb was the subject of contraction unless she saw it move.

Before she left my care she passed through such a variety of nervous phases, some of which affected her so seriously, that a brief history of her case in its other aspects may be worth recording.

She was at first constipated and would go for days without an evacuation with no apparent discomfort, laxatives producing little result, when one night she developed hysterical convulsions in which the spasms were general, including double strabismus, which lasted for about two hours. After this attack she began to have diarrhœa, from five to eight evacuations daily, and also menstruated about every alternate four days. From this time, alternating diarrhœa and constipation, and frequent menstruation, continued for several months.

The treatment applied for the disorder of sensation was faradaism, or the interrupted galvanic current of sufficient strength to contract the muscles, and strong mental suggestion. After a few such treatments sensation returned in her hands and in the dorsal surface of her feet, but was most acute in the fingers. Normal sensation was slow in returning, beginning in the extremities and gradually extending toward the body. When the anæsthesia was at its worst there was also considerable muscular weakness, so that at one time she had not enough grip in her hands to make a record on the dynamometer. During one of her spells of constipation she seemed to resist all remedies, and vomiting set in, which soon assumed a serious character.

She threw up everything administered by the stomach, both food and medicine, and also threw up large quantities of liquid, black or greenish-black in color, and having an odor between that of urine and fæcal matter.

This condition lasted four or five days before it finally gave way, during which time her kidneys nearly ceased to secrete and she voided no urine for thirty-six hours, the stomach probably acting, in a measure, vicariously. At the end of this day and a half, less than a pint of urine was found in the bladder by the use of the catheter, and for several days she voided no urine except once in twenty-four hours when the catheter was used. One after another her distressing symptoms disappeared, her strength increased, also her flesh, though at no time was she emaciated. She was under observation for ten

months, and when she left, her sensations were practically normal over her entire body and her bodily functions had assumed their normal regularity, and she still reports herself as in good health.

The case that has prompted this paper is one of extreme hysteria, *hysteria major,* as it is called, quite common in some portions of Europe, comparatively rare in this country.

The idea so common in the popular mind that hysteria is a disease void of danger to the individual affected, and the freaks of temper this class of patients so often indulge in, so influence the attention given to these sufferers that they receive little thought, and often the most tactless management possible; hence numbers of them go to form that large army of "shut ins," many of whom should be useful members of society.

The diagnosis of hysteria is usually overlooked in the less severe cases and is frequently jumped at in the more aggravated forms, and the object of the study prompted by the case reported is to show the important relation that this disorder may have to the vital functions, and to consider the importance of anæsthesia as a diagnostic sign.

That hysterical disorders may be serious enough to prove fatal has been stated by so renowned an authority as Charcot, and I have seen the *globus* so pronounced and persistent that I am sure the patient would have succumbed to inanition but for rectal feeding. I have also seen spasm of the respiration so severe as to be alarming, and death has been known to occur from hysterical spasm of the glottis. The heart is usually not influenced much in this disorder, but in the case reported in this paper it became very weak and beat irregularly. It would be evident also that such vomiting, with stoppage of the bowels and suppression of urine, as occurred in the case reported, could not last indefinitely.

The importance of anæsthesia as a diagnostic sign in hysteria does not rank with *globus,* or *hyperæsthesia,* which are much more frequently encountered; but when it does occur, it is of marked importance, and should be looked for systematically, especially as it is one of the symptoms seldom complained of by the patient, for the patient only discovers the anæsthesia by accident.

When anæsthesia occurs in hysteria it is usually after a pronounced hysterical attack. Its distribution and depth vary much in different cases.

The classical varieties of distribution are, over one half of the body, hemianæsthesia; over the lower extremities, paranæsthesia, and over isolated spots or islets which not infrequently follow in outline the shape of a sock or mitten.

In rare instances the whole body may be anæsthetic. The location and outline of the anæsthesias do not follow any particular nerve distribution, and are apt to vary from time to time in the same subject. In this latter particular the case reported was somewhat exceptional, as it also was in the manner and extent of its distribution. The depth of anæsthesia may involve all sensation, including the muscular or location sense, or it may be only tactile anæsthesia, to which may be added analgesia, thermo-anæsthesia, and the loss of the muscular sense, making it complete.

Ischæmia is usually present, and was in the case reported, but the deep puncture with a good-sized surgical needle was followed by bleeding, and ecchymosis was produced by a slight contusion.

Paralysis may accompany the anæsthesia, but such is usually not the case, muscular weakness only being present. However, anæsthesia frequently accompanies hysterical paralysis, and, when it does, the anæsthetic area usually corresponds to the area of paralysis.

I have already said enough to fulfil the object of this short paper, and time will not permit the consideration of other branches of this very broad subject.

Therapeutical Notes.

For Stimulating the Appetite in Chlorosis.—Dr. Max Kahaue recommends the following (*Berliner klinische Wochenschrift,* 1901, page 20):

℞ Compound tincture of cinchona.... 1 ounce;
Tincture of orange peel..... 1 "
M.

The dose is from 15 to 20 drops in half a glassful of water before meals.

Veil's Pyrogallic Acid Treatment of Lupus.—Captain W. D. Sutherland, I. M. S. (*Indian Medical Gazette,* November, 1900), gives the following treatment (originated by Veil, of Kannstadt) as being in use at Herxheimer's clinic at Frankfurt, and, moreover, endorses its efficacy from his own experience:

The larger tubercles are touched with a point of lapis infernalis (lunar caustic), and this treatment helps the physician in his diagnosis; for where no tubercle exists, there the skin remains unbroken when the point is pressed well down; whereas, when the skin is affected, a marked solution of continuity is left. After touching the larger tubercles with the point, the whole affected surface is covered with this salve:

℞ Pyrogallic acid. . . . . .from 1 to 10 parts;
Vaseline. . . . . to 100 "
M. Ft. unguent.

Treatment is begun with a 1-per-cent. or 2-per-cent. salve, and the strength is then increased as the patient becomes used to the action of the acid, which seeks out the tuberculous patches, leaving the healthy tissues untouched. The part is kept constantly smeared with the salve, and when marked improvement results from the application of 8- or 10-per-cent. ointment the strength of the salve is gradually reduced to 8 or 6 per cent., then to 4 or 2 per cent., and finally to ½ per cent.

Captain Sutherland says: "That lupus can be well treated thus with good cosmetic results, I have had ample opportunity of judging, for lupus is very common in this part of the world."

During the treatment the patient's urine is examined once a week for albumin and casts, as a slight nephritis may be set up by absorption of the pyrogallic acid.

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NEW YORK, SATURDAY, FEBRUARY 16, 1901.

THE NEW YORK STATE COMMISSION IN LUNACY.

IN both the Senate and the Assembly there are bills pending which, if they should be enacted, would repeal the existing provision of law by which the president of the Commission in Lunacy is required to be a physician who has had five years' actual experience in the care and treatment of the insane, also experience in the management of institutions for the insane. Such repeal is opposed by the State Charities Aid Association and by the New York Neurological Society, and it is our decided opinion that these two deservedly influential organizations found their opposition upon cogent reasons.

These two reasons are given by the State Charities Aid Association: 1. The extensive powers possessed by the commission require that it should include a member who knows about the construction and equipment of buildings specially designed for the treatment and custody of the insane; who has experience as to the requisite number and qualifications of physicians, nurses, and employees in the State hospitals and as to their proper salaries; who has knowledge of the quantity and quality of food supplies to be allowed; and who knows in regard to other important matters which require the judgment of a physician who has had experience in the management of institutions for the insane. 2. The commission is practically a court of appeals to which an appeal may be taken in behalf of any person who is forcibly detained in a private or public institution for the insane, but is alleged not to be insane. The insanity law, says the association, requires the commission, when inspecting asylums, to give patients an opportunity to converse with its members apart from the officers and attendants of the institution, and confers upon it absolute power to discharge any patient who, in its judgment, is wrongfully detained. Thus the commission is made a most important safeguard of the rights and liberties of citizens, so that it is of supreme importance that its one medical member should be familiar with all phases of insanity and experienced in the treatment of the insane. The enactment of the pending bills, the association declares, would be injurious to the welfare of over 23,000 insane patients now in the hospitals and private asylums of the State, and would imperil the liberty of citizens who might wrongfully be incarcerated.

To practically these same reasons the New York Neurological Society adds the requirements that the medical member of the commission should be familiar with the most advanced methods in the care and treatment of the insane, and that he should have the knowledge requisite to enable the commission to so direct the working energies of the State hospital physicians as to add to our knowledge of the means of preventing and curing insanity.

Both organizations have thought the matter one of sufficient importance to lead them to print and circulate expressions of their views, and most assuredly they have not overrated it. We cannot conceive of any creditable motive for seeking to do away with a proviso that is most precious in the interest of the insane and of the general public. The physician who has not had considerable experience in the actual management of an institution for the insane—and we believe an experience of five years to be none too great—is not qualified to properly perform the varied and responsible duties of a member of the lunacy commission, and we are confident that the legislature of the State will perceive the inexpediency and downright injustice that would be wrought by such legislation as the passage of the pending bills. They are known as Senate bill No. 255, introduced by Mr. Brackett, and Assembly bill No. 396, introduced by Mr. Fish.

THE ARMY MEDICAL SERVICE IN THE PHILIPPINES.

WE have received a printed copy of the report of Colonel and Assistant Surgeon-general Charles R. Greenleaf, chief surgeon for the Division of the Philippines, for the year ending July 31, 1900. It relates chiefly to the period beginning with January 1st and ending with July 31st, the report for the preceding months having been made by Dr. Greenleaf's predecessor, Lieutenant-colonel and Deputy Surgeon-general A. A. Woodhull. The pamphlet, which seems to have been printed in Manila, is a creditable piece of work from the point of view of typography, but the proof-reading might have been improved.

The scarcity of medical officers in the Philippines is a prominent theme, constituting as it has since the beginning of our occupation, says Dr. Greenleaf, the greatest source of anxiety that has confronted the chief surgeons. At the time of the report this scarcity was more felt than it had ever been before, and, in round numbers, there were 10,000 men serving at posts that had practically no medical attendance. At that time the number of posts was 375, and was constantly increasing, while there were only 336 medical officers on duty in the islands, and but 233 of these officers were available for post service. The hundred additional acting assistant surgeons promised by the surgeon-general, says Dr. Greenleaf, would not suffice to make good the deficiency, unless soon reinforced by more, because there were then about fifty acting assistant surgeons whose terms of contract had expired and who were anxiously awaiting their release, and every day was adding to the list.

Dr. Greenleaf declares that he is now more than ever impressed with the fundamental weakness of the contract system. To place civilians without real rank or authority in the position of quasi-officers, he says, is an injustice to the surgeon himself and to the Medical Department, which has to be responsible for his acts; his contract is made for a year only, and at the end of that time he can demand his release from duty, no matter how urgently his services may be needed; while performing an officer's duty, he is not an officer, and the knowledge that this is the case makes him less exact and prompt in bending to military discipline. The surgeon may even desert and leave his post unsupplied with medical attendance, as has actually happened in one instance, and there is no law, so far as Dr. Greenleaf knows, by which he can be punished or brought back and made to perform his duties; he gets a year's experience and is just beginning to learn his work when his contract expires, an untrained man takes his place, and the process begins anew. To discipline and train men for so short a service is a hopeless task. In short, says Dr. Greenleaf, the contract system is the least economical, the least effective, and the least satisfactory that could be devised. He is decidedly of the opinion that, if the present acting assistant surgeons were all to receive commissions as lieutenants of volunteers, to serve for two years or until their services were no longer required, the evils of the present system would in large part be remedied. The professional qualifications of the men who are now sent to the Philippines are satisfactory, says Dr. Greenleaf, and he expresses the opinion that they require only a fixed status, a burden of responsibility, and a longer service to make them extremely valuable. What Dr. Greenleaf says concerning these matters is strongly corroborative of what has been freely urged upon the government, and we hope that his views will yet prevail.

THE MEDICAL ASPECTS OF THE SIEGE OF PEKING.

The opening article in the January number of our excellent contemporary, the *China Medical Missionary Journal,* by Lillie E. V. Saville, M. D., is entitled The Siege of Peking—Its Medical Aspects. It appears that there was a large proportion of physicians among the besieged, twenty in all, besides a retired naval surgeon, and nine of them were women. On June 21st the International Hospital was organized in the British Legation. The staff consisted of Dr. Poole, of the British Legation, and Dr. Velde, of the German Legation. The women physicians were asked to act as nurses, and they gladly did so, says Dr. Saville. Miss Lambert, of the S. P. G. Mission, took charge of the nursing service, and three American ladies superintended the kitchen and stores, which were "beyond all praise." "Nowhere else," says the author, "was there such fragrant pony soup, such really eatable mule stew, and I think the officers and men often thought it was worth while to be *slightly* wounded to get a few days' good feeding."

"The unity which was such a striking feature of the siege in Peking," says Dr. Saville, "was nowhere more manifest than in the International Hospital." "Differences of nationality, creed, and professional status," she goes on to say, "were laid aside, and all worked with much happiness together." Nevertheless, it was judged best to group the patients by nationality so far as possible, in order that every one of them might have somebody to talk with. The Italians and French were together, the Russians were in a room by themselves, and "one room was always full of the bright, interesting little Japs." The English and Americans naturally went together. In a ward devoted to officers and civilian volunteers there were British, American, German, French, Italian, Austrian, Dutch, Australian, and Russian patients. Comfortable bedding, much of it the fruit of "very much self-denial on the part of others," was almost miraculously furnished for every patient; there were very few bedsteads, but every man had a mattress and sheets and pillows. The most varied expedients were resorted to to furnish bedding and clothing. The lower pillows were made of the straw jackets of wine

bottles; eider-down quilts were cut up to make soft pillows; and "a long piece of Chefoo silk, found in the Mongol market, made shirts, as did best damask linen and bright yellow cotton. 'Imperial' shirts these were called."

Nearly all the material for surgical dressings was supplied by Dr. Velde, who, fortunately, had a large supply, all of the German army type. He also had a sterilizer, and that had to be used when it finally came to making muslin curtains take the place of prepared gauze, and bags of peat or sawdust the place of wool. The hospital was small at first, occupying only two rooms in a bungalow, but it grew with the increase of the wounded until at last there was an operating-room with two tables. the instruments for an operation were always sterilized, there were five wards, and there were other special quarters for the sick and wounded. As the fighting was all behind barricades, wounds of the head and of the upper extremities greatly preponderated. Deep wounds were seldom examined thoroughly at the outset, even when there was no aperture of exit, but they generally did well, the clotted blood proving "the best air-proof medium that could have been devised."

Dr. Saville appends to her article a tabular statement of the casualties, distinguishing the nationalities of the patients. There were fifty-six Americans engaged. Seven of them were killed or died of wounds, and ten received wounds that did not prove mortal. There were forty-eight Frenchmen, and every one of them was wounded, eleven fatally; but it is explained that the French alone counted wounds that did not incapacitate the men for duty. We find it difficult to understand, however, how, of the twenty-five Japanese, five were mortally wounded and twenty-one others were wounded, unless one man, having recovered from his first injury, was wounded and counted again, but this does not seem to be stated. The deaths from disease were remarkably few, only two in a total force of 407 men. They were both among the Russians and were due to dysentery.

No notes of the cases were kept during the siege, for "no one had the time," and the table given is said to be but a summary of "the barest statistics" kept. Dr. Saville declares that she has no data, and that her account is "the merest sketch" from memory. We have no doubt of its substantial accuracy, and it is certainly of great interest. Incidentally, the author gives brief histories of a few individual cases. One of them, that of an Austrian lieutenant, is noteworthy. A shell wound carried away a portion of the vault of the cranium about two inches square, exposing the dura mater and the brain. There was very severe hæmorrhage from the longitudinal sinus, but the patient did remarkably well, and in about a fortnight left the hospital as a convalescent. It was apparently after that time that "a good deal of pus began to well up from the wound," and the opening was enlarged by chiselling and some pieces of dead bone and of lead were removed. In a few days the patient was up and about again. He again left as a convalescent on the day of the relief, but two days later he was brought back with a temperature of 104.5° F. He was very restless and delirious, and on the following day a purpuric rash developed on his hands and quickly spread to the trunk and limbs. A diagnosis of typhus was made, but subsequently this was changed to one of meningitis. The hospital was then broken up and the patient had to leave, but a fortnight later Dr. Saville learned from Dr. Velde that the lieutenant had recovered completely and had left Peking.

DISEASE AND VICIOUSNESS.

A WELL-KNOWN English judge had before him on one occasion a person charged with shoplifting. The judge's demeanor showed very clearly that he was not in sympathy with the effort of the prisoner's counsel to excuse his client on the score of irresponsibility. "Is your lordship aware," asked the counsel, "that there is a disease known to physicians by the name of kleptomania?" "Perfectly," replied the judge, "and I am sent here to administer a drastic remedy for it." Because the tendency to habitual drinking is often a disease, it does not therefore follow that it is not frequently merely a vice. The authorities at Bellevue, it seems, are beginning to comprehend this, and, in the case of chronic "repeaters" who "get on a jag" with the consciousness that it will be worked off in the comparative comfort of a good bed in the alcoholic ward, shelter from inclement weather, and a sufficiency of square meals, have determined henceforth to transfer all such offenders to the police authorities for more suitable and adequate treatment. One "patient" already has been transferred to "the island" for six months. This is as it should be, save in cases in which careful observation shows collateral evidence making indisputable the defect of irresponsibility.

AN EXCELLENT PRECEDENT.

To a Parisian lady doctor of medicine must be credited the honor of a brave and, strange to say, successful legal vindication of a physician's rights. Some little time back she brought suit in the Paris courts against the father of a child upon whom she had operated for

cervical abscess, to collect the amount of her fees, some 190 francs in all. The parent entered as a defense that the operation had been unskilfully performed and, so far from benefiting the patient, had done positive harm, and offered in support of this contention a certificate from a dentist. The court called upon Professor Brouardel, the eminent medical jurist, for his opinion, which was eminently satisfactory to the lady; whereupon she boldly entered further action for damages, on the ground that the defendant had supported his opposition to her claim by misstatements prejudicial to her professional reputation. The court heard the arguments in detail, and decided for the plaintiff on both counts, awarding her damages of fifty francs in addition to the amount of her bill. We congratulate both the lady and the court on this eminently sensible judgment.

THE AMENDED BELL BILL.

We are glad to learn that the essential portion of the bill has now been amended to read as follows: "Any person shall be regarded as practising medicine within the meaning of this act who shall profess to heal or who shall give treatment to any other person by the use of any remedy, agent, or method whatsoever, whether with or without the use of any medicine, drug, instrument, or other appliance, for the relief or cure of any wound, fracture, or bodily injury, infirmity, physical or mental, or other defect or disease. This article shall not be construed as prohibiting the manufacture, sale, or use of patent medicines or proprietary articles where no diagnosis is made by the maker or seller thereof, or the giving of temporary relief by a registered pharmacist, or any person in an emergency," etc. We learn that the bill is not now likely to meet with serious opposition except from the "osteopathists," who certainly ought not to be able to prevail against it.

THE SUPRARENAL CAPSULE AS A REMEDY FOR SNORING.

It has come to our knowledge that a middle-aged man who for years had had a household reputation as a most sonorous snorer, began to take a preparation of the suprarenal capsule as a remedy for chronic nasal catarrh. Not only did it mitigate the supersecretion of mucus, but his snoring practically ceased. Whether or not the occurrence was anything more than a coincidence, we do not undertake to say.

THE *OKLAHOMA MEDICAL JOURNAL.*

We are glad to see the evidence of our young contemporary's prosperity shown in the enlargement of its January number. It is handsome in appearance, too, and betokens gratifying activity in medical matters in the Territory.

News Items.

Society Meetings for the Coming Week:

Monday, *February 18th:* New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

Tuesday, *February 19th:* New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Societies of the Counties of Chemung (quarterly), Kings, and Livingston (quarterly), N. Y.; Baltimore Academy of Medicine.

Wednesday, *February 20th:* Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

Thursday, *February 21st:* New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

Friday, *February 22d:* New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

Saturday, *February 23d:* New York Medical and Surgical Society (private).

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending February 9, 1901:

Bertolette, D. M., Medical Inspector. Ordered to the *New York.*

Bucher, W. H., Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the Naval Hospital, Norfolk, Virginia.

Derr, E. Z., Medical Inspector. Ordered to the Naval Academy.

DuBose, W. R., Surgeon. Detached from the Naval Academy and ordered to the *Wisconsin.*

Grove, W. B., Assistant Surgeon. Detached from the *Vermont* and ordered to the Naval Hospital, New York.

Guthrie, J. A., Passed Assistant Surgeon. Detached from the *Franklin* and ordered to the *New York.*

McCormick, A. M. D., Surgeon. Detached from the Naval Hospital, Norfolk, Virginia, and ordered to the Naval Academy.

Spear, R., Passed Assistant Surgeon. Detached from the *Buffalo* on arrival at Cavite and ordered to the *Isla de Luzon.*

Stone, M. V., Assistant Surgeon. Detached from the *Isla de Luzon* and ordered to the *Buffalo.*

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 26 to February 9, 1901:

Crosby, William D., Captain and Assistant Surgeon, is detailed as a member of the board of officers appointed to meet at the Army Building, New York, to examine officers of the Corps of Engineers, United States Army, for promotion, *vice* Euclid B. Frick, Captain and Assistant Surgeon.

Hartsuff, Albert, Colonel and Assistant Surgeon-General, United States Army. His retirement from active service, February 4, 1901, by operation of law, is announced.

Kean, Jefferson R., Major and Surgeon, United States Volunteers, will proceed to Washington and report in person to the president of the board of officers convened in that city for examination as to his fitness for promotion.

Kilbourne, Henry S., Major and Surgeon, is detailed as a member of the board of officers appointed to meet at the Army Building, New York, to examine officers of the Corps of Engineers, United States Army, for promotion, *vice* William Stephenson, Major and Surgeon.

WOOD, MARSHALL W., Major and Surgeon, United States Army, will proceed to St. Louis and take temporary charge of the medical supply depot at that place during the absence of JOSEPH B. GIRARD, Major and Surgeon. Upon the return of the latter officer he will rejoin his proper station.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending February 9, 1901:

Smallpox—United States.

Jacksonville, Florida	Jan. 26-Feb. 2..	1 case.	
Chicago, Illinois	Jan. 26-Feb. 2..	4 cases.	1 death.
Lawrence, Kansas	Jan. 26-Feb. 2..	2 cases.	
Leavenworth, Kansas	Jan. 1-31	4 cases.	
Wichita, Kansas	Jan. 26-Feb. 2.	22 cases.	
Lexington, Kentucky	Jan. 26-Feb. 2.	2 cases.	
New Orleans, Louisiana	Jan. 26-Feb. 2.	9 cases.	2 deaths.
Lawrence, Massachusetts	Jan. 26-Feb. 2..	2 cases.	
Grand Rapids, Michigan	Jan. 26-Feb. 2..	1 case.	
Manistee, Michigan	Jan. 26-Feb. 2..	4 cases.	
Butte, Montana	Dec. 26-Jan. 20.	39 cases.	
Omaha, Nebraska	Jan. 19-Feb. 2..	6 cases.	
Manchester, New Hampshire.	Jan. 26-Feb. 2..	32 cases.	
New York, New York	Jan. 26-Feb. 2..	50 cases.	2 deaths
Utica, New York	Jan. 19-29	1 case.	
Morton County, North Dakota	Jan. 30	10 cases.	
Ashtabula, Ohio	Jan. 26-Feb. 2..	2 cases.	
Cleveland, Ohio	Jan. 26-Feb. 2..	49 cases.	3 deaths.
Allegheny City, Pennsylvania.	Jan. 26-Feb. 2..	5 cases.	
Erie, Pennsylvania	Jan. 26-Feb. 2..	2 cases.	
Pittsburgh, Pennsylvania	Jan. 26-Feb. 2..	8 cases.	
Greenville, South Carolina	Jan. 26-Feb. 2..		1 death.
Jackson, Tennessee	Jan. 1-31	20 cases.	2 deaths.
Memphis, Tennessee	Jan. 26-Feb. 2..	18 cases.	
Nashville, Tennessee	Jan. 26-Feb. 2..	4 cases.	
Galveston, Texas	Jan. 12-26	37 cases.	
Ogden, Utah	Jan. 1-31	32 cases.	
Salt Lake City, Utah	Jan. 26-Feb. 2..	29 cases.	
Eau Claire, Wisconsin	Jan. 22	12 cases.	
Washington Township, Wisconsin	Jan. 22	20 cases.	
Green Bay, Wisconsin	Jan. 26-Feb. 2..	1 case.	
Milwaukee, Wisconsin	Jan. 26-Feb. 2..	2 cases.	

Smallpox—Foreign.

Prague, Austria	Jan. 5-12	21 cases.	
Antwerp, Belgium	Jan. 12-19	3 cases.	
Rio de Janeiro, Brazil	Dec. 1-15		27 deaths.
Bradford, England	Jan. 23	4 cases.	
Newcastle-on-Tyne, England.	Jan. 12-19	6 cases.	
Calcutta, India	Dec. 15-29		72 deaths.
Karachi, India	Dec. 16-23	5 cases.	
Seoul, Korea, Japan	Dec. 22	Many cases and deaths.	
Moscow, Russia	Jan. 5-12	2 cases.	1 death.
Glasgow, Scotland	Jan. 18-23	324 cases.	3 deaths
Barcelona, Spain	Nov. 25-Dec. 30.		71 deaths.

Yellow Fever.

Cartagena, Colombia	Jan. 8-13		3 deaths.
Clenfuegos, Cuba	Feb. 1	1 case.	
Havana, Cuba	Jan. 22-29		1 death.

Cholera.

Calcutta, India	Dec. 15-29		87 deaths.
Singapore, Straits Settlements.	Dec. 8-15		25 deaths.

Plague—United States.

San Francisco, California	Jan. 12-19	2 cases.	2 deaths.

Plague—Foreign.

Calcutta, India	Dec. 15-29		46 deaths.
Osaka, Japan	Dec. 22-Jan. 7..	3 cases.	
Wakayama, Japan	Dec. 22-Jan. 7..	1 case.	
Smyrna, Turkey	Dec. 30-Jan. 6..		1 death.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine Hospital Service for the Seven Days ending February 7, 1901:

BAILHACHE, PRESTON H., Surgeon. Relieved from duty as chairman of the board for the physical examination of Second Assistant Engineer R. F. HALPIN, R.C.S.

BALLARD, J. C., Acting Assistant Surgeon. Granted leave of absence for five days from February 7th.

CORPUT, G. M., Assistant Surgeon. Bureau order of January 26th, directing Assistant Surgeon CORPUT to proceed to Cleveland for temporary duty, revoked.

FRANCIS, EDWARD, Assistant Surgeon. To proceed to Cleveland and assume temporary command of the service during the absence on leave of Surgeon PETTUS.

VAUGHAN, G. T., Surgeon. Detailed as chairman of the board for the physical examination of Second Assistant Engineer R. F. HALPIN, R.C.S.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending February 9, 1901:

DISEASES.	Week end'g Feb. 2.		Week end'g Feb. 9.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	27	15	27	9
Scarlet Fever	326	14	369	30
Cerebro-spinal meningitis.	0	0	0	0
Measles	116	2	145	5
Diphtheria and croup	361	40	260	40
Small-pox	50	2	17	6
Tuberculosis	282	90	282	165

The Sale of Horse Meat Prohibited.—The board of health of New York City has prohibited the future slaughter of horses and the sale of meat from all such animals. Section No. 86 of the Sanitary Code was amended to conform to this resolution.

Murderous Assault on a New York Physician.—News comes from El Paso, Texas, that Dr. Alfred E. Meyer, of New York, has been stabbed in that city and robbed of $1,000. The report comes via St. Louis in a special to the *New York Times* for February 14th, but is at the time of writing unconfirmed.

A Course of Clinical Lectures by Dr. T. D. Crothers, of Hartford, Conn., on the Neuroses and Psychoses of Spirit and Drug Diseases, at the hall of the New York School of Clinical Medicine, 328 West Forty-second Street, which the members of the medical profession are cordially invited to attend. The first of the lectures will be given on February 18th, at 8 P. M.

Indiana's Law against Christian Scientists.—Senator Wood has introduced a bill in the State legislature making it a felony punishable by imprisonment in the penitentiary when Christian Scientists treat cases of illness and death results. The purpose of the bill is entirely to exclude the practice of Christian Science in Indiana.

An Anti-vaccination Movement.—The Anti-vaccination Society of St. Paul, Minn., was recently organized in that city. At the meeting of the Ramsey County Medical Society there the following evening resolutions were passed indorsing the good work of vaccination by the Minnesota State Board of Health and the local boards, and the following officers were elected: President, Dr. Cornelius Williams; vice-president, Dr. John L. Rothrock; secretary, Dr. Ethelbert F. Greer; treasurer, Dr. Frederick Leavitt; necrologist, Dr. A. F. Whitman.

Praise for New York Medical Schools.—The annual report of the State board of regents, recently submitted to the legislature at Albany, contains the following: "It speaks very well for New York medical schools that of the papers submitted by their graduates the average number rejected was only about one for every four graduates, as compared with one for every graduate of schools in other

States, and two for every graduate of schools in foreign countries. In addition to candidates from schools in which there was at least one failure, thirty-nine graduates of four New York schools and eighty-five graduates of forty-two schools in other States and countries were examined."

Forestry Reserves for Consumptives.—The Dauphin County (Pa.) Medical Society has invited Forestry Commissioner Rothrock to talk before it on a proposed scheme for the care of consumptives, which contemplates the establishment of camps on the various forest reservations of Pennsylvania, which may be suitably located for the purpose, where persons suffering from consumption, and who have not the means to go to California, can spend several months in the summer. It is probable that the first camp will be opened on the reservation in Clinton county, which has an elevation of 2,000 feet above the level of the sea. This reservation has an area of 45,000 acres and is adjoined by two other large reservations.

Massachusetts Legislation Regarding Christian Scientists.—A bill has been introduced into the Massachusetts legislature, aimed at Christian Scientists, clairvoyants, and persons practising magnetic healing and mind cures. The bill aims to have inserted in the present medical law (chapter 458 of 1894) a new section providing that "whoever, not being registered, shall advertise or hold himself out to the public as a healer of disease, or able to abolish disease or the symptoms of disease, or as competent to do surgery, or shall in any way treat or prescribe for the sick or injured for gain, shall be punished by a fine of not less than $100 or more than $500 for each offence, or by imprisonment in jail for three months, or both."

Massachusetts Board of Registration in Medicine Attacked.—Dr. Immanuel Pfieffer has preferred charges against the Massachusetts State Board of Registration in Medicine to Governor Crane, and asks for their removal. The petition charges that the board has not made annual reports, as required by statute, and that this method is pursued in order that they may find out what restrictive amendments can be introduced with a fair prospect of having them passed, and not to give this information to the opposition before it is too late to introduce counter measures before the legislature. The board, it is said, has refused registration to a large number of persons who have earned diplomas in such medical schools as Harvard, Tufts and the Physicians and Surgeons. The secretary of the board says that the charges are groundless.

Michigan State Board of Registration.—Governor Bliss has appointed the following-named members of the State board of registration in medicine. The terms of the first five end on October 1, 1901: Dr. Joseph B. Grisvold, Grand Rapids, regular school; Dr. George E. Ranney, Lansing, regular school; Dr. Walter H. Sawyer, Hillsdale, regular school; Dr. Austin W. Alvord, Battle Creek, regular school; Dr. Henry B. Landon, Bay City, regular school; Dr. Joseph H. Cowell, Saginaw, homœopathic school, term ends 1901; Dr. Albert Lodge, Detroit, homœopathic school, term ends 1903; Dr. William Bell, Belding, eclectic school, term ends 1901; Dr. Henry C. Maynard, Hartford, eclectic school, term ends 1903; Dr. John Kost, Adrian, psychomedical school, term ends 1901.

Receiver Asked for a Sanitarium.—Application was recently made to Justice Dickey for a receiver for the St. Martha's Sanitarium, Brooklyn. In a suit brought by John D. and Joseph Stafford, judgment had been taken by default against the institution for $7,000, and it was held that the defendant had confessed judgment for $18,000 and there were no assets. In opposition, the institution claimed that since the controller had cut off $4,000 from the sanitarium and dispensary it had been compelled to rely on voluntary contributions. To appoint a receiver would discourage charitable people from giving money. Since the support from the city had been discontinued most of the patients had been removed to the Flatbush Asylum. Justice Dickey reserved decision.

Diphtheria.—The marine barracks and prison in the navy yard at Boston and the receiving ship *Wabash* have been quarantined on account of diphtheria. Within a few days about thirty men have been sent to the Naval Hospital in Chelsea. None of the cases is called serious. ——The diphtheria situation at Eastport, L. I., is very favorable, and notwithstanding the fact that there have been seven cases of the dread malady, some of which were affected by the most aggravated type of the disease, not a single death has occurred, and there is every probability that all the cases will recover.

Typhoid.—The typhoid outbreak at East Hampton, L. I., last summer has been investigated for the State board of health by Professor Landreth, of Union College. He finds that the cause was the proximity of Camp Wikoff. The report says there is little doubt that typhoid became established at East Hampton by soil implantation, and that it was disseminated either through the agency of percolation or through the air. Professor Landreth says that unless vigorous sanitary measures are taken there is a prospect of the disease developing into an epidemic during the coming season.

Small-pox.—Exciting scenes have marked the invasion of "Little Italy," an Italian colony of New York City, by the physicians of the health board, and for some time the doctors and the policemen assisting them had a lively time of it. An incident of the raid was the refusal of a policeman to allow his stricken child to be taken to North Brother Island, and his final consent when the mother was allowed to accompany the patient. Small-pox is reported to have developed very rapidly among the Italians. Many patients were concealed in crowded tenements, and the physicians discovered children hidden in ice-boxes, closets, trunks, and barrels. Several times when houses were invaded women rushed out carrying bundles under their arms. These bundles were found to be children suffering from small-pox.——From Watertown, N. Y., comes the report that a small-pox patient has been placed on exhibition, the health department taking that remarkable method to convince skeptical physicians and others that the cases of small-pox in town are actually that disease. The man afflicted was placed on a couch before a large landscape window at his home which faces directly upon the sidewalk.——Fort Dodge, Iowa, is suffering considerably from small-pox, the result of an innocent country dance. A germ-infected person probably attended the gathering and scattered broadcast the infection. Livermore, where most of the cases are located, has been quarantined, and the residents are alarmed over the spread of the sickness. ——There is a regular epidemic of small-pox in Chi-

cago and schools have been closed and every precaution has been taken to stop the spreading of the disease. A report has been circulated, but not been substantiated, that the employees of the large store called The Fair are afflicted with small-pox.——In Buffalo an order has been issued to the children in parochial schools to the effect that they must show vaccination certificates, permit themselves to be vaccinated by a private physician or by a health department physician. This is to be done to prevent any contagious disease from becoming epidemic in the city.——Frederick Bowley, president of the Borough of Queens, has had his office converted into a free vaccination station for the school children and the boys and girls in mercantile life.——Wisconsin has suffered considerably from small-pox, but now the cases are dying out and the numbers of sick have lessened greatly.——A bill has been introduced in the Utah legislature to compel all the people to be vaccinated within a certain time.——Another State that is afflicted with the disease is Texas, and but few nurses can be obtained to care for the sick.——A report from Cleveland, O., states that small-pox is increasing, though most of the cases are in a mild form.

Officers of the Schenectady County Medical Society.—At the annual meeting of the Schenectady County (N. Y.) Medical Society the following officers were elected: President, Dr. C. F. Clowe; vice-president, Dr. J. F. McEncroe; secretary, Dr. E. J. Wiencke; treasurer, Dr. Joseph Raymond.

The Medico-legal Society of Philadelphia at a recent meeting elected the following officers: Dr. L. H. Adler, president; Dr. S. Wolfe, first vice-president; Dr. W. Reber, second vice-president; Dr. C. W. H. Clewell, secretary; Dr. J. W. P. Peltz, treasurer, and Dr. J. D. Nash, librarian.

The Associated Health Authorities and Sanitarians of Pennsylvania met recently at Harrisburg and elected the following officers: First vice-president, Crosby Gray, Pittsburgh; second vice-president, Dr. H. H. Whitcomb, Norristown; third vice-president, E. S. Wagoner, Mechanicsburg; treasurer, Jesse C. Green, West Chester; secretary, Dr. W. B. Atkinson, Philadelphia.

The Atlantic County Medical Society.—The annual meeting of the Atlantic County Medical Society was held recently at Atlantic City, N. J., and the following officers elected for the ensuing year: President, Dr. Theodore Boysen, Egg Harbor City; vice-president, Dr. William Edgar Darnall, Atlantic City; secretary and treasurer, Dr. Theodore Senseman, Atlantic City; reporter, Dr. A. Burton Shimer, Atlantic City.

The Otsego County Medical Society convened for its semi-annual session at Oneonta, N. Y., on January 15th. The programme was as follows: Vice-president's address, Dr. A. W. Cutler; paper, Some Suggestions to the Practitioner, Dr. A. J. Butler; paper, Gangrene, Dr. Rupert W. Ford; discussion led by Dr. C. E. Parish; paper, The Physician, a Man and a Citizen, Dr. J. K. Leaning; report of cases, led by Dr. B. W. Dewar.

The Brashear Medical Society met in quarterly session at Bardstown, Ky., on January 15th. Among the subjects discussed were the following: The Use and Abuse of Atropine in the Eye, by Dr. A. O. Pfingst, of Louisville; The Importance of the Early Recognition of Eye Strain, by Dr. Charles McClure, of Cox's Creek; The Importance of Rest as a Therapeutic Measure, by Dr. A. G. Blincoe, of Bardstown; Fracture of the Neck of the Femur, by Dr. Irvin Abell, of Louisville; Pulsatilla in Orchotis, by Dr. B. E. Gore, of Bardstown.

The Annual Banquet of the Buffalo Medical Union was held at the Genessee Hotel, Buffalo, on January 23d, the following members and guests being present: Dr. R. L. Banta, Dr. DeWitt C. Green, Dr. A. A. Hubbell, Dr. S. S. Green, Dr. Renner, Dr. Westinghouse, Dr. Buswell, Dr. Meyer, Dr. W. D. Green, Dr. Diehl, Dr. Krauss, Dr. Tobie, Dr. Koenerson, Dr. Ingraham, Dr. J. C. Thompson, Dr. J. G. Thompson, Dr. J. H. Potter, Dr. Rasbach, Dr. Fell, Dr. Brown, Dr. Bissell, Dr. S. G. Dorr, Dr. L. B. Dorr, Dr. Congdon, Major Briggs, and Mr. Stockney.

Organization of Bellevue Graduates.—Graduates of Bellevue Hospital and of the New York University Medical College have organized at Chicago a western alumni association of the two institutions named. The reason for a joint association of the two colleges is that they are now under the same management. The following officers were elected: President, Dr. J. F. Podd; first vice-president, Dr. James G. Tiernan; second vice-president, Dr. James McKinlock; secretary, Dr. William O. Nance; executive committee, Dr. Hugh P. Patrick, Dr. J. S. Christison, Dr. J. Grinke, and Dr. Sanger Brown.

Annual Dinner of the Alumni Association of King County Hospital.—The eighth annual dinner of the Alumni Association of the Kings County Hospital was held recently at the Clarendon hotel, Brooklyn. Covers were laid for seventy-five, the tables being arranged in the form of a hollow square and the decorations red carnations. The Alumni Association of the Kings County Hospital numbers about two hundred physicians, but of this number scarcely more than seventy-five are available by reason of their not living near or in the borough when the annual dinner is held. The speakers were John Green, of the board of education; Dr. C. F. McGuire, Dr. Harmon Smith, of Manhattan, and Commissioner of Charities A. Goetting.

The Massachusetts Association of Boards of Health held its annual meeting in Boston on January 24th, the president, Dr. Samuel H. Durgin, in the chair. The following officers were elected: President, Dr. Henry P. Walcott, of Cambridge; vice-presidents, Dr. Samuel H. Durgin and Dr. Samuel H. Abbott; secretary, Mr. James C. Coffey, of Worcester; treasurer, Dr. James L. Field, of Lowell. Executive committee (for two years): Dr. W. H. Chapin, of Springfield; Dr. D. S. Woodworth, of Fitchburg; Dr. F. W. Kennedy, of Lawrence; Dr. W. S. Everett, of Hyde Park, and Dr. Walter C. Kite, of Milton.

Papers were read by Dr. Palmer, of South Framingham, who treated of Glanders in a Human Patient, and by Mr. William Lyman Underwood, of M. I. T., who considered the drainage of certain wet, rotten, and spongy lands between Cambridge and Belmont.

Lack of Funds Leads to Closing of a Hospital.—For lack of a yearly guarantee fund of $10,000, the Mothers and Babies' Hospital at Lexington Avenue and Fifty-second Street, New York City, must close during the coming month. It has been supported for eighteen years by voluntary contributions.

American Medical Missionary College and Hospital.—This institution proposes to expend $150,000 in the erection of two four-story buildings for its own use in the neighborhood of the Cook County Hospital, on Harrison Street, Chicago. At present the senior year students only study in Chicago, the preliminary courses being pursued in the Battle Creek Sanitarium.

Officers of the Detroit Polyclinic Hospital.—At the annual meeting of the Detroit Polyclinic Hospital the following officers were elected: Dr. W. H. Poole, president; Dr. J. E. Davis, vice-president; Dr. S. E. Sanderson, secretary; Dr. B. W. Pasternacki, treasurer; trustees, Dr. E. Amberg, H. W. Yates, W. C. Thomson, J. E. Davis, L. Breisacher. The number of cases treated during the year was 2,295, and the number of new patients 633.

The Stony Wolde Sanitarium for Consumptives.—A number of women who are interested in building a hospital for consumptive women at Stony Wolde, in the Adirondacks, held a meeting in the Dakota recently. Dr. Frieda Lippert and Dr. S. A. Knopf addressed those present, and a feature of the gathering was a solo by Mrs. Mabel McKinley Baer, wife of Dr. Baer and a niece of the President. Auxiliary associations have been organized in several parts of the city and State. A committee has been organized and is collecting funds to buy a site and erect the sanitarium.

Hospital Saturday and Sunday Association.—The annual meeting of the Hospital Saturday and Sunday Association was held recently in this city. An election for officers and the board of trustees resulted as follows: President, George Macculloch Miller; vice-president, Isaac Wallach; recording secretary, George P. Cammann; corresponding secretary, Rev. George S. Baker, D. D.; treasurer, Charles Lanier. Board of trustees, George M. Miller, Isaac Wallach, Rev. George S. Baker, D. D., George P. Cammann, Charles Lanier, Jacob H. Schiff, William Alexander Smith, A. G. Agnew, John S. Bussing, George G. Wheelock, M. D., James Speyer, J. A. Stursberg, Robert Olyphant, O. Egerton Schmidt, R. Vander Ende, Walter H. Lewis, Louis Stix, Charles Renauld, Henry Maillard, W. Oliver Moore, M. D., Leonard Weber, M. D., Henry Rosenwald, Eugene H. Conklin, A. B. Ansbacher, A. H. Wellington, H. R. Kunhardt, R. J. Cross, Marcus M. Marks, Mrs. Edmund L. Baylies, and Mrs. James Speyer.

A Summary of the Report of the Committee of the Medical Board of Bellevue Hospital, appointed January 2, 1901, to investigate and report upon questions relating to the general administration of the hospital:

We are of the opinion that the rules and regulations of the hospital are correct upon the whole: that the various divisions and subdivisions of the force which is concerned in the conduct of the hospital are, as far as circumstances permit, organized upon correct lines; a division of authority has, however, existed, which has been responsible for the defective execution of the laws under which the hospital was supposed to live. This, as we stated to you some time ago, can be obviated by a head which places itself in contact with these various subdivisions and exercises immediate and vigorous control over all. This, we are glad to say, you have accomplished by installing Dr. Stewart.

But permanent improvement is rendered difficult, and some of us believe impossible, in the face of the inefficiency of the paid employees as a class, and the wretched accommodations furnished to so large a portion of your staff, doctors and employees alike. Correct this and raise the *per capita* allowance of this hospital to a figure approximating that which obtains in like institutions in this city, and the crying evils will be permanently eradicated. Otherwise, the outcome of this effort at improvement will end as the many which have preceded it. Decent service requires fair pay and decent accommodations; to which end we earnestly recommend an increase in the *per capita* allowance, and that the main hospital building be replaced at once by a modern and more commodious structure.

We beg to call your attention to the subjoined comparative statement of the *per capita* allowance at this and other leading hospitals:

Per Capita Cost per Diem for Ward Patients.

St. Luke's Hospital	$1.62
Presbyterian Hospital	2.44
Roosevelt Hospital	2.195
Mt. Sinai Hospital	1.38$\frac{1}{6}$
New York Hospital	2.08
Pennsylvania Hospital	1.17
Massachusetts General Hospital	1.96
Boston City Hospital	1.77
Bellevue Hospital	1.21
Daily *per capita* cost for the Bellevue Hospital, estimated on the basis of total inmates	$0.6985

Selecting for comparison the five hospitals in the above list situated in New York City, it is seen that the average *per capita* allowance provided by them for each patient is $1.98, as against $1.21 for Bellevue Hospital; a statement all the more worthy of official consideration when we compare the commodious and well-equipped quarters in which their patients (18,907 in all) are cared for, with those in which at the Bellevue Hospital care for the 24,300 which fall to our lot.

(Signed) W. M. Polk, *Chairman;*
A. Alexander Smith,
George B. Fowler,
Alexander Lambert,
John W. Brannon.

Hospital Buildings and Endowments.—St. Anthony's Hospital and Orphanage of New York, a new Polish Catholic institution, is now ready to receive its charges, although the entire building has not neared completion. The hospital is provided with eight large wards, each of which has twenty beds, and besides these there are thirty private rooms. It is designed to provide a home for orphans and for aged people, as well as for the sick and the maimed. The building, although not nearly completed, is already sheltering a half dozen orphans, and for this part of the hospital there are nine Sisters of Charity in attendance. These attendants will be increased as the needs of the institution demand. A drug store, in charge of an experienced pharmacist, is in a section of the building, and on the second floor is a small chapel, which has eight very handsome windows, costing $800. The hospital is located in a Polish neighborhood, at North Robey Street and North Hoyne Avenue, and it is through the efforts of Bishop Anthony Kozlowski and the generosity of his people that the institution has been built. All in need of help will be admitted, regardless of race or religion. For trustees of the institution, Bishop Kozlowski has associated with

himself as president, Joseph Sadowski, vice-president; Alexander S. Leszczuski, secretary; John Murawski, vice-secretary, and Jacob Dziewior.——Mayor Van Wyck has refused to grant the request of the Navy Department for a part of Blackwell's Island to be used as a naval park. He says that to do this it will be necessary to raze both the insane asylum and the hospital to get a space sufficiently large for a park. Commissioner Lantry suggests that the city offer the government the land it owns on Barren Island for this purpose.——A bill has been introduced in the Missouri legislature to provide a hospital for the State, to be known as the Missouri General Hospital. If this bill becomes a law the city will be relieved of many of the indigent sick who annually tax the institutions of the city.——The new Catholic hospital at Hot Springs, S. D., has been begun. The land was donated and some of the money was raised by subscription. It will be under the charge of the Benedictine Sisters.——A new hospital is to be built at Dobbs Ferry, N. Y., the plans for which are to be ready by March 1st, and the building to be begun by May 1st. It will cost $12,000, which amount will be made up by residents of Dobbs Ferry.——The Sydenham Postgraduate Hospital, on West Thirty-fourth Street near Tenth Avenue, opened its doors to applicants who wished to be vaccinated. It is a non-sectarian institution and the only hospital in that section of the city.——The Southern Dispensary and Hospital of Brooklyn has been dissolved by Justice Dickey.——A bill has been passed in the Senate providing for additional buildings for the Providence Hospital at Washington.——The United Presbyterian Women's Association has decided to build a small addition to the Memorial Hospital at Pittsburgh, Pa., to relieve the crowded condition of the present building.——The Beahan Hospital has been incorporated at Rochester, N. Y. The board of directors is composed of Dr. A. L. Beahan, Dr. M. R. Carson, Dr. O. J. Hallenbeck, Dr. J. H. Jewett, Dr. F. E. McClellan, Dr. J. A. Hawley, Dr. H. C. Buell, and Dr. F. H. Warner.——There is a movement on foot to establish a Presbyterian hospital at Atlanta, Ga.——The new buildings of the Hale Hospital, at Haverhill, Mass., considered among the best in the State, were recently opened for formal inspection.——A lot containing 21,500 feet of land has been purchased for $26,500 for the new Deaconess Hospital in Boston. Toward the amount stated $15,000 has been pledged, $10,000 of which is conditional upon the raising of $30,000 before January 1, 1902.——The board of aldermen of Buffalo have voted to have plans and specifications prepared and to advertise for bids for the construction of a new quarantine hospital at a cost not to exceed $50,000, and to ask the board of supervisors to provide a site for the hospital on the Almshouse property.——At the annual meeting of the board of directors of Lakeside Hospital, Cleveland, O., recently, the following gifts to the hospital were announced: Amos Townsend estate, $7,850; Mr. and Mrs. J. C. Morse, $10,000; Mr. and Mrs. H. H. Brown, $5,000; Mr. Fayette Brown, $30,000; H. M. Hanna, $83,500; Mr. and Mrs. L. C. Hanna, $10,000; J. Hartness Brown, $5,000. In addition to this are gifts from John D. Rockefeller and L. H. Severance of enough money to pay off the balance of the debt on the new buildings, amounting to $30,000.——The new St. George's Hospital at Kansas City, Mo., has been opened. It will accommodate 100 patients. At a special meeting of the board of health it was decided to spend $2,000 more on the hospital and its equipment.——A fund of nearly a million dollars has been raised in the Presbyterian church to be used for defraying church debts and erecting hospitals in the larger cities. Among the points where a hospital is to be built is St. Louis. ——The West Philadelphia Hospital for Women has received $5,000 for the endowment of a bed from the estate of Mary Baker.——The will of the late Oswald Ottendorfer, of New York, bequeaths $20,000 to the German Hospital and Dispensary.——Senator Payne has introduced in the Illinois legislature a bill making the following appropriations for the Western Hospital for the Insane: For ordinary expenses, $182,000; for a society hall, $12,500; for a male dormitory, $7,000; for a laundry, $4,500; for a parole ward, $7,000; for improving the grounds, $10,000; for a refrigerator plant, $2,500; for a library, $500; for repairs and improvements, $6,000.——Owing to the large number of patients constantly in St. Mary's Infirmary, Cairo, Ill., the sisters have decided to have a new building erected in the spring. Some of the older buildings will be torn down, but the large frame structure will be moved back and generally overhauled. The new addition, which will be of brick, will be erected at the rear of the present brick structure and in front of the frame.

Births, Marriages, and Deaths.

Engaged.

MUNDORFF—GRAU.—In New York, on Saturday, February 2d, Dr. George Theodore Mundorff and Miss Minnie Grau.

Married.

BLACK—STORR.—In Baltimore, on Wednesday, February 6th, Dr. R. Markley Black, of Cecilton, Maryland, and Miss Mary L. Storr.

DUKE—PERKINS.—In Kansas City, on Wednesday, January 30th, Dr. John William Duke, of Oklahoma, and Miss Isabelle Perkins.

HAY—PRICE.—In Chestnut Hill, Pennsylvania, on Wednesday, February 6th, Dr. Charles Mackenzie Hay, of Woodstock, New Brunswick, Canada, and Miss Louisa Gordon Price.

LANE—FARGASON.—In Camp Hill, Georgia, on Tuesday, January 29th, Dr. Sidney W. Lane, of Berlin, Maryland, and Miss Annie Fargason.

SAILER—STRAWBRIDGE.—In Germantown, Pennsylvania, on Wednesday, February 6th, Dr. Joseph Sailer, of Philadelphia, and Miss Mary Lowber Strawbridge, daughter of Dr. George Strawbridge.

WELTY—WOOD.—In San Francisco, on Thursday, February 7th, Dr. Cullen F. Welty, of Cleveland, and Miss Eleanor Wood.

Died.

BARKWELL.—In Tucson, Arizona, on Monday, January 28th, Dr. Wesley W. Barkwell, of Chicago.

FERGUSON.—In St. Charles, Missouri, on Wednesday January 30th, Dr. David W. Ferguson, aged eighty-three years.

FRANKLIN.—In New York, on Wednesday, February 6th, Dr. Benjamin Franklin, in the fifty-fifth year of his age.

HUNDLEY.—In Tappahannock, Virginia, on Wednesday, January 30th, Dr. John Hundley, in the seventy-fifth year of his age.

KENNEDY.—In Michipicoten, Ontario, Canada, on Wednesday, January 30th, Dr. James Harty Kennedy.

MELLINGER.—In Creswell, Pennsylvania, on Thursday, February 7th, Dr. Henry S. Mellinger, in the seventy-ninth year of his age.

MIDDLETON.—In Washington, on Thursday, January 31st, Dr. Rosier Middleton, of Herndon, Virginia.

OSBORN.—In Dubuque, Iowa, on Sunday, February 3d, Dr. Charles Osborn, of Clinton, Iowa.

RICE.—In Trenton, N. J., on Wednesday, February 13th, Dr. William Rice, aged sixty-three years.

Pith of Current Literature.

Lancet, January 26, 1901.

The Selective Influence of Poisons in Relation to Diseases of the Nervous System. By Dr. F. W. Mott. —The author's article deals with the primary intoxications and degenerations of the nervous system which are ccasioned directly or indirectly by some general toxic ondition of the blood or lymph. In a great number of nstances, particular groups of neurones are especially ffected by particular poisons. These poisons act by ncreasing or diminishing the excitability of the nervous lements. Whether a poison is exogenetic or autogentic, it is the toxic state of the blood or lymph that auses the morbid nervous phenomena. Of the exoenetic poisons, one great group is of those substances sed as intoxicants—alcohol, opium, haschisch, cocaine, obacco, and absinthe. The abuse of alcohol is the most idespread and potent cause of nervous and mental diases. The various specific effects produced by the bove-mentioned poisons are dealt with in detail. Poions may be produced within the body (1) by the pererted action of the organs or tissues, and (2) by the ction of micro-organisms upon the living fluids and issues of the body. As belonging in the first class may e mentioned uræmia, cholæmia, uricacidæmia, acetoæmia, and the perverted state of the blood or lymph in nyxœdema and Graves's disease. The spinal scleroses bserved in pernicious anæmia are due, not to hæmolyis, but to some toxic agent absorbed into the portal lood from the alimentary canal. The best examples of he selective action of microbial toxines are afforded by abies and tetanus; diphtheria, influenza and other afections may also be cited. Syphilis is a poison which s responsible for a large proportion of organic nervous liseases. It may attack the nervous system directly, or t may produce progressive degenerations (locomotor ataxia, general paralysis of the insane).

Plague. By J. M. Atkinson, M. B.—In this article he author deals with the symptoms and diagnosis of plague and the measures necessary to prevent its extension. He also discusses the *post-mortem* appearances, he clinical varieties of the disease, its bacteriology, and its diagnosis. The following is an outline of the procedure adopted in Hong-Kong in dealing with outbreaks of the plague:

1. *House-to-house Visitation.*—This is effected by officers of the local government board, and the sick and dead are removed in special ambulances. The disease is notifiable, but the Chinese universally evade the regulation.

2. *Segregation of Contacts.*—All individuals who have been in immediate contact with cases of the disease are isolated in sheds erected in various parts of the city.

3. *Isolation hospitals,* which should be made of wood, so as to be easily destroyed.

4. *Disinfection of infected premises,* by spraying with solutions of corrosive sublimate or fumigating with free chlorine gas.

5. *Latrines and sewers are kept flushed out* and disinfected as far as possible.

6. *The night-soil at the hospitals and the dressings* from patients are burned after being mixed with sawdust.

7. *Haffkine's antitoxic serum* is kept and supplied free of cost.

8. *A reward is given for each rat* brought to the sanitary authority.

A Suggested Method of Preventing Water-borne Enteric Fever amongst Armies in the Field. By Dr. L. C. Parkes and S. Rideal, D. Sc.—The authors report the results of their experimental trials of acid sodium bisulphate as a destroyer of typhoid bacilli in drinking-water. They conclude that water naturally infected with the virus of the disease never contains large numbers of typhoid bacilli, and that these organisms are not by any means resistant to acids or other weak disinfectants. Their experiments show that in the case of such naturally infected waters, sodium bisulphate in the proportion of one gramme to the pint is an effective antiseptic after fifteen minutes' contact, even for waters containing 50,000 bacilli to the cubic centimetre. They recommend its employment in the form of five-grain tabloids, three of these being used to sterilize one pint of water. A box containing three or four hundred of these tabloids can easily be carried by each soldier, and would suffice for a campaign of three weeks. But instruction must be given as to their use, and especially as to the necessity of allowing all contaminated water to remain in contact with the dissolved tabloids for at least fifteen minutes before being consumed. The tabloids may also be used as thirst lozenges when water is scarce.

Notes on Acquired Syphilis of the Nose and Pharynx. By C. A. Parker, F. R. C. S.—*Primary syphilis in the nose* is very rare. Its seat is usually on the alæ or just within the vestibule, and it is accompanied by swelling of the submaxillary glands.

Secondary syphilis does not attack the nose in any definite or serious way. The following manifestations are met with: (1) Coryza; (2) mucous patches; (3) rhinitis, erythematosa, and papulosa; and (4) superficial ulceration.

Tertiary syphilis of the nose may be met with in any of the following forms: (1) Gummata; (2) superficial ulceration; (3) deep ulceration and necrosis; and (4) scars, adhesions, and deformities.

Primary Syphilis of the Pharynx.—The primary sore occurs in the pharynx fairly frequently, usually on one tonsil.

Secondary Syphilis of the Pharynx.—1. Erythema. 2. Mucous patches. 3. Superficial ulceration.

Tertiary Syphilis of the Pharynx.—1. Gummata, (*a*) circumscribed, and (*b*) diffuse. 2. Ulcerations. 3. Scars, contractions, and adhesions.

Removal of a Foreign Body from the Bronchus by Intrathoracic Tracheotomy. By H. Milton, F. R. C. S. —The author describes a case of anterior median thoracic incision for a foreign body in the right bronchus. The patient had had a tracheotomy performed some years previously for syphilitic stenosis of the larynx, and the outer tube had fallen into the trachea. It was successfully removed, and he did well at first, but died of sepsis on the second day.

A Singular Case of Extensive Deposit of Phosphate of Lime in the Lungs. By Dr. T. Fisher.—The author reports a case in which, at autopsy, the lungs were found to be studded from apex to base with granules of phosphate of lime. Sections of decalcified portions of the lungs showed few abnormal changes. Calcification had obviously taken place in so-called amyloid bodies, and the presence of large quantities of phosphate of lime was secondary to the existence of amyloid bodies in the lungs in unusual numbers.

Notes on a Case of Poisoning by Coal-tar Naphtha. By G. H. Douthwaite, M. R. C. S.—The author reports

the case of a girl, aged five years, who took three ounces of coal naphtha and died nine days later of bronchitis. When seen, some hours after taking the naphtha, the face was dusky and livid, pupils dilated, pulse rapid and small, and respirations rapid and difficult. Artificial respiration, counterirritation, and stimulation restored consciousness, and the child did well for two days, when the bronchitis developed which proved fatal at the end of a week.

A Case of Anthrax. By A. Kidd, M. R. C. S.—The author reports a case of anthrax occurring in a man aged twenty-seven years, who was engaged in the hide trade. The whole diseased area of the neck (about three quarters of an inch square) was excised, the subjacent tissues scraped with a Volkmann's spoon, and pure phenol applied. The patient developed high fever and the neck was much swollen for a few days, after which the trouble gradually subsided and recovery took place.

Splenomedullary Leucæmia; Remarkable Tolerance of Arsenic. By Dr. C. Heaton.—The case here reported is of interest in showing how arsenic may be tolerated by these patients. The total number of days was 271, including intervals amounting to fifty-eight days, and the total amount of hypodermic administration was as follows: Arsenious acid $5\frac{1}{2}$ grains, arsenate of sodium 105 grains, and sodium cacodylate $10\frac{2}{3}$ grains. In addition, $10\frac{2}{3}$ grains of sodium cacodylate were administered orally. The maximum dose administered at one time was $2\frac{2}{3}$ grains of arsenate of sodium, equivalent to 4 drachms and 26 minims of liquor sodæ arseniatis. At no time were there any symptoms of poisoning. The influence of the treatment was beneficial for a time.

Results of Thirty-five Prophylactic Injections of the Antidiphtheritic Serum. By P. R. Blake, M. R. C. S.—Following the occurrence of three cases of diphtheria in a children's home, the author injected thirty-five children with immunizing doses of antitoxine. The amount used in each case was about 334 units. In no case did any local lesion follow at the site of injection; no other case of diphtheria ensued, and in thirty-one cases no reaction followed. In four cases, all of which were tuberculous, there were fever and glandular enlargement in two, and rash formation in the remaining two.

February 2, 1901.

Considerations Touching the Pathology and Relations of Diabetes. By Dr. W. H. Dickinson.—The author reviews the morbid anatomy of diabetes in the light of our present knowledge. The most frequent morbid appearance found in connection with diabetes is extravasation of blood in the perivascular canals of the brain, not limited to, or constant in, any one part, but scattered apparently at random around the deeper arteries and also the more minute vessels of the pia mater. These extravasations are the results of transudation and have no connection with the coma of diabetes. Such perivascular hæmorrhages indicate an abnormal condition of the cerebral circulation. Enlargement of the perivascular canals also takes place, giving to certain districts of the white matter a cribriform appearance. Leucocytes, amorphous matter, and blood crystals may be found in these canals. Dilatation of the central canal of the spinal cord occasionally occurs in diabetes. There is also sometimes to be observed a peculiar hyaline modification of the lateral parts of the gray horns. Next to the brain, the liver supplies an early step in the diabetic process. The diabetic liver is large, hard, red, and congested. The vessels are full of blood and have been known to present coagulation both in the arteries and veins. Mention is also made of the consequential changes to be observed, such as cataract, pulmonary tuberculosis, etc.

Grief, anxiety, and terror may all be so closely followed by diabetes that there is no room for doubt as to their having occasioned it. Heredity is a prominent cause, as also is gout. The loss of the patellar reflex may be regarded as one of the most constant signs of the disease. The extravagant exit of phosphate of lime in some cases of diabetes has to do with the state of the nervous system in this disease. The peculiar dusky redness of the complexion, so often present in advanced cases, suggests a connection with the nervous system. Glycosuria in small amount accompanies insanity, not frequently, but often enough to imply a morbid relation between the two. From these facts the conclusion is reached that diabetes is not a "functional disease," and that in all probability its pathology is closely associated with that of disease of the nervous system.

Femoral Hernia. By W. H. Battle, F. R. C. S.—After discussing the diagnosis of femoral hernia from other swellings in the femoral region, and the various operations for its radical cure, the author describes his own procedure, in which he makes a shutter of the external oblique muscle, thus opposing the descent of a hernia between the sac and the canal. He has performed the operation successfully in three cases, with no recurrence so far.

The Hæmorrhagic Diathesis in Typhoid Fever and its Relationship to Purpuric Conditions in General. By Dr. A. G. Nicholls and G. E. Learmouth, B. A.—In the present communication the authors report a most extreme example of enteric fever with the hæmorrhagic diathesis. The case was that of a woman aged twenty-one years, and the first hæmorrhage (into the skin of the abdomen) was observed on the fourteenth day of the disease. Thirteen days later the patient had two intestinal hæmorrhages and multiple hæmorrhages over the trunk. The next day there was nosebleed and hæmorrhage from the lips and gums and into the conjunctivæ. These losses of blood continued and the patient died on the fortieth day of her illness. The temperature was never very high. The *post-mortem* examination showed the case to be one of typhoid fever atypical in the particulars that the intestinal lesions were most marked in the large bowel, that the spleen was small, that there was a general hæmorrhagic diathesis, and that there was a mixed infection with the *Staphylococcus albus*. One main factor of the extensive hæmorrhages was the fatty degeneration of the basement membranes of the capillaries, which was specially noticeable in the lungs and the kidneys. The authors refer this fatty degeneration, not to any local action of bacteria, but to a condition of systemic intoxication and septicæmia. They have studied the literature of hæmorrhagic typhoid, and discuss its pathology, symptoms, prognosis, and treatment. The cases fall into three groups: (1) primary typhoidal purpura; (2) purpura due to secondary bacterial invasion; and (3) cachectic purpura. The condition is generally very grave and the treatment is purely symptomatic. "Purpura hæmorrhagica" is to be looked at as a train of symptoms. In the light of our present knowledge, it would be better to speak of (1) an "essential" purpura, including morbus Werlhofii, purpura simplex, purpura urticans, etc.; (2) "symptomatic" purpura, including all those cases met with in the course of the infective fevers; (3) "cachectic"

purpura, as seen in Bright's disease, pernicious anæmia; (4) "toxic" purpura, due to snake-bite, poisons, etc.; and (5) that form of purpura seen in disseminated sarcomatosis. The first two groups, and possibly the third, would fall under the head of "infectious" purpura.

The Treatment of Typhoid Fever. By Dr. F. J. Smith.—In the treatment of typhoid fever two principles are of overwhelming importance: these are (1) the examination (daily) of the stools; and (2) the appetite of the patient. 1. In the stools may be found (*a*) undigested milk or other food, showing that too much food is being given; (*b*) blood, which, if present in any quantity, calls for the administration of opium; (*c*) sloughs, the total bulk of which indicates the amount of ulceration; and (*d*) fæculent *débris,* the desirable constituent of the stools. 2. The appetite of the patient should be, within very wide limits, the sole arbiter of his diet, provided vomiting, hæmorrhage, or distension are all absent. The temperature is entirely ignored. Where the appetite is good a wide range of dietary is allowed; where there is no appetite, the best food is plain cold water. The author has kept patients for days on nothing but water, with the best results. On the first indication of nausea after food, resort should be had to the plain water diet for twelve hours. Tympanites is an ominous complication and most difficult to treat. The author gives two drachms of sulphate of sodium every two hours until the bowels are acting freely. Constipation should never be allowed to persist. Excessive diarrhœa points either to too much food or to extensive ulceration of the colon. The occurrence of hæmorrhage calls for starvation and opium. Alcohol is unnecessary for the treatment of typhoid fever. The author believes that antiinoculation is destined to be the universal method of treatment and prophylaxis in typhoid fever.

Filatow's Spots in Morbilli. By Dr. L. Falkener.—The author's observations are based upon seventy-six cases of measles, in all of which he found Filatow's or Koplik's spots. Their commonest site is the buccal mucous membrane, opposite to, and on a level with, the cases of the lower milk molars. They were seen in patients of all ages. In no case were they seen before the third day preceding the eruption. On the day before the eruption, and on the day of the eruption, they were seen in every case. They disappear with great rapidity and are usually gone by the third day of the exanthem. Aphthous stomatitis furnished the only great difficulty in diagnosis. The author examined some 3,000 cases other than measles for the spots, but never found them. The spots are of the greatest utility as a definite means of diagnosis in rötheln, measles with laryngitis simulating laryngeal diphtheria, measles without eruption, and antitoxine rashes and erythema multiforme.

Laparotomy and Cleansing of the Peritonæum in a Case of Tuberculous Peritonitis. By Dr. G. W. Davis.—The author reports a case of tuberculous peritonitis with extensive fibrous areolæ occurring in a girl aged seven years, in which laparotomy and douching of the peritoneal cavity with normal saline solution brought about marked improvement in every way.

Selenium Compounds as Factors in the Recent Beer-poisoning Epidemic. By Dr. F. W. Tunnicliffe and J. Rosenheim, Ph. D.—In connection with the recent beer-poisoning epidemic in England, the authors have been struck with the apparent incongruity between the doses of arsenic taken and the effects produced. They suggest that some tangible poisonous substance has found its way into the beer along with the arsenic. Selenium at once suggested itself; it occurs in nearly all pyrites and the acids prepared from them, and its compounds are highly poisonous, producing symptoms practically identical with those produced by arsenic.

An Intraperitoneal Method for Radical Cure of Inguinal Hernia. By Dr. T. H. Wells.

A Case of Primary Carcinoma of the Vermiform Appendix. By T. R. C. Whipham, F. R. C. S.—The author reports a case of primary carcinoma of the vermiform appendix, occurring in a woman aged forty-five years. The affection is not quite so rare as has been supposed; the reasons why cancer of the appendix have been overlooked are: (1) that appendices after removal are not submitted to microscopical examination as a routine practice; and (2) that in dissemination of the disease the appendix may be involved in a large mass of growth implicating the cæcum or other parts which may be thought to have been the seat of origin of the affection.

British Medical Journal, February 2, 1901.

The Complications of Gastric Ulcer and their Treatment. By A. W. Mayo Robson, F. R. C. S.—In this article the author deals with some of the simple diseases of the stomach associated with ulceration, which are capable of relief or cure by surgical means. He classifies the various forms of gastric ulcer as follows: I. Erosions: (*a*) simple erosions; (*b*) exulceratio simplex, of Dieulafoy; this form of ulceration may give rise to severe hæmorrhage, which may rapidly prove fatal unless arrested by treatment. II. Simple ulcer: (*a*) acute round ulcer, most often found in chlorotic young women; (*b*) chronic ulcer, the form which most frequently gives rise to complications. After discussing the questions of symptoms, diagnosis and the advisability of exploratory operations, the author states that the treatment of gastric ulcer is at first essentially medical, and if properly carried out and for a sufficient length of time, is usually completely successful. Where surgical intervention becomes necessary, gastro-enterostomy, of all operations, is the one to rely on. The author prefers the posterior operation, the junction of the stomach and first part of the jejunum being effected by two continuous sutures around a decalcified bone bobbin. His last twenty cases have all recovered without pain or any drawback. Perforation is one of the most serious complications, and occurs in about fifteen per cent. of all cases of ulcer of the stomach. Doubtless many perforations are recovered from, if the accident happens when the stomach is empty. Statistics clearly prove that operation for perforation of gastric ulcer, if undertaken within a few hours of the accident, is very hopeful; but that death occurs in more than half the cases when operated on after twenty-four hours. Hæmorrhage occurs in eighty per cent. of all cases of gastric ulcer; surgical treatment should be adopted in recurring acute, as well as chronic, hæmorrhage. Cicatricial contraction of the pylorus is the complication of gastric ulcer which most frequently calls for surgical treatment; where active ulceration is going on, gastro-enterostomy is the best operation. In cases of hour-glass contraction of the stomach, the operation of gastroplasty has given excellent results. The adhesions formed in cases of perigastritis complicating gastric ulcer often call for surgical treatment; this operation the author terms "gastrolysis."

A Case Illustrating the Relief of Chronic Gastric Disease by Gastro-enterostomy. By A. E. Barker, F. R. C. S.—The author reports a case that illustrates in a striking way the benefits of surgical intervention in

chronic pyloric stenosis. The patient, a woman aged forty-two years, had led a miserable life of pain and distress for years, and had reached the last stage of weakness. A diagnosis of non-malignant pyloric stenosis due to contraction after ulcer was made, and a gastro-enterostomy performed. Her recovery was uneventful and rapid; she gained over thirty pounds in weight in a few months and has remained perfectly well in every way.

Remarks on a Case of Retroperitoneal Cyst. By Dr. S. W. Cousins.—The author reports a case of this affection occurring in a married woman; the cyst had caused no pain and but little inconvenience, the patient thinking herself pregnant for months. Laparotomy was performed and six pints of a clear and slightly yellowish fluid were removed by aspiration. The fluid was clear, alkaline, and very slightly colored; specific gravity, 1,020; a few blood and pus cells. The cyst was fixed to the lower angle of the abdominal wound and a drainage tube left in for two weeks, after which the wound rapidly healed. The report is accompanied by some general remarks on the causation, symptoms, and diagnosis of retroperitoneal cysts.

Strangulated Femoral Hernia; Successful Primary Resection of the Damaged Gut. By H. B. Robinson, F. R. C. S.—In reporting the case, the author draws attention to the following points: 1. The accurate apposition of the mesenteric border of the cut ends of the intestine was attained by the stitch similarly used by Maunsell in his method of resection. 2. The adoption of a continuous Lembert's suture, whereby the sutured edges are more evenly supported and much time is saved. 3. The resection *in situ*, instead of making an abdominal incision, withdrawing the damaged gut and running the risk of fouling the peritoneal cavity.

The formation of an artificial anus is thus avoided, together with the necessity for a secondary operation, and there is a great saving of time.

Some Remarks on the Radical Cure of Hernia; Based on 190 Cases of Operation for the Cure of Oblique Inguinal Hernia. By A. R. Anderson, F. R. C. S.—The operation now performed by the author is the Bassini-Halsted, with some slight modifications. Under this method he has not had a single relapse that he knows of. The operation is attended with a very low death rate. Of his 190 cases, four died, in two of which strangulation existed. The ages of the patients varied from one to over seventy years. Silk sutures were used in the last sixty operations, without the occurrence of suppuration in one of them. The author never orders a truss to be worn after the operation. Where cleanliness and good truss management cannot be obtained, he does not hesitate to advise operation in children under four years of age who are otherwise healthy.

Carcinoma of the Liver at the Age of Twenty-four Years. By Dr. D. McKenzie.—The remarkable feature of the case of carcinoma of the liver here reported is the youth of the patient—twenty-four years, when the illness commenced. The diagnosis of carcinoma, as opposed to sarcoma, was arrived at upon consideration of the chronic afebrile character of the illness and the bony, hard, and general enlargement of the liver. No autopsy was obtainable.

Remarks on Aneurysm of the Coronary Arteries of the Heart. By Dr. T. W. Griffith.—The author reports two cases of aneurysmal dilatation in the course of the coronary arteries, discovered at the *post-mortem* examinations. He has collected from the literature of the subject twenty-four such cases, the earliest of which was published in 1812. In seven instances the aneurysms were multiple. In only two instances was the aneurysm in the auricular wall; in all the others it appears to have been on the main stem of the artery or on the ventricular part of the heart. In fourteen instances the affection occurred in the male sex. It is a well-recognized fact that embolism plays a very important part in the causation of aneurysm, especially in the smaller blood-vessels. But the exact way in which embolism gives rise to aneurysm is not yet definitely settled. The author inclines to the view of Goodhart, who points out that most embolic aneurysms are associated, not with a simple endocarditis, but with an ulcerating form of the disease, a very severe form, generally producing fever and septic conditions. The clot from such a part will lead to acute softening of the arterial wall by inoculating it with its own inflammatory characters.

Revue de médecine, November 10, 1900.

Paludism and General Paralysis.—M. E. Marandon de Montijal concludes from his study of several cases that acute paludism may occasion progressive general paralysis or general pseudo-paralysis in those who are predisposed to it. Chronic paludism may not only evoke the second disease in those disposed to it, but may even furnish a basis for paresis in those who are not disposed to it. Paludism may cause an early appearance of paresis, and the course of the latter is usually rapid.

Heroine for Morphine in Morphinism. By M. A. Morel-Lavallée.

Wound of the Left Vertebral Artery; Hæmatorrhachis; Compression of the Cord. By M. Bouchaud.

Presse médicale, January 2, 1901.

Visceral Atrophy and Arterial Hypoplasia.—M. Emile Sergent reports a case of general atrophy of the viscera, especially of the heart and spleen and of the great blood-vessels. Fatty degeneration of the liver and ulcerations of the intestines were also found. The author attributes the visceral smallness to the diminished calibre of the aorta and its principal branches, although he believes the atrophy to have been congenital and not consecutive to the arterial hypoplasia. Yet the arrested development of the viscera is due to the vascular condition.

January 5, 1901.

Treatment of Eclampsia.—M. Gaulard reviews the well-known methods of intervention in threatened and existing eclampsia of the pregnant woman. He himself favors intervention in order to save the life of the mother, while waiting for a length of time sufficient, if possible, to save the infant's life also; but the life of the mother must first be considered. Embryotomy is indicated if it is necessary. The author thinks symphysiotomy offers too great a mortality at present to be a routine measure.

Distribution of Leprosy in Indo-China and Yunan. By M. E. Jeauseline.

Lyon médical, January 13, 1901.

True Bones of the Lung. By M. Devie and M. Paviot. (*Continued article.*)

Deaf-mutism.—M. A. Rivière says that not infrequently thyreoid absence and the presence of adenoid vegetations are found in the same individual; likewise that deaf-mutism and thyreoid absence appear together geographically. Acting on theoretical grounds, he is

cured two cases of deaf-mutism by removal of adenoid growths, Politzerizing the drums and giving thyreoid extract simultaneously, for a period of months. The patients were brothers, both young children, and were congenitally deaf-mutes.

Progrès médical, January 12, 1901.

Socalled "Pernicious Gastric Fever."—M. Jean Cardamatis and M. S. Kanellis say that this name should be abandoned, since the disease rarely ends in death, and because the treatment is by quinine in the same dosage as in simple intermittent fever, which is probably the most frequent, if not the only, source of the disease. Paludism can usually be demonstrated in cases of "gastralgic" fever. The gastralgia is only a symptom of a masked malarial infection, it is a simple complication of malaria and should not be dignified by a name of its own.

Indépendance médicale, January 16, 1901.

Black Appendicular Vomiting.—M. Dieulafoy describes a case of melæna in which œsophageal and gastric lesions were excluded. The man was fed by the rectum and finally recovered. He reports a number of similar cases in which hæmatemesis followed, and sometimes preceded, operation for appendicular inflammation. He desires to make a special group of these cases with the above title, since they are characteristic of a particular form of appendicular inflammation.

Gazette hebdomadaire de médicine et de chirurgie, January 13 and 17, 1901.

Grippal Polyneuritis. By M. Dienier.—An abstract.

Note upon the Hæmatocrite.—M. M. H. Mallet, writing of Deland's hæmatocrite, says that it can be employed to estimate the number of red cells in normal blood in counting cells where an error of more than 100,000 is possible. In pathological cases where a possible change in form or diameter of the red cells may exist, it is not so trustworthy; but when used comparatively with the hæmatometer, it can give useful clinical results as to the average diameter of the red cells.

Deutsche Aerzte-Zeitung, January 15, 1901.

When to Operate in Perityphlitis. By Professor Köste. (*Continued article.*)

Bacteriological Blood-examinations in Phthisis.—Dr. A. Lasker concludes that in cases of phthisis the presence of tubercle bacilli in the blood can only rarely be demonstrated. When they are found, the patients are, as a rule, in the last stages of the disease. The bacteria in the blood cannot, therefore, be taken to account for the fever of phthisis patients.

Internal Treatment of Gonorrhœa. By Dr. Martin Friedländer.

Treatment of Syphilis. By Dr. Max Joseph.—A review of the literature.

Centralblatt für Gynäkologie, January 5, 1901.

Umbilical Hernia with Resection of Prolapsed Lobe of the Liver.—Dr. Otto Küstner reports an operation of this kind upon a newly born child which died nineteen days later of melæna. The liver was then found to be inseparably connected with the abdominal wall.

Protargol instead of Silver Nitrate for Infants' Eyes.—Dr. Fritz Engelmann says that protargol has failed to take the place of nitrate of silver as a prophylactic measure against gonorrhœal ophthalmia, because its stability is not so great. Either no reaction appeared or it was much more severe than is usually seen from the use of nitrate of silver.

Hypertrophy of the Female Breast. By Dr. A. Grasmück.

Centralblatt für innere Medicin, January 5, 1901.

Histologic Changes in the Central Nervous System and the Stomach in Tetany of the Stomach. By Dr. L. Ferrannini.

Auscultation of Normal and Pathological Muscle.—Dr. Max Herz says that auscultation over contracting muscles elicits a sound very similar to that given by the first sound of the heart. It may be divided into three parts: the muscle-tone, preceded by a musical sound and followed by a sort of murmur. These conditions are changed by disease, as in a case of Thomsen's disease, in which the last sound only was heard after the muscle had completed its contraction. The author goes minutely into the characteristics of the three sounds and believes the phenomenon will attain clinical significance.

Berliner klinische Wochenschrift, December 26, 1900.

Flechsig's Opium-bromide Cure.—Dr. E. Meyer and Dr. C. Wickel make a report upon Ziehen's modification of Flechsig's cure of epilepsy, which consists in limiting the amount of opium to twelve grains of that drug daily, and insisting upon the use of large quantities of the bromides for at least one year. A rigid diet and hydrotherapy are combined with these measures. In contrast to the cases treated with bromides alone, they find the seizures diminished and the physical and psychic conditions of their patients decidedly improved.

Treatment of Nervous Cases at Home. By Dr. R. Gnauck.

Treatment of Septic Infections Arising from the Uterus.—Dr. Abel repeats Brunner's bacteriological classification. He thinks uterine irrigations with lysol or bichloride of mercury solutions useful, and does not speak disapprovingly of Carossa's plan of alcohol irrigation. He regards atmokausis as a practical disinfecting method. He does not favor general extirpation of the uterus, unless no pyæmic evidences are present. He thinks it justifiable to extirpate the uterus if no pathogenic germs are found in the blood, but some are present in the uterine cavity. The author mentions the other well-known measures of treatment, including the use of Marmorek's serum and Fochier's *abscès de fixation.* He cordially recommends saline infusions and oxygen inhalations as important adjuvants of treatment.

Sensitiveness of the Modified Phenylhydrazine Test for Urinary Sugar. By Dr. Albert Kowarski.

Consideration of Forensic Nervous Diseases (*conclusion*). By Dr. A. Cramer.

Wiener klinische Wochenschrift, January 3, 1901.

Curative Effects of Local Hyperæmia.—Dr. Karl Ullmann describes the results obtained from the local use of hot air in ulcers and infectious sores (chancres, chancroids, etc.). In a large number of cases a perfect cure was obtained, in others a decided amelioration of the condition. The good effects are due, undoubtedly, the author thinks, to the local hyperæmia induced by the heat. Venereal and varicose ulcers yielded especially well to the treatment.

Permeability of the Intestines to Bacteria. By Dr. Hugo Marcus.—A polemic article.

Case of Pemphigoid Measles Complicating Diphtheria.—Dr. J. Zuhr reports a fatal case of diphtheria complicated by measles, with an eruption which assumed the characters of pemphigus. The vesicles of the pemphigus eruption appeared only upon the measles spots.

Medicinish-chirurgisches Central-Blatt, January 11, 1901.

Artificial Feeding of Infants. By Dr. B. Bendir.—A theoretical paper.

Some Inflammatory Diseases of the Female Pelvic Organs.—Dr. G. Weidenbaum writes that his results at Kemmera (a bathing resort in Russia) in 200 gynæcological cases have been very satisfactory when combined with "moor" baths, tampons, and massage. Inflammatory tumors are rapidly absorbed, menstruation becomes regular, hæmatoceles and inflammatory conditions of the tube gradually disappear or become smaller, sleep is promoted, and pain is quickly relieved.

Klinisch-therapeutische Wochenschrift, January 13, 1901.

New Therapeutic Methods in Nervous and Mental Diseases. By Dr. Ladislas Hascovec.

The Active Agent in Radiotherapy. By Dr. E. Schiff and Dr. L. Freund. (*Continued article.*)

Treatment of Convulsions in Children.—Dr. Jacob Götz advises an enema of a quart to a quart and a half of physiological salt solution. At the same time from seven and a half to twenty-two grains of chloral hydrate are given by the rectum, and the child is then placed into a mustard bath until its skin becomes red. Care must be taken not to get any of the mustard water into the child's eye. The child is thoroughly dried, rubbed, and put to bed. It soon perspires freely and falls asleep. If the convulsions are due to teething, the author incises the distended mucous membrane of the gum.

Wiener medicinische Blätter, January 10, 1901.

The Treatment of Empyema.—Dr. Edward Martin says that the prophylactic treatment of empyema consists in emptying at once every considerable pleural effusion of inflammatory origin. In this little operation the skin should always be cut with a scalpel at the point where the exploratory needle is inserted. Serous effusions are best removed by means of aspiration; if they reaccumulate after three aspirations, they should be subjected to continuous siphon-drainage. Fresh empyemata are best treated by continuous siphon-drainage, a tube the thickness of the little finger being introduced through the cannula. If this is not sufficient, a resection of a rib must be undertaken. Delorme's operation, the removal of the pseudo-membranes from the pulmonary surface, may be necessary if the lung does not expand; and if this is impossible of performance, Estländer's operation, or Schede's operation (removal of the chest wall with the thickened pleura), must be done.

Zeitschrift für Geburtshilfe und Gynäkologie, December, 1900.

Pathology of Tumor Formation in the Female Genitals.—Dr. Hans Wülfing describes an interesting case in which the entire developmental sphere of the Wolffian body was included. The patient had a carcinoma of the cervix, several intramural fibroids, bilateral adenomyomata of the uterine horns, and enlarged iliac glands which the author attributes to division of parts of the Wolffian body. He offers no suggestion as to the ætiology of these multiple tumors, although he hints at their common embryological origin.

Tubal Pregnancy with Simultaneous Uterine Pregnancy.—Dr. Willi Straus reports such a case in which a positive diagnosis was made before operation on account of the disproportionately large size of the uterus which corresponded to a three months' pregnancy. The diagnosis was confirmed at the time of operation. A month later the patient aborted the uterine fœtus. The author reviews the literature of similar cases.

Glands, Cysts, and Adenomata of the Myometrium in Adults. By Dr. Robert Meyer. (*Continued article.*)

Tuberculosis of the Female Genitals. By Dr. Oscar Polano.

Thrombosis and Embolism after Operations for Myomata.—Dr. Georg Burckhard reports three such cases, and emphasizes two points. The first lies in the fact that the usual view of cardiac degeneration as secondary to the presence of myomata, is probably incorrect, and that the changes in the heart muscle are probably primary. The second point is the emphasis of Mahler's sign of embolism, an exceptionally rapid pulse without a corresponding rise of temperature. This sign was present in every one of the author's cases.

Significance of Vaginal Germs in Obstetrics.—Dr. Sticher says, in a preliminary communication, that the methods of the future in combating puerperal infection will lie in the directions of asepsis and antisepsis. Asepsis will be best achieved by the employment of sterilized rubber gloves, while antisepsis will be accomplished by suitable preliminary preparation of the external genitals and the genital canal of the patient. The latter element cannot be considered to have been satisfactorily accomplished as yet.

Operative Treatment of Prolapse of the Uterus. By Dr. Arnold Christiani.

Riforma medica, December 27, 1900.

Concerning Pleuritic Urticaria. By Dr. D. Gomo.—The author reports a case of staphylococcous pleurisy with subacute course and serofibrinous exudate in which there appeared an urticaria during the absorption of the exudate. This form of urticaria has been termed by Carageorgiades *urticaria pleuritica*. The trunk, the abdomen, and the anal folds are the most frequent sites of the eruption, which consists of wheals of various size. In some regions the eruption is so confluent that there is no healthy skin to be seen. The appearance of this urticaria is a favorable prognostic sign, especially if the eruption appears early and in abundance. As regards its origin, Carageorgiades attributes it to the pleuritic toxines, and looks upon it as a toxic urticaria. Rummo, in 1892, called attention to such cases, but they are quite rare. In the case reported here the patient was a girl aged sixteen years, who showed a marked urticaria during the stage of absorption of the effusion. There were no intestinal disturbances at the time. The eruption disappeared in a few days, and with it the pleuritic exudate.

December 28, 1900.

Cardioptosis; a Clinical Lecture. By Dr. G. Rummo.—This clinical entity, first described by the author,

lue to a weakening of the means of support and suspension of the heart. He presented three patients, the first of whom had simple cardioptosis, *i. e.*, without any complications or concomitant lesions; the second presented, in addition to the sagging of the heart, a mitral stenosis of congenital origin; and the third showed, in addition to cardioptosis, also a splanchnoptosis, *i. e.*, a prolapse of the abdominal viscera. The heart is suspended principally by the great vessels, as well as by the ramifications of the pulmonary artery and veins in the lungs. The principal support of the heart, however, is the diaphragm, the normal position of which depends upon the abdominal pressure as well as upon the negative pressure of the chest and the aspiration of the lungs. Other means of suspension are the pericardium, which forms a sort of cuirass, holding the heart muscle in place; the sternopericardial ligaments, the aortic arch, and, finally, the other structures surrounding the heart, such as the lungs, the mediastinum, and the aponeurotic fascia of the neck. Various causes may contribute to the displacement of the heart downward. Thus, an increase of the heart muscle in volume and weight; an increase in the thoracic pressure, or a diminution in the intra-abdominal pressure. Finally, the great vessels which suspend the heart may become weakened and less resistant as the result of acute and chronic inflammation. It is true that in some grave cases of atheroma there is no cardioptosis, but this is because, instead of becoming weaker and more easily stretched, the arteries become rigid with the sclerotic changes. There are cases in which the arteries are congenitally lacking in elasticity, and in these cardioptosis will always be found. The diagnosis of this condition can only be made by physical examination. The treatment consists in the observance of hygienic rules, and in the application of some support to the diaphragm, with the use of strychnine, nux vomica, ergotine, hydrastis canadensis, or other tonics.

Vratch, December 23, 1900 (January 4, 1901, N. S.).

On the Physiology of the Cœliac Plexus. By Dr. L. V. Popelsky (*continued*).—It may be assumed, perhaps, that the occurrence of diarrhœa and gastro-intestinal hæmorrhages in the dogs whose cœliac plexus had been removed was due to the section of the splanchnic nerves, which is followed by dilatation of the intestinal capillaries and by cessation of the muscular functions of the intestines. In order to test this, the author excised about two centimetres from each splanchnic nerve in two dogs. The results showed that the hæmorrhage and the diarrhœa were not due to section of the splanchnics, but to excision of the cœliac plexus, for in these two dogs there were no such manifestations. The author concludes as follows concerning the physiological functions of the cœliac plexus: The hæmorrhages in the digestive tract are extravasations of blood from the blood-vessels of the stomach and intestines, due to the absence of the vasomotor centres which are situated in the cœliac plexus. These centres are in communication with those of the medulla by means of the cœliac nerves, but are independent vasomotor centres whose activity is destroyed by the removal of the cœliac plexus. Further, the cœliac plexus possesses independent centres, which influence the peristaltic activity of the intestines. Section of the splanchnics alone does not influence peristalsis. Excision of the cœliac plexus, also, is followed by evacuations resembling those of acholia, and this is due to the rapidity of the passage of the fæces through the intestines, which is such that the contents have not time to become influenced by the bile. The origin of the ulcers found in the dogs in which the cœliac plexus had been removed may be explained thus: The great dilatation of the blood-vessels in the region after excision of the plexus is followed by a corresponding rise in the blood-pressure (?) in this part of the body. As a result, there are numerous effusions of blood, and the weaker vessels of the mucosa give way and rupture, and ulcers result. The author thinks that it would be well to study the condition of the cœliac plexus in round ulcers of the stomach. The clinical picture resulting from excision of the cœliac plexus in dogs reminds one of several pathologic conditions in man. Thus, for example, of cholera and typhoid fever; in fact, a number of investigators have found changes in this plexus in persons who had died of these diseases. We know also that burns of the skin may give rise to ulcers in the stomach or the upper part of the intestines. Experiments on animals have shown that even slight burns may cause extensive lesions in the plexus. The cœliac plexus is without doubt the central station for all the sensory impulses coming from the mucous and serous membranes in the abdomen. From the plexus, these impulses are conducted to the central nervous system by means of the sympathetic chains.

Journal Akouscherstva i Gienskich Boliesney, October, 1900.

The Surgical Treatment of Cancer of the Uterus. By Dr. D. Ott.—This is a report read before the recent International Medical Congress in Paris. The report is based upon one thousand cases collected from the data furnished by a number of Russian gynæcologists, and upon two hundred cases observed by the author himself. As regards the operation to be employed in cases of cancer of the uterus, he says that most gynæcologists agree that total hysterectomy is necessary, and that amputation of the cervix is not radical enough, even if the cancer is limited to the neck of the womb. Whether, in addition to hysterectomy, the operator should also remove the pelvic and retroperitoneal glands, subjecting the patient to cœliotomy for this purpose, is another question. The fact that patients have died of metastases after successful hysterectomy for cancer, seems to show that the removal of the lymph nodes is necessary. Yet we always run the risk of leaving some glands that have escaped observation, and the operation is infinitely more dangerous when the glands are removed than when simple hysterectomy is performed. The question will remain open for discussion until the advocates of the new method have shown that their mode of procedure gives better results than simple vaginal excision of the womb. The mortality immediately after the operation is given, by Russian observers whose opinions the author has collected, as ten and three tenths per cent. In the author's clinic this percentage was reduced to one and seven tenths per cent. The number of radical cures reported in the 1,000 cases analyzed was 30, the number of years during which there was no reappearance of cancer varying from five to ten years. As only about one quarter of the cases collected were operated upon more than five years ago, this figure (30) must be referred to 250 cases. In the author's clinic 62 cases out of a total of 181 were operated upon more than six years ago. Of these, 47, or 75.8 per cent., were cases of cancer of the cervix, and 15 of adenocarcinoma. Radical cures were reported in 18 out of 62 cases; in all the others there was either a

reappearance of cancer, or they disappeared from observation. Of the 47 cases of carcinoma, 11, or 23.4 per cent., were cured radically, while in the 15 cases of adenocarcinoma, 7, or 47 per cent., recovered completely.

Intra-uterine Injections in the Mud-bath Treatment of Diseases of Women. By Dr. D. A. Paraschefl.—The author points out the fact that no effect on the mucosa of the uterus can be produced by mineral mud-baths, whereas these baths have a beneficial effect on the course of diseases of the female generative organs which involve the substance of these organs and not their mucosa. He therefore suggests that the use of systematic uterine irrigation, according to the method first described by Grammatikati, be combined with the administration of mud-baths.

Post-partum Ulcers in the Vagina and in the Cervix. By Dr. G. L. Davidoff.—The author thinks that it is difficult to agree with Schroeder as to the rule that no examination with the speculum should be attempted after labor. It depends whether the physician himself has attended the labor from the first, or is only called upon to take care of the patient *post partum*. If the latter is the case, and if the presence of ulcers is suspected, nothing but an examination with the vaginal speculum will solve the question.

A Case of Multiple Pregnancy. By Dr. N. E. Akatzatoff.—The patient was a multipara aged thirty-six years, who was found in an attack of eclampsia and was delivered of triplets. The woman recovered, and the first child survived, but the other two lived but a few days.

Transplantation of the Ureters into the Rectum. By. Dr. A. P. Jachontoff.—The author experimented on a series of animals in which he performed transplantation of the ureters. Of the ten dogs in which the operation was performed, six died, one disappeared from observation, and three remained alive. The causes of death were, peritonitis in three dogs, apparently shock in one, and renal complications in three. Further experiments are necessary to show whether this operation can safely be performed in man.

Demonstration of a Specimen Showing the Nerves of the Uterus. By Dr. N. N. Djonk.

Habitual Abortion and Habitual Premature Labor. By Dr. S. S. Cholmogoroff.—The causes of the abortion or miscarriage habit are very numerous, and the author reviews the opinions of the various authorities on the subject. The author uses antisyphilitic treatment in the doubtful cases where no cause can be discovered and where there are no evidences of syphilis. It is possible that the patient or her husband conceals the existence of syphilitic infection, or the woman may have had syphilis in such a light form as to be unnoticed. It is also possible that mercury and the iodides have a beneficial effect on the predisposition to abort, for in the eighteen years during which the author has used antisyphilitic treatment in these cases, he has seen very good results. He reports forty-nine cases, in five of which there was a history of syphilis, the infection having taken place at the same time as fecundation. In five other cases the husbands of the patients had had syphilis when they were single, but no syphilitic manifestations after marriage. In one case there was hereditary syphilis, and in the remaining thirty-nine cases the patients and their husbands absolutely denied syphilis. In these cases the author used mercury and the iodides in various modes of administration whether there was syphilis in the history or not. *(To be continued.)*

Concerning the Technique of the Operative Treatment of Prolapse of the Uterus. By Dr. N. N. Michailoff.—The author's purpose was to simplify the existing methods of operation in prolapsus uteri. The method of Hegar and Martin are certainly effective, but they are very troublesome to execute. The author came upon the new method accidentally. In operating in a case of almost complete uterine prolapse he found that the narcosis was very unsatisfactory, and that he had to hurry the operation. He had already amputated the cervix and was about to perform anterior and posterior colporrhaphy; but the catgut which had been prepared proved useless, as it tore upon slight tension. He sewed the cervix with silk threads, leaving long ends, and abandoned the idea of performing colporrhaphy. Then it was that he remembered Stoltz's method, and decided to employ the latter's idea, but without excising a flap. Accordingly, he made an incision in the anterior vaginal wall, occupying its upper two thirds. Grasping the edges with bullet forceps, and separating them, he quickly introduced his finger and raised the upper layers of tissue. The base of the fold thus raised was sewn with silk, and the edges of the incision closed with a few stitches. As a result there were two thick projections of tissue hanging down in front of the uterus, and almost occluding the lumen of the vagina. The period of postoperative observation was brief, but the patient apparently did very well. A second case was also operated upon in the same manner with satisfactory results. The author presents his method for consideration and for further clinical testing. He adds that in women who have passed the menopause, the whole vagina may be occluded by suturing the summits of the vaginal projections formed by this operation. The fate of these projections is problematic, as the patients could not be observed for a sufficient length of time, but their mechanical efficiency as shelves upon which the uterus rests could not be doubted in the cases operated upon by the author.

Concerning the Duration of Pregnancy, Labor, and the Puerperium in Young Primiparæ. By Dr. N. P. Mariantchick. *(Continued).*

Miscellaneous.

A New Operation for the Treatment of Internal Hæmorrhoids in Ambulant Patients without Dilatation of the Sphincter or Anæsthesia.—Dr. Charles G. Levison (*Occidental Medical Times*, September, 1900) thus describes an operation, based upon purely surgical principles, which, he says, while causing some pain, is practically a radical cure and can be carried out in one or two sittings. In the average case, there is usually one varix, seldom two, which cause most of the disturbance; and these can usually be treated in one sitting. The only pain experienced by the patient is when the pile is ligated; this can be done very quickly, so that the pain is of the shortest duration. The only special apparatus required is the Kelly sphincteroscope. With this instrument every portion of the sphincteric region can be perfectly examined without reflected light and without material inconvenience to the patient. The patient is placed in the knee-elbow position and the sphincteroscope is introduced, permitting thorough inspection. After the localization of the pile or piles, a piece of cotton saturated with a ten-per-cent cocaine solution is applied for a few minutes; the cocaine does not produce absolute anæsthesia, but it diminishes pain to such a degree that patients do not object. The pile is then grasped with a Péan hæmostatic forceps and pulled down. Coincident with the drawing down of the pile

the speculum is removed from the anus; it is allowed to hang on the handle of the hæmostat, and, possessing considerable weight, aids in drawing the pile somewhat further out of the anus. The pile is now extruding, held by the forceps, which are weighed down by the speculum; it is then ligated with a silk ligature as near the base as possible, after which the forceps and speculum are removed and the ligated pile is returned to the rectum. The patient's bowels must move daily; he experiences no inconvenience going about as usual. The pile desiccates and a practical cure results. If multiple varices are present, the operation is repeated; but one sitting and the ligation of one group of varices in the majority of cases usually suffice.

Letters to the Editor.

SEXUAL INTEMPERANCE.

126 East Twenty-ninth Street,
New York, *February 1, 1901.*

To the Editor of the New York Medical Journal:

Sir: A great deal could be said *pro et contra* in regard to the article of Dr. Jennie G. Drennan in your issue for January 5, 1901, entitled Sexual Intemperance. Allow me only to call attention to certain positive facts which the author might have considered, or at least mentioned, in writing the article: Some of the author's arguments are the very same which the Turks apply to justify polygamy; others are in strict contradiction to teachings of St. Paul in his first epistle to the Corinthians, and also to the teachings of the fathers and other recognized theologians of the Christian church. In other points the author's views correspond exactly with views laid down in the writings of Catholic theologians, as, for instance, in a chapter on matrimony: *Illicitus est conjugii usus, si fiat ob solam voluptatem, i. e., alios fines expresse excludendo.* Patet ex propositione 9. ab Innocentio XI damnata, quæ sic sonat: *Opus conjugii ob solam voluptatem exercitum omni penitus caret culpa ac defectu veniali. Per se tamen esset tantum veniale peccatum, quemadmodum veniale est, cibum ob solam delectationem sumere.* These words correspond exactly with some in the article on Sexual Intemperance in your journal.

A. Rose, M. D.

232 East Seventy-eighth Street, New York.

To the Editor of the New York Medical Journal:

Sir: Such exaggerations and errors as those contained in the article of Dr. Jennie G. Drennan on Sexual Intemperance, which appeared in the *New York Medical Journal* for January 5, 1901, being likely to do more public harm than good, should not be allowed to remain without contradiction. The quintessence of this article seems to be that married men should abstain from sexual intercourse with their wives during the entire period of pregnancy and lactation, *i. e.,* for various periods of almost two years each. I am sure that it is not the intention of the authoress to have men satisfy their *libido sexualis* during these periods with individuals other than their own wives, she insisting, apparently, upon total abstinence. I think it would be mere hypocrisy to affirm that the majority of men in the prime of life could be induced to keep up total abstinence for such extended periods. Now, by teaching the women that intercourse during the entire period of pregnancy and lactation is liable to make them invalids, we should naturally promote prostitution. And just this latter is the original cause of the invalid condition of so many women, while cohabitation during the larger portion of the above-named periods is not harmful. A proof of this assertion is found in the thousands of women giving birth to a child every year for a number of years in succession and enjoying the best of health.

Dr. Drennan asserts further that animals lead a more natural life in sexual respects than men. No doubt they do. But they live also in polygamy, which is more natural than monogamy, but which modern civilization has stamped as a crime.

One assertion of the doctor's is not founded on facts and is an insult to the human "males." Comparing them with the "animal males," she says: "In lower animal life this function is carried out according to law. Man is the only male who abuses himself and his female." This statement has no foundation in fact. Male animals, as is well known, follow no known law in satisfying their sexual appetite, but exercise it on almost every occasion. Moreover, monkeys frequently masturbate *cum manu,* as may be seen at almost any menagerie, while other animals produce an ejaculation by various methods of friction and by licking the genitalia, as has been often witnessed.

The article, in addition to all this, contains other fallacies, and in calling the attention of the readers to a few, I hope that they will analyze the entire essay and accept it at its true worth.

Max Talmey, M. D.

THE EVIL OF THE DOCTOR'S DRUG-STORE.

Mankato, Minn., *December 13, 1900.*

To the Editor of the New York Medical Journal:

Sir: Oliver Wendell Holmes suggested that there might be an idiotic area in the human brain corresponding to the blind spot on the retina. Admitting such a condition, the medical profession must surely have been governed by impulses originating in this particular region when it created and fostered an institution so inimical to its own interests and the interests of humanity as the modern drug-store. The drug-store of today is, to a large extent, a combination of novelty or racket-store, an emporium for patent medicines, a shelter for counter-prescribing and substituting knaves, in all prohibition towns a saloon, and, last, a doctor's dispensary.

This dispensary in the ordinary country towns uses its prerogative to dispense with the labor of a pharmacist. Any smart, neat fellow will do just as well for less pay. The reason for this economy is that the doctor and the drug-store keeper are one, and he likes to cut down expenses. The doctor, or the man who works directly for him, gets in his quarterly supply of patent medicines and it goes before the public under the patronage or auspices of the doctor in charge.

"Smith's" or "Jones's" drug-store, which means to the people Dr. Smith or Dr. Jones, sings the praises of some nostrum in bad verse in the columns of the local newspaper or recounts the virtues of other nostrums. Patients come to the drug-store with a prescription from Dr. Somebody, and they see in the most conspicuous places, after they have picked their way through piles of holiday goods, rocking horses, and family Bibles,

those large rectangular packages warranted to cure all sorts of disease, with a promise to refund the money if it fails. The strong man is strangling serpents on somebody's nervine in a way that would make old Laocoon green with envy; the mild countenance of a prim elderly woman smiles on them reassuringly. A healthy-looking individual on Dr. Blank's new medical discovery beckons them. Another sure cough cure takes their eye, and so on.

By what occult science is an unfortunate patient to know that he has reached the land of liars? How is he to learn that what is here printed and bears all the evidence of earnestness and good faith, even the testimony of clergymen and statesmen, is simply catch-penny claptrap to wheedle a dollar out of his pocket? Even the doctor whose prescription he carries, keeps these things for sale, so his heart goes out to these mysterious packages invented by a great doctor in some far-away city and put up by hands he has never seen. The dingy, dirty dispensary has no charms for him, and he naturally loses faith in the insignificant little bottle of medicine compounded by a boy he has seen "licked" in the last foot-ball game, and prescribed by a doctor whom he knows, for a fact, to be an ordinary mortal, subject to town taxes and water rates, when he can get for the small sum of one dollar a full pint bottle of the remedy of a great, mysterious, unknown doctor who hasn't to descend to the vulgar methods of finding out what ails him.

The doctor cannot well advise against the goods he carries in his own store, and the question here arises, What harm does it do? Some people are always tinkering at themselves and taking something for imaginary ills, and patent medicine, except for the alcohol it contains, is, as a rule, a very simple compound. But the fact remains that patent medicine comes between the doctor and the patient at the very stage of some of the most deadly diseases when the doctor's advice and care are a matter of vital importance. Patients are using nostrums during the early stages of cancer uteri, and only see a physician when there is too much involvement for safe action. Incipient Bright's disease, when professional instructions as to diet, habits, etc., are so urgently called for, is treated with other nostrums. That most deadly of all diseases, tuberculosis, seldom reaches the doctor's office until, under the benign influence of proprietary expectorants, the patient has reached that stage where labor is vain. Persons with anæmia are drenched with the whole line the drug-store carries before a physician's advice is sought. And so on to the end of the chapter.

The question now at issue is, What can be done to prevent this state of things? and we are told in answer that the people must be educated; but the people are being educated, and educated along wrong lines, by the doctors themselves. We should never forget that the most common, yet the proudest, appellation of a member of the medical profession is "doctor," which means "teacher." And we have taught with a vengeance. The result of our doctrinal inculcations since the days of Hippocrates to the present is a swarm of quacks and a supreme ignorance on the part of the people as to what is to be expected from a doctor. We are still looked on by part of our clients as devils, and by the other part as miracle-workers. But, not to wander too far from the drug-store, what can be done with it as a propaganda for fake slops? The law will not stop these productions, but the doctor can withhold his patronage by standing aloof from the drug-store business and refusing to send his prescriptions to shops where they carry such a line of articles. Then patent medicine makers will be obliged to dispose of their wares at some other business stand. Let the people get their "safe cures" and their "sure cures" and their "discoveries" where they get their axle grease and kerosene oil, and the curative halo will soon depart from them. It may be argued that in a small town a dispensary cannot exist of itself but if the business is so small, the doctor can dispense directly—an old and very convenient custom, especially in these days when medicine is put up so neatly and in such small bulk. In conclusion, I would say that this is not written with any animus against the men who make their living by running a novelty-store with a dispensary in the far end of it, but with a strong desire to call the attention of medical men to the fact that honest medicine and patent medicine are incompatibles, and the sooner they are divorced the better for the good of humanity and the honor of the profession.

HELEN HUGHES, M. D.

Proceedings of Societies.

NEW YORK OBSTETRICAL SOCIETY.

Meeting of Tuesday, January 8, 1901.

The President, Dr. H. J. BOLDT, in the Chair.

Large Myomatous Growth of the Uterus.—Dr. JANVRIN presented a specimen. The history of the case was as follows: The patient was a single woman, forty years of age, whose menstruation was regular, without pain or bleeding. A month ago she had her normal period, which continued for several days, after which she began to flow freely. The hæmorrhage was controlled somewhat, but she continued to flow for several weeks. Upon examination at the end of three weeks, a large abdominal growth was found and the tumor removed. Several cysts of the ovaries were removed at the same time. The case was of interest because no hæmorrhage had occurred until the last month, although the mass was of large size. The reason for this was that the tumor was probably of the cystic variety.

Tubal Gestation.—The PRESIDENT presented a specimen in which the fœtus, of two months, was found still within the tube. The great interest in this case lay in the fact that operation had been performed as the process of tubal abortion was taking place. The abdominal extremity of the tube was dilated to a diameter of a centimetre. The uterine end was completely occluded. The tube was two centimetres and a half in diameter at the thickest point. The patient had been bleeding for three months at irregular intervals and having cramp-like pains. During the week before the operation the bleeding was very profuse, so that her physician (who thought that the patient had an intra-uterine pregnancy) said that she would abort. Large clots were expelled *per vaginam*. The patient was very anæmic and suffered great pain. In the abdomen there was a large quantity of blood which had escaped at different times, as was shown by its varying degrees of consistence; some clots were recent, and bleeding was continuing from the tube, while some were very firm and yellowish-red, the latter being on the floor of the pelvis. The bleeding for such length of time without completion of the abortion was the main interesting feature.

Dr. VINEBERG said that the case was of great inter- t showing as it did that there might be as profuse a emorrhage from the uterus in ectopic gestation as from intra-uterine abortion. He also emphasized the ad- sability of giving an anæsthetic in cases of supposed ortion, in order to make a careful diagnosis of the act conditions.

Dr. BROTHERS mentioned the fact that some men ought it unnecessary in cases of tubal abortion to per- rm laparotomy or to exsect the tube. But in cases like is one of Dr. Boldt's, in which the diagnosis of tubal ortion was made and the patient might lose her life om exsanguination, the loss of blood occurring ex- nally or into the peritonæum, one was justified in ing an abdominal section and removing the diseased be.

Dr. JANVRIN remarked that in many cases in which rgeons were called to operate there was really a tubal ortion present and no rupture of the tube itself. It s rare for hæmorrhages to continue from a tube for o or three weeks without abortion being complete. In ost cases tubal abortion took place within a week. In opinion there was no question of the necessity of an eration in any case in which hæmorrhage was going .

The PRESIDENT said he believed that a gravid tube ould be treated like one of malignant disease, and an eration was therefore indicated.

Septicæmia and Pyæmia, and the Indications for ysterectomy and for Abdominal Section and Drainage i Puerperal Infection.—The PRESIDENT read a paper these subjects (see page 142).

Dr. VINEBERG said that he agreed with Dr. Boldt as t the indications for hysterectomy, but he personally ferred the abdominal route to the vaginal. He could t agree with the reader of the paper with regard to e definitions of sepsis. He thought there were no ounds for the introduction of the term "bacteriæmia." his mind, there was but one kind of infection. Many nes, from neglect, putrid intoxication ran into acute ticæmia, and the profession should be taught that h case of sapræmia was one of septic infection from e onset, and that it might pass into acute septicæmia. fection with other bacteria, such as the *Bacillus coli mmunis,* the staphylococci, and the *Bacillus aerogenes sulatus,* had also been attended with fatal results.

Dr. STONE congratulated the reader of the paper on successful effort to define the different varieties of erperal infection. To his mind, the profession was apt to think that there was only one form of sepsis, d that the correct thing to do in each case was to rette. This he thought a great mistake, as many pa- nts got well without being curetted.

Dr. ABRAM BROTHERS thought that the question of atment depended upon the recognition of the pres- e or absence of local infection. This infection might due, not only to placental débris after delivery, but o to some condition of local infection occurring pre- us to delivery. He agreed with Dr. Boldt that, if the gnosis of acute bacteriæmia could be made, hysterect- y or any other form of local treatment was contra- icated. In his opinion, the terms "local sepsis," ute bacteriæmia," and "chronic bacteriæmia" were l chosen.

Dr. W. E. PORTER said he believed that many cases ld not come to hysterectomy if persistent intra-uter- irrigations were properly carried out. In his ex- perience, the placental forceps was better than the curette for the removal of retained secundines.

Dr. MALCOLM MCLEAN had seen several cases in which lactation had given symptoms severe enough to make one strongly suspect septic infection, and he ad- vised the greatest caution in making a diagnosis which would result in the performance of hysterectomy.

Dr. G. L. BRODHEAD referred to the cases of hys- terectomy for retained placenta which Dr. Boldt had re- ported, and said that, in his opinion, if retained pla- centa could not be reached by the usual methods, it would be better to incise the cervix in order to get more space in which to operate. Certainly the greater part of the retained placenta could be removed in this way, and therefore hysterectomy would never be indicated.

Dr. JANVRIN said he had never removed a uterus for acute septicæmia, but he would ask Dr. Boldt to tell how one could know whether to perform abdominal or vaginal hysterectomy.

The PRESIDENT said that he would again refer to the excellent definition given by Coplin under the term "mycosis of the blood." We must recognize the fact that puerperal fever was always in a degree a septic in- fection. If fœtid discharges came from the vagina, it did not necessarily mean that the case was a serious one. Patients with acute bacteriæmia might have no fœtid discharge, and yet there might be an intense septic endo- metritis. We must watch our cases for a number of days or several weeks, and, if we found that all treatment had failed, the patient was steadily getting worse, no other cause for the chills, etc., could be found, the para- metria were free, and there was no peritonitis, but per- haps streptococci were found in the uterine secretions, we were justified in considering vaginal hysterectomy. Abdominal hysterectomy should be considered only in cases in which we were called upon to perform a Cæsar- ean section on a septic uterus, or in which there was an intense septic intoxication associated with a septic endo- metritis, the patient's condition not improving under other treatment. The reason why the placenta could not be removed in the case reported by Schultze was that there was a uterus bicornis. In the other case, cited from Sippel, the general condition of the patient was such that it was not advisable to carry on intra-uterine manipulation further, so great was the danger of per- foration. It required great judgment to decide in these cases what was correct to do, but each practitioner must judge from his own experience, with the aid of all the symptoms present. We should all endeavor to make precise definitions of the diseases that we were dealing with.

Miscellany.

Dental Surgery with the British Army at the Front in South Africa.—To those who regard the idea of military dental surgeons with some sort of scorn, a perusal of a very interesting paper by F. New- land-Pedley, F. R. C. S. Eng., L. D. S. (*Lancet,* Janu- ary 5th), on Dental Surgery with the Field Force in South Africa, may be recommended. Mr. Pedley was dental surgeon to the Imperial Yeomanry Hospital at Deelfontein. For nearly six months he worked under varied conditions—on board ship, in a tent, afterward in a shanty, and subsequently in a hut. Occupation, he says, was never lacking from the first day of the out- ward voyage, for there was the usual epidemic of in- fluenza, followed by numerous cases of neuralgia and

toothache. He had to attend to patients nearly every day, though only a few instruments were available, yet he managed to do some temporary fillings and some extractions, including a badly impacted wisdom tooth. At Deelfontein, 500 miles up country from Cape Town, he obtained "a shanty ten feet square with a tarpaulin roof." This "dear little place" became a dental surgery and also the editorial office of the *Devil's Fountain,* a camp journal established by him to while away the monotony. Mr. Pedley continues: "On March 25th a complicated fractured jaw case arrived, and as it was necessary for me to unpack my workroom appliances in order to construct a special splint, I was moved into a hospital shed, which I converted into a workroom and bedroom combined, and I had the use of the second, or reserve, operating theatre of the hospital for my consultations and operative work. The workroom was 27 feet long and 16 feet wide, and it was constructed of sections fastened together with bolts and nuts, so that it could be readily taken down and put up elsewhere if desired. Each section was 8 feet long, 5 feet 6 inches wide, and 4 inches thick, and it consisted of an outer layer of galvanized iron nailed on to a rough wooden frame and lined with deal boards. It was lit by four windows, each 3 feet 6 inches by 2 feet 6 inches. These huts, or sheds, were much cooler than tents in summer and were a much better protection against rain. For winter they were rather too well ventilated, as there was an open space of four inches all around the eaves, and there were about fifty large, square holes in the woodwork where the sections were bolted together. A fine breeze blew upward between the floor boards, and there was a wide chink around the floor which admitted a further supply of fresh air. The cost of a similar shed, better made and finished, would be about £50 in England, but these sheds were made in Cape Town, and were inferior in every respect to the English huts excepting in the matter of mobility. The draught under the boards could be reduced by piling earth around three sides of the foundation, and the industrious person who had the foresight to bring his own carpenter's tools could quickly exclude the frosty night air. With these slight improvements the shed made a very suitable workroom, and here I set up a casting bench, a plaster bench, and a jeweler's bench, with vulcanizer, lathe, and all necessary appliances. A smaller room would be sufficient for a workroom if additional space were afforded for storage and for a bedroom, but in a country where commandeering is recognized as a fine art and tools are in great request, the dental surgeon who elects to combine his sitting-room, bedroom, and storeroom with his workroom is wise. I covered the ugly walls with numerous prints and engravings, many of which I framed. This kind of workroom may be considered perfectly satisfactory for two or three mechanical assistants, in addition to which there is space for one bed 2 feet 6 inches wide.

"My operating and consulting room adjoined the operating theatre and x-ray room, and could be used at any moment as a second surgical theatre if it were necessary to perform two operations at the same time. The room was 19 by 16 feet, and was lit by seven windows. An attempt at top-lighting had been made, but it could not be said that the light was really good for dental manipulations. In this room I placed an operating chair, a dental engine, and all the instruments, appliances, and materials that I required for practice. There were, in reserve, a second engine and two more operating chairs for the use of possible assistants. I worked strictly by appointment for all cases requiri fillings, and the ophthalmic surgeon was kind enough give gas every day at 11:30 A. M. punctually. So surprise may be felt that one should give gas to a soldi for the extraction of a tooth—and it would not be nece sary if the patients were not sick, but hundreds of the were recovering from typhoid fever and dysentery, whi left them in a very weak state. A man with nine bull wounds, who was known amongst his friends as t man who stopped a whole volley, was a very brave f low, but he was glad to take gas for a severe extractic

"The work required of me at Deelfontein was lit more than the work of a dental practitioner, and I or had a very few severe gunshot cases, which I treated conjunction with Mr. Alfred Fripp. Gold fillings a rarely necessary in a military camp, but the percenta of exposed pulps is very high, as nearly every patie would rank as a neglected case. Disease, neglect, tou beef, and hard biscuit play havoc with the teeth—o young man had only three useful teeth left. How su patients recover from typhoid fever and dysentery is mystery. They are of no further use as fighting m under the present *régime,* for they cannot eat servi food. Nothing is done to preserve the soldier's tee while he has any, and when they are gone he must home as a man unfit for service. It would be better a quicker to put a soldier's teeth in order than to train fresh man as a substitute for the invalid. The offic suffer with their teeth after a few months' campaignin and I hear on the best authority that there were at o time at Modder river eighty officers requiring den attention, and they sent to Cape Town for a dental su geon. Unfortunately, they were again on the ma when he arrived."

As regards the establishment of a dental service war time, Mr. Pedley says: "At first sight it might se desirable to attach a dental surgeon to each regime brigade, or division. Experience in South Africa, ho ever, has left no doubt in my own mind that it wou be better to make such appointments to the general h pitals, and perhaps to the stationary hospitals al where the transport rations and sleeping accommo tion for two or three such dental officers could easily added to that already required for the staff of twenty-o medical officers. Each of the numerous general or b hospitals in South Africa should have been provided fore it left England with a dental unit consisting of o dental surgeon and two senior dental students as assi ants. In Deelfontein it would have been impossible me adequately to tackle the dental work of our th sand-bedded hospital without at least two assista What must the condition have been in the general h pitals at Cape Town, Kimberley, Naauwport, a Bloemfontein? My chief experience was drawn fr our camp of 1,000 souls, but in the latter place al there were 5,000 sick in hospital, to say nothing of 30,000 troops left encamped there after Lord Robe moved north with the bulk of his army. At each g eral hospital there should be an operating room w three chairs and a workroom for the construction of s cial appliances and dentures. Each stationary hosp of 200 beds should similarly have a dental surgeon u its staff, but workroom appliances are cumbrous heavy as compared with surgical instruments, and patients requiring dentures should be sent to the gene hospitals. The dental units should be supervised by chief dental officer at the base in the same way that principal medical officer supervises all medical units."

"To meet emergencies and the requirements at the ctual front—as, for example, after a great battle or ıring a protracted halt of the army—the principal ental officer should have a small reserve of dental offi- rs who could be drafted to any point on the receipt of ıe necessary intelligence from headquarters. The uipment of the dental officers who were sent to the ont would, of course, be as light as possible. The den- l engine packs into a small space and all the neces- ry instruments and materials would go into a case one ıbic foot in measurement. Dental officers at the front uld obtain additional supplies, if necessary, from the earest general hospital. No special operating chair ould be taken to the front; all that is necessary is a rtable headrest that can be fixed on to any chair. In rge hospitals portable operating chairs weighing eighty unds each and costing seven guineas would be useful, ıd a strong operating chair for anæsthetic operations uld be desirable in addition."

Financial Responsibility for Care of a Wounded isoner.—A man named Butter was arrested in Cleve- nd on May 19th for assault and battery, and, attempt- g to escape, was shot by a policeman. He was taken the general hospital for treatment under guard, and o days later was arrested. He remained in the hospi- l under treatment until October 13th, when he was ansferred to prison and later tried and convicted. The spital authorities presented a bill for his treatment, ıounting to $148, to the police department, which de- ned to pay it. The county solicitor says that the unty should not pay the bill as the prisoner was not in e jurisdiction of the county court until he was ar- igned in the police court on October 31st. The case is e involving several interesting legal points.

New Medical Practice Act for California.—A bill to ıgulate the practice of medicine and the certification of ysicians in the State of California was introduced in e senate at Sacramento recently. The bill embodies e suggestions made by the committee on legislation of e State Medical Society. It provides for a board of edical examiners, five to be elected by the State Medi- Society, two to be elected by the California State omœopathic Medical Society, and two by the Eclectic edical Society. They are to be elected annually, to ve one year. Provision is made for accepting certifi- es from other States. The application fee is placed $20. Certificates may be revoked for unprofessional nduct, after proper hearing. Unprofessional conduct defined to include criminal practice, obtaining a fee the assurance that a manifestly incurable disease can permanently cured, wilfully betraying a professional ret, advertising one's business or medicines, convic- n of any offense involving moral turpitude, and bitual intemperance.

The South African Hospitals Commission, which has ently published in London a report of its work and clusions, is said to have recommended the appoint- nt of a committee of experts to define the steps neces- y to secure qualified officers of the medical corps to ndertake sanitary duties, to prevent orderlies pilfering nulants and the comforts of patients, and to relax ct military rules so as to give patients an additional ing of ease. According to a press dispatch, the com- ssion says: "The evils are serious and ought not to be minimized, but, reviewing the campaign as a whole, it cannot be said that the medical and hospital arrangements have broken down. There has been nothing in the nature of a scandal in the care of the sick or wounded, nor any widespread neglect of patients, nor an indifference to suffering. In no other campaign have the sick and wounded been so well taken care of."

Higher Standards for Medical Education.—The University of Pennsylvania, at the beginning of the present school year, adopted a curriculum embodying four years of exclusively medical study. This new curriculum has just been adopted by the State Medical Council, at its winter meeting, as the standard for Pennsylvania. Under this newly adopted standard the applicant for admission to a medical college must have attained a high degree of general education, and he will not be admitted to advanced standing in the medical school on the ground that he has, for instance, studied anatomy in an art school, or chemistry in an electrical school. The fact that ninety or more applicants out of about 250 were rejected last September in the university examinations is taken as an indication that the new curriculum is to be lived up to, in spite of its immediate financial drawbacks. About ninety per cent. of these unsuccessful applicants have been admitted to other schools, a fact which is regarded as a thing that cannot occur again under the State's new standard. The attorneys-general of all the States in the Union have been made interested in a movement to make the standard of medical training in Pennsylvania, or its equivalent, the standard of other States. After lengthy correspondence between the Pennsylvania Medical Council and the medical boards of other States, a bill in Congress is now proposed extending the elevation of the medical standard throughout the United States.

Disease in the Philippines.—In the report of the Taft commission to the President concerning the Philippines, the following remarks are made regarding the climate and diseases of the Philippines: "It is believed by this commission that no tropical islands in the world enjoy a better climate than do the Philippines. While this is true, two classes of diseases have to be reckoned with here. These are, first, diseases common to temperate and tropical countries, and, secondly, diseases especially characteristic of the latter regions. Under the former head would fall small-pox, cholera, bubonic plague, and leprosy. Small-pox is endemic in these islands. The natives have very little fear of it, and are apt to neglect the necessary precautions to prevent its spread, unless compelled to adopt them. Experience has shown, however, that it can be stamped out by thorough vaccination. A particularly effective virus is obtained from the water buffalo, in a laboratory established at Manila for this purpose by Dr. Frank S. Bourns. Similar laboratories will be established at convenient points throughout the archipelago, and a vigorous attempt made to vaccinate the whole population.

"There have been more or less destructive epidemics of Asiatic cholera in the Philippines in the past, but they have occurred at long intervals. The last was in 1888-89. Cholera has not appeared in the islands since that time, but we are near China, which is a breeding ground for disease, and danger from epidemics imported from that country can be avoided only by the maintenance of a strict quarantine service."

Bubonic plague appeared in Manila in December, 1899, but has never made any considerable headway. No systematic effort has ever been made to stamp out leprosy

in these islands. The report recommends the isolation of the lepers in a small island. It is confidently anticipated that the establishment of a department of well-organized public health will lead to a general improvement in sanitary conditions. Under this subject the report also treats of the climatic effect upon sick and wounded soldiers.

Havana's Death Rate.—A carefully compiled and elaborate report of the vital statistics of Havana for the year 1900 has been issued by Major W. C. Gorgas, chief sanitary officer of that city. From these official figures it appears that there were 310 deaths from yellow fever in Havana last year, as against 103 in 1899, and 136 in 1898, a substantial increase. This growth of the death list, which exceeds that reported in 1890 under Spanish rule by two, may partly be attributed to the large immigration, no less than 24,124 foreigners settling in or passing through Havana in 1900. The real triumph of American methods of governing Havana over the Spanish system is shown by a comparative table of deaths from all diseases from 1890 to 1900. In 1900 the death rate per thousand, despite the increase in yellow fever, had sunk to 24.40 from 33.67 in 1899, and 91.03 in 1898, the latter being the highest figures of the decade. Even in normal years of the Spanish rule, such as 1893, the death rate was as high as 32.01. It must not be overlooked that the population of the city has risen steadily during this period, numbering 250,000 in 1900, or 31,500 more than in 1893.

A Pen Portrait of a Great Surgeon.—As tending to show a rare combination of geniality, exuberant good humor, modesty, forcefulness, and energy, with the more strictly scientific attainments that go to make up the ideal disciple of Æsculapius, we abstract from the *Medical Dial* for January the following pen portrait from an article on The Surgeon in War, by Charles E. Hands. The author was in bed in Mafeking with a bullet in his thigh. He says:

"After Dr. Davies had gone away with his regiment on General Mahon's march, I was lying in bed one day minding my bullet, and thinking about the time when I should get up and go for a walk, pondering the terrible abyss of time that stretched between breakfast and lunch, and wondering about all the kinds of things that people wonder about when they are minding bullets, when I heard a strong, hearty man's voice in the house, and there came into my room the most cheerful-looking old gentleman I have ever seen in my life. A hearty, healthy, vigorous old gentleman, who came bustling in full of life and energy, with a whimsical smile on his shrewdly good-natured, kind, beaming, big, broad, clean-shaven face.

" 'Weel,' he said cheerily, with a Scotch accent, as he took my hand between his two big, firm palms and gently shook it, smiling meanwhile like a benevolent uncle, 'weel, I've just come to see how ye're getting on. Eh, but I know all about ye! Eh, my laddie, but they're all verra cansairrned about ye down country there. And I'm glad to see ye.'

"And he continued to shake my hand and smile, and I smiled back and shook his hand, and said that I was—as was perfectly true—downright glad to see him, although I hadn't the faintest idea who he was, except that I seemed to know at once that he was a great surgeon.

" 'Then,' said he, 'I'll just give ye my caird'; and if he had said he would just give me a thousand pounds he could not have said it in a kindlier tone of impulsiv benevolence. I remember saying, 'Thank you, sir,' as took the pasteboard he handed me. It said in plai formal type, 'Professor John Chiene, consulting su geon to the forces, South Africa.'

"Professor Chiene! I had never seen him befor but I had known of him all my life. One of the famo surgeons of the world. Dozens of times I had hea doctors who had been Edinburgh students exchangi pleasant reminiscences of John Chiene. This was a sli of luck indeed.

"I said what I had to say, and he went on to tell n that 'Airchie Hunter'—that was General Hunter—h given him leave to come up to Mafeking to see if could be of any service to the wounded lying there. I seemed to think that it was a personal kindness on t part of Airchie Hunter to let him come, and I am su that he felt positively grateful to the wounded for gi ing him the opportunity of coming.

"But at that time I knew that General Hunte division was a hundred odd miles away, somewhere the other side of Vryburg, that there was no railw through, that there were only rough, boulder-strew tracks for roads, and that the only people on the w were low-class Dutch, who were nearly all rebels and thieves. How, then, had he managed to get through Mafeking, I asked him. Did he have an escort? Oh, no escort—capital adventure to come without an esco

"He had made the journey in a sort of rough cart most enjoyable kind of traveling in a rough, jolti cart! One of the horses had broken down—splend fun! Had slept out on the veldt—glorious sleeping o on the veldt! Never was such a blanket! They got water one day—extraordinary fun being thirsty! H given a lift to a belated correspondent on the way—ca tal chap, that correspondent! Most entertaining co panion! Had just got to Mafeking and found a lo ing in the remains of what had been a hotel before t big shells knocked the end wall out and the roof off charming place, Mafeking! Beautiful sight, all t bare sand! Capital taste sand had, too, in your foo And how lucky to find a room in the hotel with the e wall out and the roof off. Most convenient for looki out of! And the ration bread made out of bra Really most wholesome food and wonderfully agreea eating!

"Buoyant!—why, Professor Chiene would h floated in hydrogen gas. He told me a story abou Scotchman enjoying himself at a funeral, and laugh as he told it, and made me laugh till I could feel bullet wobbling about in its hiding place. He made feel so much better that I wanted to get out of bed a practise walking, but he wouldn't let me.

"Then, when my doctor came in, he got to busin He ceased laughing and put on a grave, thoughtf shrewd look, though he still kept a keen, humor twinkle in his eye, and went into the consultation. listened alertly to the doctor's description of sympto and to my own, and then he put in some unexpected seemingly inconsequent questions, which reminded of something I had forgotten or failed previously to serve. Then he felt over the surface of my leg wh finger-tips so sensitive that they almost seemed to what was underneath, and in a few minutes he knew about my bullet and my thigh bone, and just what to be done and when and why. And everything he s turned out to be true, and everything he recommen to be right."

Original Communications.

STATE CARE OF THE INSANE.*

By HENRY WALDO COE, M. D.,

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If there is any man that needs a doctor, that man is an insane man. If there is any man who should be provided with a physician, that man is an insane one. He is the sickest of individuals and is unable himself to plan for his own wants. Others must not only care for him, but also plan for him. It is with a view of discussing methods for his care that the present paper is presented to the general profession, for from such discussion must come the influences needed to effect the reforms which are to correct the evils of the methods in vogue to-day. The men who must bring the truth home to the profession are those who have to do with the care of the insane.

While these methods will largely put out of existence the private retreats, dependent upon the insane for patronage and maintenance, yet I feel that those connected with such private institutions on account of the independence of their positions, must take a leading part in this modern crusade against methods which have largely outlived their days of usefulness. In this regard those who are administering private institutional care to the insane as a portion of their neurological work, are doing no more than every one of you does each day of his life, when you cut off your own incomes, by the advocacy of purer and better drainage against typhoid and diphtheria, and of quarantine to suppress scarlatina and small-pox; moves which the public little understand or appreciate, although the medical profession is full of this work in which a consciousness of duty performed is the only reward received.

It is almost a matter of supererogation, in passing, to compliment the medical men who have to do with the insane in public asylums. Although these men are largely chosen on account of political influence, the *personnel* has generally been excellent. Alienists have not always been selected, but the governing boards have sufficiently felt their responsibility to exercise much care in this matter, so that the medical officers have usually come from the better class of our doctors. In your own State you have been specially fortunate in this regard, and your asylum at Blackfoot is a model of the best American methods existing to-day.

The medical men in State institutions, if they have not become callous to their surroundings, feel the needs of their unfortunate charges, but they are largely helpless to effect the greater changes that they desire. They are, however, working toward the goal to attain which alienists everywhere are striving, and it is our duty to lend a willing hand to all such efforts.

The care of the insane is one of the greatest financial burdens of the State. To produce an appearance of economy in this matter is the first demand of the governing board of every public insane asylum in America. The cost *per capita* for maintenance, in the eyes of the powers that be, is the important portion of the medical superintendent's report. It is not the question of reduction in the number of patients that is most interesting, but the financial one of the individual cost for each. The superintendent who discharged fifty per cent. of his inmates as cured during a given year and reported also that the *per capita* expense had increased twenty-five per cent., as it would necessarily have to do, would, under the usual system, be looked upon with suspicion. The medical side of the patient's condition is markedly secondary to the financial. Thus it is that a goodly number of our public institutions retain many inmates, harmless bodies, who are reasonably contented with the institution, and are able to do much work and give little trouble, because this class helps to make up the averages that are to satisfy those in authority in such institutions.

You can scarcely to-day take up a single report of a public insane asylum in the land, which is not crying out for more room. Crowded wards with patients in the corridors is a common statement in such reports, and the system of herding the insane in certain quarters grows day by day more pronounced.

At the Utah State Medical Society at Salt Lake, this week, several medical men were pronounced in their advice that children afflicted with chorea should be isolated in order that suggestive influences should not affect other pupils in the same school. If this is a desirable end in such regard—and who can doubt it?—what of the effect of crowding patients together in an asylum—susceptible persons in the condition found in the insane?

Especially harmful is the usual asylum influence upon cases when in a state of convalescence. Patients who are fully recovered are supposed to be returned to their homes, and only those retained who are still ill, so that, no matter how careful the management may be, even the convalescent wards are largely filled with those who are still mental invalids, subject to the various vagaries of their several forms of insanity, the study of which has now the closest attention from their fellow inmates whose reason is reasserting itself. Besides this, most insane patients possess, after recovery, a hazy memory of all that has transpired about them, and in some instances such memory is extremely acute.

Much of the public feeling regarding the insane is dependent upon the view that the law takes of these individuals, and especially as to their examinations for lunacy and commitment to the asylum.

Let us take an everyday experience. A man of good

*Read before the Idaho State Medical Society, Boise, October 5, 1900.

family connections and possessing ordinary breeding and refinement suddenly becomes insane. He is, perhaps, somewhat demonstrative; possibly he is a melancholic and he may have attempted suicide. His family physician, his friends, and the sheriff are called in for advice. For purposes deemed best for the safety of himself and his family, he is taken to jail. He is thus treated as a pickpocket, a horse thief, or a murderer would be, and is brought into association with such other criminals as may at this time be under confinement. The next day a court convenes, and among the prisoners at the bar appears our mental sufferer. An examination is held, which, although the patient's best interests are honestly sought, smacks throughout more of star chamber proceedings than of those having reference to a righteous regard for the personal liberties of a fellow citizen. Very often the grossest deception is practised upon this man, who is under trial involving both his liberty and his peace of mind for all his future days, and often, although he may be able to comprehend everything reasonable presented to him, he may find himself in the insane asylum, placed there under one subterfuge or another, before he can realize what is being done with him. Possibly his delusions are fattened by the measures taken to get him peaceably to the asylum, and sometimes such delusions are thus so thoroughly crystallized that weeks of treatment are required to overcome the evil effects of a few hours' detention in the hands of the officers of the law. Reference has been made to a man, but the same deplorable state of affairs often occurs in the case of a sensitive woman.

This picture is a true one in nearly every week in the year in most of the States in the Union. The State is responsible for the initiation of the method, but we are to blame for its continuance. The individual before us, to whose care we may have been professionally called, is not a criminal, but an invalid, and this method of treatment to which we have been a party is not right from any standpoint. It may be argued that there is no other place than the jail to take the patient to, and that the care required is not otherwise attainable, but this is not usually the truth. In almost every case better things could be brought forth for our patient than he has received.

I remember, many years ago, while in general practice, the case of a young man who was injured in a railroad wreck. He had received a compound fracture of the leg and other traumatisms, including a blow across the head. He was actively delirious for two weeks, and I am sure that I have never seen an insane case more difficult to manage than he was. Because his was a surgical case and he was not technically insane he received the benefit of private care in a general practice. If as good judgment were employed in mental cases as in the lines of other practice, insane patients would be started off upon their mental journey in a much less striking and depressing manner than *via* the jail route.

It is much more economical to care for a certain number of patients in large bodies than individually, and on this account present asylum methods came into vogue. The medical officers are making every effort possible for improvements which *must* be made, so that they are often unable to demand things which *should* be made. It costs less to feed and warm a certain number of patients, and especially to furnish attendants for them, when the insane are maintained in wards of considerable size, than when living in cottages containing from two to half a dozen patients each. The benefits to the patients in the latter method are, however, quite manifest. I have seen a number of asylums where in a single ward from forty to sixty patients were confined, over whom were placed two or three attendants in the daytime and a less number at night. How much time has an attendant to put in upon a single patient under this state of affairs? Very often under private care, or in private institutions with ample accommodations, three hours a day is required in feeding a single patient. In the absence of ample help the stomach tube must be brought into service and, when necessary, passed from patient to patient. The tube is necessary in some cases, but with a patient under a tactful nurse this may generally be dispensed with. This method of feeding is one of the things which a patient remembers long after recovery, and it is very desirable that no such event shall have been a portion of his mental illness.

The fault with asylum nurses is not one relative to the individual, but that of a system necessitating work from one person, and that hurriedly done, which should be accomplished by a half dozen or more. It begets a routine method of daily care which in a few years unfits the asylum nurse for the care of outside cases, and it is against my rule to employ these individuals for my own cases. Worn out by the grosser cares of numbers, they have acquired a type of character that does not easily permit their transformation into that type of an individual who must be burdened with the intricacies of the individual.

In the curative forms of insanity, and this paper necessarily refers to them, the rays of mental light must be closely watched for and their sources cultivated, for it is by the growth of such normal awakenings that full mental health is to return. The invalid needs close observation and individual care to this end, that every tendency toward health may be encouraged and convalescence be accelerated.

I was struck by the number of attendants in the Morningside Asylum at Edinburgh, not less than a nurse or companion for every two patients. I inquired of Dr. Clouston how he was able to procure the necessary funds for such work, telling him that in America the canny Scot was looked upon by others as extremely calculating in regard to his financial expenditures, yet the appointments at Morningside seemed to have been effected regardless of expense. "Yes," said Dr. Clouston, "and

that is the very reason why I am able to secure more attendants in Scotland than I should be able to do anywhere else in the world. The Scot is a good business man, and he is willing to spend a few thousand pounds to-day if he can save more money thereby to-morrow and the next day. As an example, look at this patient before us. The average life of the individual of his type in an insane asylum, under ordinary methods of care employed elsewhere, is twenty years. In other words, these cases usually die in such institutions. You will note that I have with him a very intelligent gentleman, a retired tradesman whom business reverses brought into my employ. This nurse is very much above the ordinary in intelligence and tactfulness. He has no other patient to care for. It is his entire duty to attempt to bring this man up from his mental depression and out of himself into a normal atmosphere. Six months of this care will doubtless permit me to dismiss this patient. This is an example of the benefits of our methods, and shows how we are able to save money while we are freely expending it."

The medical officer of every insane asylum in the island feels the need of more nurses and attendants, but, in the race for a *per capita* exhibit, his board will not permit him due latitude. Again, the political aspect of public asylum records, in which one political party seeks to make a showing, from a financial standing, more favorable than its political foes have done, even where the medical officers are not subject to change for political reasons, is one of the most pernicious features of the expense side of this important subject. There is that ever-present demand for more room, which must somehow be met in our rapidly growing country; and bolts and bars, relics of a passing era, must be made to take the place of needed attendants. Bolts and bars have only an initial expense; attendants, nurses, and companions entail financial burdens which never cease, and so the massing of patients goes on, to the detriment of all concerned.

Then there is the medical side to the case. In your own State asylum you have Dr. Given, the noblest Roman of them all. He has general supervision of his institution, and that should largely be the sum of all his work. He should select the physicians who are to act under him and for whom he should be responsible, but the State ought not to expect him to be liable for the individual medical care of his charges. His time and responsibility should extend to the selection of proper medical and other assistants. He should see that his patients are properly fed, clothed, warmed, and employed, and he should have time to work out the newer problems for the enlargement of his institution and the individual benefit of its inmates. He should travel much in this country and abroad, at the expense of the institution, for the benefit of these charges of the State. A single individual has but a limited amount of energy and strength, and it is unreasonable and unjust to expect from any single man the work expected of him. He is not able to do the work of half a dozen persons, and there is no need of attempting to lull your consciences into the belief that the State is doing its whole duty because it even has at the head of the asylum a man of the experience, ability, breadth of character, and tenderness of heart possessed by Dr. Given. For every fifty patients in the institution a skilled alienist should be employed, and he should assign such physicians to the various groups of patients as from special fitness for the position, and other reasons, seems best to him. These physicians should be held strictly accountable for their patients, and as thorough individual care should be exercised in each of them as though the patients were suffering from any other serious illness. The medical care of several hundred patients, when it devolves upon any one man, as it does in many insane asylums in this country, is, from a rational and scientific standpoint, something of which we have no reason to feel proud.

Your own State could furnish these medical assistants. They ought to be physicians possessing some natural adaptability and an interest in the subject of the care of the insane, who could, when assured of a position during competency and good behavior, take the time for the necessary preparation for such work.

The cottage plan of treatment would naturally follow such a division of medical work. While one or two individuals could scarcely walk the multitudes of miles necessary to see the number of patients in an ordinary asylum where the cottage plan was in operation, with the work thus divided sufficient time could be devoted by the physician to every patient in the institution. The number of attendants would necessarily have to be increased. Those strictly employed in the nursing care of the cases should not be less in number than an attendant for one or two patients, and this care should be divided between nurses, attendants, and companions.

These desultory thoughts in criticism of present public sentiment regarding the care of the insane are presented largely in the interest of the poorer classes. There are numbers of private institutions over the country where the sick may be able to recover, away from ordinary asylum life, if the patient or friends possess the financial ability to maintain such treatment; but these facilities are denied those financially less fortunate. These poorer classes, too, furnish the larger proportion of those born with a mental defect and subjected to the more trying ordeals of life, and they should therefore be the most tenderly cared for, that there might neither be unpleasant recollection, nor imperfect recovery, to invite a recurrence when the harassing cares of life have again been taken up.

Physicians in general practice do not always understand and fully realize the import to the patient of detention in an insane asylum, or I am sure that many cases that are sent there at the present day would be cared for by the family physician or otherwise treated

away from public institutions. The public asylum is an extremely useful institution, even in its present form, and we could not get along well without it, but it should not be invoked except in cases of actual necessity, and the responsibility of the family physician in this regard is one of the greatest that falls to his lot in the practice of medicine.

It is not easy to drive from my memory the bitterness of mind displayed by a certain convalescent patient who has been returned recently to her home. She was a woman of a family in good circumstances, who was taken with a mental illness many months previously and, during the consequent distress of her family, hurriedly sent to a State insane asylum. She was supposed to be a hopeless case. After some months' detention, her family in the meantime having canvassed the subject of the treatment of the insane, she was transferred to a private institution, where, in due time, the recovery referred to occurred. Her bitterness over the public commitment was intense. Time and again she referred to the fact that for weeks she had cared for her husband, who was very ill and delirious with a sickness from which he had recovered; at the close of which, on account of the sleepless nights, care, and anxiety connected therewith, she herself had broken down, and had then been made subject to the odium of asylum life, the recollections of which were to her extremely unpleasant, when private care was quite within the reach of her family. She could not see why she should be made a State charge, believing, as she had a right to do, that she was no more sick than her husband had been, to whom every detail of care was furnished which money could afford.

Another case was that of a prominent gentleman, whose brother had years before died in a public asylum after ten days' sickness, and who was himself taken with a similar form of mental illness. On their way to the asylum his friends stopped with him in Portland and there first learned that there was a retreat in which he might be cared for. He soon began to improve, and within two weeks was in a normal mental state and was transferred for convalescence to one of the cottages of the sanitarium proper. He had a large family of grown-up sons and daughters at home, several of whom I have met, and I have scarcely before witnessed such bitterness against the family physician as in this instance. The doctor was a warm personal friend of mine, and had himself formerly recovered from serious neuralgia after a few weeks' treatment in the sanitarium, and I am sure of his friendliness toward our institution. He had, however, made a positive diagnosis and a positive prognosis regarding this case. He said that the patient would surely die, and that quickly, too, and that he should at once be taken to an asylum. My medical friend made, as we all occasionally do, a grave mistake, and he deserves censure in the present instance, although not to the extent to which the family threatened him, and which, I believe, I was the principal agent in overcoming. The burden of the criticism was largely based upon the fact that the doctor was not a specialist upon insanity, and that he should have declined to entertain so positive an opinion upon so important a subject; that, on the other hand, he should have referred the case to a specialist for such opinion; and further, they argued, in any event, since he knew of a private institution, if the patient was to die in the short time indicated, the family had the right to have such death occur outside an insane asylum.

It will take more than the change of the name "asylum" to that of "hospital" to remove from the memory of the inmates of such an institution the gruesome recollection of the restraint and association therein necessarily a part of present methods, although to the friends outside the change may appear as a euphonious improvement. The word "asylum" is a good one; it means a resting place, a house of peace. We need not seek to change this name, but rather seek to make this institution what its name truly indicates, and in this matter we all have, as a duty, the obligation of assisting those in such institutions who are seeking to effect the reform here indicated.

When the day of such consummation arrives, as it surely will, when the word "asylum" shall have a pleasant sound, private retreats will have largely passed away, and we may feel that we have done our part in giving to an honorable name a meaning which will bring back happy memories to all those who have received mental strength under the pleasant environment of the institution which the term will describe.

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THE NORMAL DECLINATIONS OF THE RETINAL MERIDIANS.

By GEORGE T. STEVENS, M. D., Ph. D.,

NEW YORK.

(Concluded from page 278.)

Declinations and the Contour of the Brows.—This leads to a part of the subject which, while in the line of the discussion, passes from the domain of painful affections to that of facial expressions. The scope of this article does not permit of more than a mention of a few of the peculiarities in the contour and the symmetry or asymmetry of the two brows. The subject when considered in all its bearings is most interesting, but it will serve the present purpose to mention three of the most conspicuous forms of expression about the brows which are in direct relation to the declinations of the meridians. So characteristic are these that when either is conspicuously present it is easy, not only to recognize the class of declinations, but to tell the direction of the leaning of each eye.

In the form in which both brows slant or arch upward from the temples toward the median line, the internal extremity ending almost in the general direction of the line of slant or suddenly curving down at the inner end as it is seen in the diagram (Fig. 5), we may look for

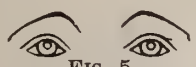

Fig. 5.

Fig. 6.

positive declinations for both eyes and of nearly the same extent. It is an expression which, some years ago, I associated with exophoria, but the more recent observations show that not only the expression but the exophoria itself has its cause in the direction of the meridians.

A second form of direction of the brows which is also most frequently associated with exophoria, but which is sometimes found with esophoria, is that in which each of the brows ascends from the inner extremity outward, forming what I have called "the bird's wings" eyebrows (Fig. 6). Here the declination is positive for each eye, but the extent of the declination differs materially in the two eyes. Such a declination may, when the positive declination is quite moderate in one eye and is more de-

Fig. 7.

cided in the other, give rise to esophoria, but the nearer the approach to equality of declination in the two eyes the greater the probability of exophoria resulting.

Again, the position of the brows assumes the directions shown in the diagram (Fig. 7). The diagram here appears somewhat extravagant, but it is a common form of expression, and a close observer will soon find that it is by no means exaggerated. It is a form of expression which indicates homonymous declination with the positive leaning at the side with the compressed brow and the negative leaning at the side on which the brow rises toward the temple. One of the common modifications of this form is that in which both brows curve strongly, but one is drawn much farther upward than the other.

It is easy to see that a great variety of modifications of these three forms of expression about this part of the face may arise from variations in the kinds and proportions of declinations in the two eyes.

Amblyopia and Declinations.—The plan of this article will not admit of entering upon details of the irritations and disturbances of vision resulting from phenomena within the eyeball which still have their origin in unfavorable inclinations of the meridians, but it will be seen that such a cause might well give rise to many disturbances, not only of function, but of nutrition. There is one form of visual affection, however, so distinctly connected with and dependent on declination that it must not be passed by without some special notice. It is the amblyopia which is not infrequently found in apparently well eyes and in which there is no squint. It is not difficult to understand that the ever-recurring confusion arising from the partial diplopia from failure to maintain a correspondence in the position of the meridians of the two eyes would induce such amblyopia. This emphasis upon the simple uncomplicated amblyopia does not imply that declination has no part in the amblyopia of strabismus or of astigmatism. Without doubt it is an essential element of both.

Asthenopia, very naturally, is one of the common and characteristic symptoms of declination.

More General Symptoms.—Without pointing out other local symptoms, a cursory glance at more general disturbances having their origin in declinations will be necessary. These general symptoms may, like the local ones, be the direct or the indirect result of the ocular anomaly. For example, certain symptoms which are characteristic of the general nervous state known as neurasthenia are among the direct effects of declination.

The habitual pose of the head and, indeed, that of the body are in a large measure influenced, it might be said controlled, by peculiarities in the normal adjustments of the eyes. Independent of the position of the normal plane of vision, which has an important controlling influence upon the pose of the head and body, when there exists a positive (+) declination for each eye the head is, in many cases, thrown backward as it is when the plane of vision is low. This high carriage of the head is commonly associated with chronic pains at the base of the skull, at a point over the spine of the seventh cervical vertebra and at points between the shoulder-blades or just below each scapular angle, with habitual aching in the lumbar region. If, in these cases, the plane of vision is raised where it was originally low, or if the positive declination, when it exists, is corrected, the head is no

longer habitually thrown backward, the back no longer bends in, the tension is removed from the muscles, and relief from the pain is experienced.

Vertigo is one of the symptoms so closely related to declinations that it may be said that, in general, vertigo is the direct, not the reflex, effect of the declinations. Carried to its extreme manifestation, the vertiginous attack becomes epileptoid, and without doubt the underlying principle in both vertigo and true epilepsy is the same.

The more recent experiences with ocular causes of epilepsy, and beyond a doubt a great proportion of iodiopathic cases of epilepsy have for their cause ocular conditions, show that when we arrive at the root of the matter the declinations are the most important if not the essential of these ocular elements. The relief which often follows correction of the refractive errors or the anomalies of heterophoria may probably be due largely to the fact that with the greater freedom of action of the adjustments of the eyes and the consequent relief from fatigue the management of the declinations becomes less difficult and disturbing. If we proceed directly to correct the anomalous declinations, the results upon the epileptic state are much more certain and more quickly and permanently marked than when the heterophoric conditions are alone treated. Whatever the theory may be, the fact is that in many cases in which the correction of refractive and heterophoric anomalies only modifies the epileptic state a correction of declinations serves to arrest the epileptic seizures.

Space does not allow of any extended mention of insomnia, dyspepsia, mental disturbances, and many other forms of nervous reactions which in very frequent instances have their origin in the class of defects under consideration. Enough has been said to indicate that declinations are important elements of nervous irregularities, and if that is established it follows that the forms of manifestation may be numerous and varied.

TREATMENT OF DECLINATIONS.—While, under certain circumstances, glasses, spherical, cylindrical, or prismatic, may and doubtless do have an influence in inducing or in correcting declinations of the images of objects, no practical and systematic use of lenses can be made in the treatment of this class of anomalies. It is only important in this connection to remark that declination of the images (not of the eyes) is easily induced by a bad adjustment of strong lenses, and that the greater care which is observed in the adjustment of glasses in recent over not very remote times is even more important than it is generally supposed.

Practically, correction of the declinations can only be done by surgical interference. Without discussing the advantages or the disadvantages of such interference, I shall proceed at once to suggest some of the surgical measures which have thus far proved more or less effective in my hands. Of course there can be no direct method of reaching the declinations, a modification of the tension of the obliques being the nearest approach to this, and it would be a bold and probably a most imprudent surgeon who should undertake to change the action of these muscles. There is left, then, only such indirect influence upon the position of the eyeball as can be brought about by changing the direction of the action of the recti muscles.

If with declinations there coexists the condition of anophoria, that is, if the eyes point too high, quite important modifications of the declination can be accomplished while depressing the plane of vision. Let a case be supposed in which there is upward rotation by the tropometer of 40° for each eye and a downward rotation also of 40°. The declination is: right (—) 3°, left (+) 5°. The problem is to reduce the declination. It will not only be safe but much to the advantage of the patient to reduce the upward rotation to about 36° or 37° and increase the downward rotation in proportion. This will mean a graduated tenotomy of the superior rectus of about 6° or 8° of prism. Experience has shown that it is prudent not to attempt to bring about such a relaxation of the superior rectus tendon as to induce, after the tenotomy on the first eye, as much as 10° (prism) hypertropia. A relaxation of 6° (prism) or possibly a little more is within the limit of safety.

In the case supposed, then, we may relax the superior rectus of the left eye, *releasing the attachments of the tendon at its inner border only,* leaving the external border to a considerable extent intact. This depresses the eye somewhat and tilts it toward the centre. If we do not induce a right hypertropia of more than 6° by this, we are likely to find, later, that we have effected a correction of at least 2° or 3° of declination. This, though less than a complete correction, is an extremely important one. We may now, using a prism to neutralize the hypertropia, ascertain by the aid of the clinoscope whether the (—) 3° declination for the right eye remains. When the negative declination is but slight in such cases, it sometimes disappears after the partial or complete correction of the larger positive declination, a fact which suggests that the lesser negative anomaly may in some cases arise from a synergetic tension of the muscles in association with those of the other eye, and it also indicates the propriety of attending first to the side which has the greater degree of the defect, which is almost invariably the positive.

Should the declination be found still to exist in the right eye, as at first, a relaxation for the correction of the induced hypertropia is to be done, this time, however, carrying the relaxation toward the outer border of the insertion, leaving the inner border intact. It is advisable sometimes to defer the second operation till the following day, in order to make sure of the position of the meridians. The procedure described has served to bring relief in very many cases, and it is the most simple, easy, and uncomplicated of all the measures at our disposal.

On the other hand, if there is katotropia, the inferior tendons may be treated on the same principles. It

hould, however, be strongly impressed upon the mind of be surgeon that of all the recti muscles the inferior are nfinitely more subject to unpleasant disturbances of heir action from surgical interference than any of the ther eye muscles. It is better not to disturb the action f these muscles except when the upward rotation is narkedly below the standard, and then a relaxation of rom 3° to 5° is all that is usually safe. At the risk of epetition, let me advise the surgeon to exercise the greatst prudence and conservatism in regard to operating pon the inferior recti.

It might be assumed that, acting on the same principles, we might, in a case of esophoria without anophoria, relax the upper or lower half of one or other or possibly of both internal recti muscles, and that a like procedure might be adopted for exophoria. As a matter f fact, since the study of declinations has been carried to practical extent it is found necessary to operate directly 'or esophoria or exophoria much less frequently than efore, and, as a rule, such direct operations should be voided. If the excess of upward or downward rotation f the eyes is eliminated and the declinations are corected, the heterophoria is likely to disappear, and it is loubtful whether, if an ideal correction of the two condiions named could always be accomplished, there would n any considerable proportion of cases be occasion for perating for heterophoria.

With the view, then, of preserving as nearly as posible the full and equal rotation action of the lateral musles and at the same time avoiding any raising or lowerng of the plane of vision when such change is not, irrepective of other conditions, required, I have resorted to everal methods of procedure, each progressively more ffective than the other, until at present only one of these nethods is employed, except in cases such as I have already described. Although the earlier methods have een superseded, it will be well to pass in review the proess of evolution of the more effective operation for lecination.

Earlier Operations.—The first of these was the operation, a description of which I published a few years ince and called *peri-tenotomy*. It consisted, essentially, n relaxing a part of the insertion of opposing muscles at liagonally opposite points. Thus, if the lateral muscles were selected for operation for positive (+) declination, the upper half of the externus insertion and the lower half of the insertion of the internus were relaxed. By this means about 1° or possibly 2° declination could be corrected, but the change of direction of the meridian of more than 1½° required an extent of relaxation of the tendon insertion which threatened restriction of the action of the muscles. Practically, then, a correction of 1° or a little more was all that could be hoped for with a conservative operation.

The second step in the evolution was the operation which I called *circumtraction* (vertical or lateral). In this procedure a part of the insertion of opposing muscles was separated from the sclera, and this separated part was carried forward into a previously prepared pocket, thus advancing, for example, the upper half or two thirds of the insertion of the internus and the lower half or two thirds of the externus. By this method a correction of a larger degree of declination could be effected, but here again there was danger of inducing a disproportionate action among the muscles.

The third step in the evolution of an operation for directly affecting declination is what I have termed *extendo-contraction*.

Extendo-contraction.—By this operation the full rotation action of the muscle is preserved, no heterophoria is induced, eyes which were parallel before the operation remaining so after it, while by its means a greater degree of correction of the leaning of the meridians can be brought about than by either of the preceding measures. Even by this process a change of the direction of the meridians of 2° or 3° must be considered a favorable result, although occasionally a much more important change is effected by a single operation.

In cases of high degree of declination the operation

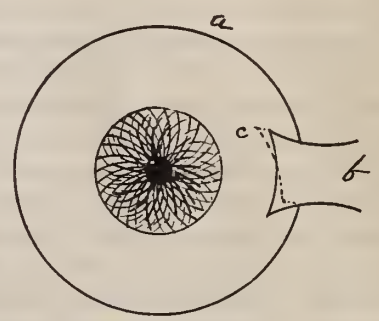

Fig. 8.—Diagram illustrating the change of the line of insertion of the tendon of the internus.

may be done on one muscle at one time and on another at another time. The selected muscles are the internus and the superior.

Of course it may be done on the externus and inferior, but it has been found prudent to avoid operations on these muscles as far as possible. As it is not an easy or simple process, I shall describe it in detail, premising that it is of the highest importance that the various steps should be taken exactly in the order and in the manner described. Let it be assumed that the internal rectus of the left eye has been selected for the operation on account of a + declination 4°. The surgeon, standing on the right-hand side of the patient, the lids being separated by a specu-

Fig. 9.

lum, the patient is told to direct the eyes to the left and down. Then the surgeon, seizing a very small fold of the conjunctiva (1 millimetre) by the fine forceps (Fig. 9), makes an opening with the fine-pointed scissors (Fig. 10)

just over the upper border of the insertion of the muscle, and, pushing the blades of the scissors forward while avoiding, so far as possible, enlargement of the small opening in the conjunctiva, he forms a pocket nearly up

FIG. 10.

to the border of the cornea and extending more than halfway down the length of the tendon insertion.

The pocket being made, the operator next passes to the left side of the patient. He now seizes the insertion of the tendon at its upper part in the fine blades of the forceps and separates it to the extent of a few millimetres only. He then introduces the delicate sharp hook (Fig. 11) between this separated part and the sclera and,

FIG. 11.

when it has been carried back to the desired extent, presses the sharp point against the inner surface of the tendon and draws it forward. The hook should engage itself sufficiently below the border of the tendon and sufficiently back to insure the drawing forward of that part of the tendon. The part of the tendon engaged by the hook is now forced through the little opening in the conjunctiva, when a small curved needle, one of two attached to a very fine thread, is carried through the protruding portion of the tendon, which is then allowed to retreat within the conjunctiva. An assistant takes the two needles, holding the thread out of the way of the operator, who now, using the small tenotomy hook (Fig. 12), divides

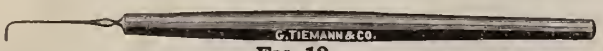

FIG. 12.

the remainder of the insertion with care not to enlarge the original conjunctival wound. If the tendon is unusually broad, a counter-opening near the lower border of the tendon is made, and the division of the tendon is completed from this point. The extent of the division is ascertained by the phorometer before the next step is entered upon. If 10° or 12° exophoria has been induced the lower border of the tendon is free.

The assistant now inserts a director through the conjunctival wound into the pocket, carrying it somewhat above the border of the cornea. One needle is carried in the direction of the probe, making its exit above and near the border of the cornea. The second needle is then carried through 3 or 4 millimetres below, and the thread is drawn and tied in a slip-knot. An esophoria of about 5° should be induced. If more than this has been brought about, the thread must be loosened until the amount does not exceed 5°. Then the knot is made fa and the thread is cut. The thread should be extremel fine, of silk. No catgut is sufficiently delicate for th operation.

On the following day there should be neither es phoria nor exophoria, and there will, if the operation h been skilfully done, be no apparent wound of the co junctiva, though there will, of course, be redness an some slight thickening.

By referring to the diagram (Fig. 8) an idea may b acquired of what is to be accomplished by the operatio The equator of the eyeball is indicated by *a*, and the ten don of the internal rectus by *b*. The solid line represent the direction of the insertion of the tendon before the op eration, while the dotted line represents the position o the insertion afterward.

It will be seen that the extremity of the tendon at has been advanced toward the cornea, while the lower ex tremity has fallen somewhat back, giving the insertion a oblique direction. The result of this oblique directio should be to influence the vertical meridian to lean fron the left farther toward the right.

GENERAL CONSIDERATIONS.—Various modification of the methods of operating above described will occur as occasion may require, to one who has a thorough com prehension of the principles involved. From what ha been stated regarding the relations between declination and strabismus the suggestion might occur to some tha there is in this presentation a claim that the empirica method of treatment for strabismus can be entirely aban doned, and that the defect may be treated entirely on what I may term the rational ground of removing decli nations and correcting excessive or restricted vertica rotations.

It would be extremely fortunate if this view could be maintained, but, unfortunately, at least for the present the empirical methods cannot be absolutely discarded. They may, indeed, be greatly modified and in many cases the rational methods may be successfully employed alone. There are, however, in a certain pretty large proportion of cases difficulties in the way of such rational treatment exclusively which cannot be wholly overcome. In many cases of strabismus it is quite impracticable to determine the direction or degree of declination. It may be even impossible for the patient to locate in space the projection of any image. My own practice with such cases has been in the milder instances of strabismus, where more or less satisfactory conclusions can be reached regarding the underlying conditions of the defect, to direct the treatment to these conditions so far as they can be ascertained. In many instances, when a beginning has once been made, the conditions become more evident and gradually a full correction can be made on entirely rational lines.

In the more extreme cases I have employed the empirical method to the extent of relieving in some measure the extreme convergence or divergence in order that some,

t least approximate, tests can be made. Following this, ıe method which I am here calling the rational method ıay be substituted, and eventually a full correction of ıe squint may be made without the disability which inıriably follows a complete tenotomy with recession of ıy eye muscle. Thus by a prudent and considerate emloyment of the empirical in connection with the rational ıethod a radical and most important advance can be ade in the treatment of these defects.

In the lesser cases, heterophoria, more patience may ; required in arriving at a nominal correction by attendıg to the underlying conditions than would be in the ore direct method. The results of the former method 'e so infinitely better and so much more apt to be permaınt that there should be no hesitation in regard to the ıoice of methods.

As to the maladies which are so often associated with ıterophoria and to which so great, even surprising, relief ıs often come from its correction, even more satisfactory ıd far-reaching results can be looked for when the essenıl element, not only of the heterophoria, but of the alady, is removed.

THE RELATION OF SCURVY TO ECENT METHODS OF ARTIFICIAL FEEDING.*

By J. P. CROZER GRIFFITH, M. D.,

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In spite of the amount of careful study spent upon the cause of infantile scurvy and its relation to ıt still possess many points of obscurity. Some cases ıuld appear to make all clear, were it not that others ım totally to controvert their evidence. Yet there are rtain conclusions which we are justified in drawing ;arding the relationship which artificial feeding bears the disease.

I wish to use for the purpose of formulating them, the report of the committee appointed by the American ediatric Society; II, my own individual experience in ıumber of cases. Upon the study of the very numers cases reported in Europe I will not enter.

I.—Two years ago the American Pædiatric Society ıde and published, as you remember, an extensive coltive investigation of infantile scurvy as it occurs in ırth America. It has been a general source of disapjintment that the committee in charge did not feel able ı express more positive conclusions regarding the ætiol-y. Having been a member of this committee, I may ıw, in my capacity as an individual, express the belief ıt the tabulated cases admit of a step further in the ıy of conclusions than the report went—no absolute ıclusions, so far as data go, but such as are almost as ·ely true, and which are very suggestive.

There were 379 cases of scurvy reported to the comttee. In 356 of these the nature of the diet was specified which the child was taking when the disease developed. In 214 cases, *i. e.*, 60 per cent., the food was a proprietary one. In by no means every one of these can the disease be certainly attributed to this cause, since in some instances sterilized milk or some other article which has been suspected ætiologically had been added. Yet the percentage is so high that there can be no question about the influence of proprietary foods, even if it had not happened that in a large number of instances proprietary food alone was employed. Thus, forty-four children, 12 per cent. of those studied, received one of the malted foods alone without any milk, and thirty-two (9 per cent.) were fed purely on condensed milk.

Food containing or derived from starch seemed to be a powerful ætiological factor, especially if we include many of the proprietary foods. At least between fifty and sixty children had insoluble starch in their diet, twenty-four of them deriving it not from proprietary foods. If, now, we add to these those who received starch partially or wholly transformed, and the twelve children who received "table food" (probably chiefly starchy) in addition to milk, the total number receiving starch equals over two hundred, viz., 56 per cent. I do not for a moment wish to intimate that this is positive proof that starch in any form causes scurvy. It does, however, cast a grave suspicion upon it, which may well influence us in our treatment of the disease.

Finally, the use of cooked or partially cooked milk seemed to have an undoubted influence in a number of cases. In sixty-eight cases, *i. e.*, 19 per cent., sterilized milk was the only food given, and in a large number more it was one of the ingredients of the diet; making, at the least, 107 cases in all, or 30 per cent. In sixteen cases (5 per cent.), pasteurized milk was the only food used. This is weighty inferential evidence that the cooking of milk is to be suspected as a cause of scurvy in infants. Yet it is not positive proof, since in so many cases some proprietary or starchy food was combined with the milk, and even in those in which sterilized milk was used alone we do not know but that the proportions of proteids, fat, and sugar present were entirely faulty. It is interesting to note that several children were attacked with the disease while on a diet of raw milk, and ten while on one of breast milk alone—an indication that a fault in the proportions of the constituents is to be sought for.

Still more useful in studying ætiology is the consideration of the effect of dietetic treatment in the collected cases. Just here there exists, however, one very great difficulty, viz., that in the use of fresh fruit juice (which for convenience I am speaking of as a medicine and not as a food) we probably possess such a rapid and certain specific for the disease that it is generally impossible to determine, when this treatment is used, exactly what influence the accompanying change of diet may have exerted. The converse of this is, of course, also true, that the exact value of fruit juice cannot be

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determined when a proper alteration of the diet is made, for rapid recovery will follow in that event also. In fact, in only three cases could we learn that fruit juice was employed alone. The spirit of humanitarianism prevailed over that of scientific research in the great majority of physicians from whom we derived our cases, for in 257 out of 326 cases suitable for study a mixed treatment of fruit juice and change of diet was employed. The children probably were benefited, but the investigation suffered. Omitting for the moment the consideration of this group of *mixed-treatment* cases, we still have fifty-eight cases in which a change in diet *without* the use of any fruit juice gave a successful result. Among these we find recovery following the abandonment of proprietary foods, alone or in combination, in thirty-four cases, including six cases solely on condensed milk. It occurred in eighteen cases in which a diet of sterilized milk alone had been abandoned. In six or seven cases the doing away with food containing unconverted starch was successful, and in nineteen cases this statement applies to food containing converted starch. Curiously, we note one case of recovery after change from breast milk to sterilized milk.

Among the 257 cases of mixed treatment we find recovery following, in twenty-three, the abandonment of condensed milk alone, and in nineteen others that of condensed milk in combination with a malted food. In eleven cases recovery followed the change from a food containing insoluble starch, and in sixty-one that from one containing converted starch, making seventy-two in which the food was made from starch, or ninety-one in all, if we add in the nineteen cases in which condensed milk and a malted food were used together.

There were probably forty-three cases in which recovery followed the giving up of milk which had been sterilized, or, in a few cases, pasteurized. Probably this number should be greater, as it is likely that the milk added to some of the proprietary foods was cooked in the course of preparation.

It must be remembered that in all the cases of this division fruit juice was given during treatment. Consequently they are not offered as actual proof of a therapeutic action of diet. They are suggestive merely.

II.—*Personal Cases.* The experience of one individual, although limited, has sometimes the advantage that details are known which are often wanting in a collective study. Omitting reference to earlier cases, I have had under my care in the last eighteen months or so sixteen cases of infantile scurvy. As I hope to publish a fuller account of these later, occasion will be taken here to give only the briefest synopsis of the diet at the time the disease developed and of the treatment employed. In all, recovery was prompt.

Case I (B.).—*Diet,* a proprietary food added to milk which was scalded only. *Treatment,* orange juice, raw milk, withdrawal of the proprietary food. *Note.*—Disease scarcely due to the slight heating.

Case II (C.).—*Diet,* a proprietary food and ste lized milk. *Treatment,* raw milk, orange juice, wit drawal of the proprietary food.

Case III (McN.).—*Diet,* a proprietary food a sterilized milk. *Treatment,* raw milk, orange juic cessation of the proprietary food.

Case IV (F.).—*Diet,* a proprietary food a milk, heated, but not to boiling. *Treatment,* oran juice, withdrawal of the proprietary food, milk to warmed only. *Note.*—Disease not accounted for by t slight heating.

Case V (T.).—*Diet,* a proprietary food. *Treatme* orange juice, scalded milk, withdrawal of the proprieta food. *Note.*—The use of partially cooked milk did n interfere with recovery, which seemed clearly due to t proprietary food.

Case VI (A.).—*Diet,* sterilized milk with dry ma extract. *Treatment,* orange juice, raw milk, withdraw of malt extract. *Note.*—Sterilization probably the caus

Case VII (W.).—*Diet,* a proprietary food a sterilized milk; beef juice. *Treatment,* orange juic pasteurized milk, withdrawal of the proprietary foo *Note.*—The use of patented starchy food seems the cau here.

Case VIII (McC.).—*Diet,* a proprietary food a sterilized milk. *Treatment,* orange juice, beef juic raw milk, withdrawal of the proprietary food.

Case IX (McC.).—*Diet,* a proprietary food a sterilized milk. *Treatment,* orange juice, beef juic raw milk, withdrawal of the proprietary food.

Case X (McC.).—*Diet,* a proprietary food, or po sibly raw modified milk with very low percentages fat and proteid, and with barley water added. *Trea ment,* orange juice; no change in the modified milk mi ture. *Note.*—The uncertainty as to the cause is due doubt regarding the date of the first symptoms. I b lieve the disease developed while the proprietary fo was being given, but in that case the symptoms gre worse on the low-percentage modified milk mixture, a improved in spite of it.

Case XI (J.).—*Diet,* raw modified milk with ba ley water. (F. 3, S. 7, P. 1.50 at seven months *Treatment,* orange juice; beef juice; increase of protei to 1.75; pasteurization of the mixture; withdrawal barley water. *Note.*—The formula seemed satisfactor the proteids not especially low for the age, and their i crease during treatment was inconsiderable. The con mencement of pasteurization did not interfere with r covery. One is led to suspect the barley water.

Case XII (C.).—*Diet,* pasteurized modified mil with barley water (proteids 1.25 at ten months *Treatment,* orange juice, no change in diet. *Note.*— have looked upon the low proteid percentage as the caus Yet both this and the pasteurization are still being use

Case XIII (S.).—*Diet,* a proprietary food an scalded milk. *Treatment,* withdrawal of the proprieta food, milk still scalded; later, orange juice. *Note.*— Improvement began when the proprietary food was wit drawn before the use of orange juice was commence Patented food must be considered the cause.

Case XIV (F.).—*Diet,* sterilized milk (2½ per cen proteids at nine months). *Treatment,* orange juice sterilization stopped. *Note.*—No cause but sterilizatio discoverable.

Case XV (P.).—*Diet,* raw modified milk with proprietary food added. *Treatment,* withdrawal of th

›roprietary food. *Note.*—No cause discoverable but the roprietary food.

CASE XVI (W.).—*Diet,* raw modified milk with arley water (proteids 1.5 per cent. at nine months). *'reatment,* oränge juice; no change in food. *Note.*—'ossibly too low a proteid percentage may be looked upon s the cause. Possibly barley water is to be suspected. 'et recovery went on in spite of no change in diet.

Without entering upon an analysis of these sixteen ases, I wish to indicate certain points of interest. 'learly, the cases support the generally accepted view hat the patented foods often produce infantile scurvy, nd some of them show that recovery may follow the 'ithdrawal of these foods without other treatment. 'hether this is because they are deficient in certain in-redients, or whether it is the fact that they so com-ıonly contain or are derived from starch, remains to be etermined. Two of my cases throw suspicion on barley 'ater.

The cases indicate, too, that the sterilization of milk as an undoubted power to produce scurvy, but that this ; a less prominent ætiological factor than the last. In ıct, one of the most striking features which the cases lustrate is that scurvy can readily develop on a diet of ıilk which is not long heated, or which is even raw. In ›me such instances we are led to suspect the action of a ›w percentage of proteids. Some of the cases also show ıat the beneficial action of fruit juice may begin and ›ntinue without any change in the food whatever. This perhaps a valuable point, because in the 379 cases col-cted by the committee there were only three which lustrated this fact. It is also important because it aches that we must not always hasten to change the 'et which has seemed to agree with a child with weak igestion, because symptoms of scurvy are appearing. etter far in most cases the danger of the development a disease generally easily curable, produced possibly a low proteid percentage, than to incur the far greater ınger of a wasting diarrhœa or other digestive disturb-ıce, the result of over-strong food.

In closing, I would only say that an extended study of ıe subject has convinced me of one thing especially, viz., ıat whereas there are classes of foods which are particu-rly apt to produce scurvy in infants, yet the individual ement is remarkably present in this disease. It is pecially true here that what is one baby's meat is an-her baby's poison.

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HE PATHOLOGY OF INTRA-UTERINE DEATH.

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THE uterus may be considered an accumulation of ımbering cells which nothing can awake but the knock a fertilized ovum. Such an ovum, however, is not thout its troubles and dangers. It is the determina-›n to investigate in some kind of a systematic way the various influences which may be considered detrimental to its growth and development. In looking through the literature of the subject it is somewhat astonishing to find so small a number of writers upon so vital a matter. Here and there are a few desultory remarks, but they are mainly fragmentary. When viewed from all the transcendent sequelæ following in its wake, the morbid processes linked and entwined about the embryo become of the utmost importance to the physician, the pathologist, and the public. Fortunately for mankind, more particularly for those who are obliged to bear the burdens, cares, and dangers of parturition, Nature, in her own inimitable ways and by ordinances which far surpass in beauty and perfection of design the imagination of man, is usually quite willing and competent to fulfill these functions in a normal and satisfactory manner. Occasionally, however, the ordinances of Nature become disregarded.

Morbid influence in the uterus, the embryo, or its appendages, or general or local constitutional perversions, may render it absolutely impossible for a viable fœtus to be born. Frequently the physician is confronted with the proposition of how such a calamity can be obviated. It is a question eminently worthy of the conscientious consideration of the profession. Brothers have gripped and throttled each other in death's grim grasp, family ties have been severed, estates have changed their line of descent, kings and princes have fallen, governments have been overthrown, wars have been waged, and dynasties have ceased to exist because some morbid pathological process has disarranged the physiological development of an embryo. Apart from such serious disasters, the death and expulsion of a fœtus may be regarded as an affliction both to the mind and constitution of the mother. Many of the disastrous consequences which ultimately lead to deteriorated health or chronic invalidism can be clearly traced to reiterated abortions. When yet the fœtus is in the early stage of development the intimate anatomical relationship of the parts renders the opportunities for deviations from normal conditions extremely frequent. From the time in which the pronucleus of the male meets and bores its way into the ovum, and there the two fuse together, until the full development of the fœtus and its various membranes, there are ever-varying and constant changes in progress.

An investigation into all the conditions and the various circumstances leading up to and producing intra-uterine death is surrounded frequently by innumerable difficulties. Not alone does it require minute investigation into morbid constitutional deviations from health on the part of the woman, but what is probably not sufficiently understood is the fact that the male parent may be the cause of the inability of the mother to carry the fœtus to the full term of gestation. Besides these, such an investigation involves the various morbid changes which so frequently take place in the uterus, placenta, fœtal membranes, or embryo.

It cannot be too strongly emphasized that frequently the causes, directly or more remotely, which ultimately bring about the death and expulsion of the fœtus are extremely difficult to detect. It is not an unusual occurrence for a woman apparently in the midst of health, and surrounded by all the comforts of home and environment, to abort in each successive pregnancy. In some women there exists such a tendency to miscarriage that almost any indiscretion is sufficient to cause a detachment of the ovum. The reverse of this, however, is not unusually seen. Women who are apparently no healthier than their more unfortunate sisters may be submitted to almost any amount of violence without in the least interfering with the progress of pregnancy. This is evidenced in women who have accidentally fallen out of windows or who have been thrown from carriages and those who have been forced to jump from burning buildings, and, although legs and arms have been fractured, they have recovered without aborting.

When the intricate anatomical superstructure of which the uterus is composed is in a healthy normal condition and the vitalizing products of the male and female possess sufficient inherent power to carry on gestation, pregnancy progresses in an uninterrupted manner unless some subtle influence interferes.

When such an ovum reaches the uterus, the decidua hastens to envelop it in its mantling fold of welcome. The latent cells and fibres of the uterus receive with glad acclaim the advent of a new life and with characteristic and marvellous harmony advance in size and function to meet the necessities for the progressive and incessant changes which are constantly to take place, for already a new life is under the watchful care of the vestal angels of heaven. The intra-uterine dangers and vicissitudes of such a fœtus become singularly interesting to contemplate.

Pathological researches into the various causes which may lead to the expulsion of a fœtus, although conducted by many eminent minds, are extremely difficult to trace in many instances. In the later stages of gestation the investigation is frequently not so uncertain, but in the earlier stages, when the delicate tissues are so fragile, the task is extremely confusing. The particular period of child-bearing life at which abortions take place has given rise to difference of opinion by equally conscientious and painstaking investigators. A number regard the risk greater in first pregnancies, especially among the better classes. The customary habit of these people of taking long journeys after marriage has a tendency, if pregnancy results, to breaking down conception as a result of fatigue and the extra amount of irritation incurred as a consequence of licensed opportunity and pent-up desire. Whitehead and others maintained that third and fourth pregnancies were the more liable to be unsuccessful. He interrogated no fewer than 2,000 young pregnant women whose ages averaged about thirty years. He found the number of their pregnancies to be 8,681 or 4.34 each. No fewer than 1,240 had aborted. The accuracy of these figures, as giving the average number of miscarriages for the whole child-bearing period should not be accepted unreservedly. They are admittedly the number of abortions for the stated number during the first half of the reproductive period of a woman, and, inasmuch as miscarriages are more frequent in the latter half of the child-bearing period, the statistics of Dr. Whitehead are on this account below the average. This can be demonstrated by any one who wishes to investigate the subject closely. Priestley's figures may be considered as accurate as any, and, as they are free from the thraldom of preconceived ideas, there is no hesitation on my part in giving the results of his inquiries here. He started on the data secured from 1,000 private patients. The accounts given by many of these patients were so untrustworthy or so vague as to be absolutely unreliable. Out of the number, he selected the histories of 400 which were distinct, reliable, and unequivocal. The results are interesting, for they were taken in all cases in women who had reached at least forty years of age. These 400 women had been pregnant 2,325 times. There were 542 abortions and 1,783 living children. The number of abortions, according to these statistics, is considerably higher than the figures of Whitehead. They, however, embrace practically the whole period of child-bearing life, while the former's investigations are limited to women below the age of thirty years. The ratio of abortions to live children, according to these figures, is very nearly one to three. Of these women, 152 had no abortions, while 27 out of the 400 had abortions only.

AN ANALYSIS OF A NUMBER OF WOMEN WHO HAD AND WHO HAD NOT ABORTED.

	(WHITEHEAD). WOMEN BELOW THIRTY YEARS OF AGE.	
	Number.	*Percentage.*
Women who had not aborted.....	1,253.	62.65
Women who had aborted.....	747.	37.35
Total number of women under observation.....	2,000.	100.00

	(PRIESTLEY). WOMEN OVER FORTY YEARS OF AGE.	
	Number.	*Percentage.*
Women who had not aborted.....	152.	38.00
Women who had aborted.....	248.	62.00
Total number of women under observation.....	400.	100.00
Women who had aborted only.....	27.	6.75

ANALYSIS OF PREGNANCIES IN REFERENCE TO ABORTIONS AND TO FECUNDITY.

	(WHITEHEAD). 2,000 WOMEN BELOW THIRTY YEARS OF AGE.		
	Number.	*Percentage of whole.*	*Number per woman.*
Children.....	7,459	85.92	3.73
Abortions.....	1,222	14.08	0.61
Total number of pregnancies...	8,681	100.00	4.34

(PRIESTLEY).

400 WOMEN OVER FORTY YEARS OF AGE.

	Number.	Percentage of whole.	Number per woman.
Children	1,783	76.68	4.46
Abortions	543	23.32	1.35
Total number of pregnancies	2,325	100.00	5.81

RATIO OF ABORTIONS TO PREGNANCIES AND CHILDREN.

(WHITEHEAD).

	Percentage.	Being about 1 in
Ratio of abortions to pregnancies	14.08	7.
Ratio of abortions to children	16.39	6.

(PRIESTLEY).

	Percentage.	Being about 1 in
Ratio of abortions to pregnancies	23.32	$4\frac{1}{3}$
Ratio of abortions to children	30.40	$3\frac{1}{3}$

A study of these tables is interesting and peculiarly instructive. The first demonstrates the fact that those under thirty years of age aborted in the proportion of about one in three; whereas among the older women the abortions were at the ratio of two to one. The next table demonstrates that the second period is more productive of pregnancy than is the first in the proportion of 5.81 to 4.34. It illustrates, too, the point that in them the tendency to abortion is also greater in the ratio of 23.32 to 14.08. If these calculations are approximately correct, the number of fœtal deaths throughout the United States is something enormous and well worthy of a careful investigation by the profession.

There are probably two periods during intra-uterine gestation when the death of the fœtus is most apt to occur, viz., the first few weeks of pregnancy and, again, about the third month. In the early weeks the fœtus is so fragile and its attachments are so delicate and tender that the least deviation from normal conditions, either local or constitutional, is sufficient to cause its detachment and expulsion. For obvious reasons it becomes practically impossible frequently to determine the presence of an ovum in the discharge that may escape. Not unusually the ovum may become dissolved and nothing can be seen but a small clot of blood, with no semblance of a fœtus discernible. One of the cardinal reasons for such a result is no doubt some faulty condition of some of the fœtal envelopes. It must be remembered that the decidua begins to form just as soon as a fecundated ovule reaches the uterine cavity. This consists of the mucous membrane of the uterus itself, thickened and changed, so as to form the outermost of the various coats that normally cover the fœtus. It occasionally occurs that a membrane in every respect similar to that of a decidua is formed in the unimpregnated uterus. More frequently about the uterus than in any other organ of the body, the decrees which govern its various functions become deranged, the control of its formative elements becomes lost, perversions of physiological acts result, and so it comes about that the latent cells of the mucous membrane in some misguided way form a phantom decidua and then lie down and die. This spurious membrane is sometimes expelled at a catamenial period and gives rise to an unusual amount of pain. The occurrence is generally known as membranous dysmenorrhœa. When such a condition occurs repeatedly in a married woman there is good reason for believing that it is the result of conception. It is not unusual for such a membrane to be extruded quite frequently during the continuance of marital relations, but for the expulsions to cease suddenly when coitus is held in abeyance. This subject will be more fully discussed when speaking of the pathology of the fœtal membranes. It is here mentioned to emphasize the importance of recognizing the condition as a frequent cause of abortions in the early weeks of pregnancy. Among other reasons for early miscarriage may be mentioned a lack of vitality in the spermatozoa.

When pregnancy has successfully passed the dangers to which it is liable during the early days and weeks, there comes the period at about three months when other dangers may appear, and this may be considered the second most frequent dangerous epoch. There are valid reasons why this should be so. About this time the young placenta is beginning to assume a definite form. The decidua serotina is fairly large and the villi of the chorion have by this time become more concentrated throughout its surface. The vascular structures in the tissues are in a state of formation and transition, and the tender anastomotic loops from the maternal circulation are beginning to zig-zag their way in and around the fœtal villi like delicate webs, as if in wonder where to go. There is a certain degree of insecurity in these fragile structures and a great liability to hæmorrhage and extravasation of blood between the decidua reflexa and the chorion during this time.

With these necessary preliminary remarks, and without any further skirmishings, I propose now to investigate the most important causes which may give rise to the expulsion of a fœtus. No definite classification will be followed, other than that the causes referable to the father will first be considered, after them general constitutional reasons attributable to the mother, and lastly those more particularly relating to the fœtus and its various membranes.

CAUSES ATTRIBUTABLE TO THE FATHER.—That the death of the fœtus or the inability of the mother to carry the fœtus is sometimes owing to a defect in the male parent, all authorities concur. If closer investigation were made of these cases, there is every reason to believe that the fault would be more frequently found referable to the father than is universally believed. The father may be too old or too young to impart the essential potency to the fecundating fluid. Certain diseases may have a similar effect, and, while it is possible for conception to take place under these circumstances,

there is not the necessary amount of vitality to continue the development of the product, and so it droops and gradually withers away. A similar condition is frequently to be seen in eggs and in plants. Birds are often unable to hatch out their eggs, although there is no apparent defect in them to be discovered. There is in all likelihood an imperfect impregnation on the part of the male. Plants are singularly prone to be affected in the same manner. Here the pollen may be defective or its vitality impaired by some unknown cause before it reaches the pistil. The result may be the formation of a seed, but it is of such a low order of vitality that it does not possess a sufficient amount of inherent energy, and the consequence is an imperfectly developed seed which never reaches maturity.

It can be stated with a degree of probability amounting almost to a certainty that the power for procreation is manifestly distinct from that of development. A man may have lived a life of debauchery and have suffered from the diseases from which men suffer to such a degree as to vitiate his whole constitutional powers, and as a consequence impair his procreating powers to such an extent as to be incapable of producing healthy vitalizing spermatozoa. Again, a man may be capable of fertilizing an ovum, but his whole energy may be expended in the effort, so that none remains for future development, so far as he is concerned. The power of development may be relative. A delicate, puny man may possess sufficient energy to impregnate a healthy, robust woman, and, inasmuch as she possesses a superabundance of strength, the life of the ovum may in future be carried on altogether under the vital energies of the mother.

It has been demonstrated conclusively that a woman may abort consecutively and yet be potentially fertile. The fault here lies in the fact that the husband, although physically in robust health, yet may have spermatozoa of so low a degree of vitality as to be incapable of continuing conception. Occasionally this defect may be congenital, but more frequently it is acquired. When the formation of spermatozoa and the distance they are obliged to travel before they finally nestle down in the seminal vesicles are considered, it is astonishing that they are not more frequently impaired. They are formed in the convoluted tubuli seminiferi in the substance of the testicle. It is a disputed point as to the length of these miniature tubes, one authority stating that their average length is about two feet and a quarter and the tubes themselves numbering over 840. Others maintain that they are over sixteen feet and number 300. Whichever statement is correct matters very little practically. They consist of a membrana propria, and in the inside wall of this membrane is an epithelial lining, from which spring the seminal cells. The nucleus of these cells is in a constant state of division, and as a consequence of this a number of daughter-cells can be seen forming. These small daughter-cells are known as spermatoblasts, and by a process of change ultimately become spermatozoa. In certain parts of these tubes the broad, expanded end may be seen elongating into the middle part of the spermatozoon, while the nucleus forms the short, thick head. A thin, long part of the epithelium projecting into the lumen constitutes the tail. After these minute bodies are formed they pass through the vasa recta, the rete testis, the vasa efferentia, the coni vasculosi, the epididymis, and the vas deferens before they finally lodge in the seminal vesicles, there to remain until copulation ejects them into the vagina.

Certain malformations or diseases of these parts may so cripple their function as to render them unfit for the development of healthy spermatozoa. The testicle arises from the inner concave disc of the Wolffian bodies, or, as they are frequently termed, the primordial kidneys. They therefore have their beginning in the abdominal cavity behind the peritonæum. The vasa efferentia, the coni vasculosi, and the globus major are not, however, produced from the Wolffian body, but very close by, and form a distinct cell mass. Until about the sixth month of fœtal life the testicles are situated below the kidney. They gradually descend so that at the end of the seventh month they are at the internal abdominal ring, ready to advance down into the scrotum. In the elephant and some other animals they remain permanently within the abdominal cavity, while in the *Rodentia* they descend only at the "rutting" season. It occasionally happens in the human subject that they are retained in the abdominal cavity, and there they are so imperfectly developed that the spermatozoa which they form are so greatly defective that, should impregnation take place, it but rarely goes to maturity. It is well, therefore, in investigating the causes of intra-uterine death, to examine the male parent for non-descent of the testicle.

Orchitis.—Inflammation of the seminal gland, either acute or chronic, not infrequently leaves as one of its results the testicle so damaged as to be unfit to elaborate spermatozoa of sufficient vitality to carry on conception. The pathology of such a condition is similar to that following an inflammation of any other part. There will be a general infiltration with a considerable amount of organizable material throughout the whole gland. This inflammatory effusion, which usually consists of fibrinous exudation, insinuates its way around and between the secreting tubuli. When this material is poured out in considerable quantities, its complete reabsorption is almost impossible. As a consequence, the subsequent integrity of the organ will become impaired as the result of the gradual contraction of the fibrous exudation that has not become absorbed. More or less atrophy of the testicle results and the delicate tubuli will suffer in proportion.

Syphilitic inflammation of the testicle has probably a greater tendency to be followed by deposit of fibrous exudation than other varieties. Nor is this to be wondered at, for we see it manifesting itself in this manner throughout the different structures of the body. I shall

have more to say about syphilis as a frequent cause of abortions in a later portion of this article.

Tuberculous Disease of the Testicle and Seminal Vesicles.—The slow, quiet, and insidious manner in which tubercle may affect the glandular structure of the testicle, epididymis, or seminal vesicles is an element of singular interest in its effects upon the progress of pregnancy. Tuberculous disease usually manifests itself in the form of miliary tubercles, when the symptoms will be indefinite for a long time or until disorganization begins. The infiltrated organ has but little power in resisting an acute or chronic inflammatory process, and, as a consequence, caseation and ultimate disorganization inevitably follow. During these several changes there is a period in which the secretion of seminal cells, with their later changes into spermatozoa, is going on, but they are necessarily so weak and delicate that, should they possess sufficient strength to impregnate an ovum, it would not have that amount of inherent vitality to carry it on to the full term of gestation. Active epididymitis is frequently caused by some local injury or the wearing of a badly fitting truss, but more frequently is a consecutive affection resulting in association with acute or latent gonorrhœa. Sometimes it follows as the result of cystitis or the irritation of a calculus in the bladder. In these cases the inflammatory process gradually extends along the vas deferens to the epididymis, and generally does not reach the seminal gland, but limits its action to the convoluted tubes of the seminal duct. The disease generally comes on quite suddenly and there is distinct enlargement in the epididymis. There is tenderness traceable along the cord. As a result of this condition, it is quite frequent to have the small, tortuous ducts so distorted and thickened by the inflammatory process as to render their function greatly impaired.

Of all the causes which produce intra-uterine death, none is more potent than the poison of syphilis. It is universally accepted that a man afflicted with syphilis may communicate the disease to the woman during coitus. A local indurated sore is the immediate result, followed later by a dissemination of the virus to all the great centres of life. In this contamination the ovum participates, and is, as a consequence, blighted. It may not, however, be generally known that a man who has become infected with syphilis, but who has got rid of his initial sore, but who, nevertheless, has yet the syphilitic virus in his spermatic fluid, may marry and have intercourse with a woman without infecting her. Should pregnancy take place, the spermatic fluid may contain such a quantity of the virus that conception breaks down, and the poison of the fœtus would then be the carrier into the maternal blood and give rise to general constitutional syphilis. The reason for this is probably the fact that there is no direct vascular communication between the fœtal circulation and that of the mother during intra-uterine life. The sinuses of the placenta contain maternal blood, which is carried there by the uterine arteries. There is a corresponding number of uterine sinuses which carry the blood away, but during the time in which these sinuses are filled with blood the miniature loops and tufts of the fœtal blood-vessels are lying so close to them that only the thinnest possible membrane intervenes. It is through this delicate structure that the oxygen and other nutriments pass from the maternal circulation for the nourishment of the fœtus, and carbonic acid, urea, and other waste products pass from the fœtus to the mother. The exchange is brought about by osmosis and is quite similar to the exchange of oxygen for carbonic acid in the lungs. So long as the integrity of the parts concerned in this process is maintained, it is difficult to conceive of how the mother could become contaminated by the virus of syphilis. Should, however, the product of conception become disorganized, then absorption from the dead fœtus would syphilize the mother. The fact that a syphilitic fœtus could develop without directly transmitting the virus to the mother was disputed for a long time, but the argument has been clearly sustained and is now almost universally accepted by the profession.

In the tertiary stage of the disease, it is extremely doubtful if coitus without conception will impart a venereal taint to the woman, but there is very cogent evidence to substantiate the assertion that the mother can be contaminated through the medium of the fœtus. It frequently happens that a man may submit to a course of treatment after having contracted syphilis until all visible signs to him have disappeared, or even longer, and then cease, thinking that, as he feels as well as ever, there is no further need of taking medicine. Should such a man marry, it is all but certain that the fœtus would become tainted and perish in the early weeks of pregnancy. As a consequence the mother would become contaminated, and afterward each successive product of conception would perish likewise, unless a thorough course of treatment was taken by them both for two or three years at least. In all stages of gestation do these fœtuses perish. Should the virus be virulent, the ovum would be so poisoned from the very beginning that it would be quite unable to form any attachment to the uterine walls. If the virus is not so concentrated, it is possible for attachment to take place, but soon the vitality of the ovum exhausts itself and it is expelled. Again, the degree of syphilis may be so slight that the product of conception may go on to full term and a viable child be born, but so marked and scarred that it cannot be reared. So it is that this unfortunate and loathsome disease may be reckoned as one of the most frequent causes of intra-uterine death. The death and disaster which befell the army of Napoleon on its ill-fated march from Moscow are microscopically small compared to the fœtal wrecks which follow annually in the wake of syphilis.

Lead Poisoning.—Saturnine intoxication acts injuriously upon the fœtus without doubt. This occurs so

often in those who labor in lead works that it is altogether too frequent not to be causal. The death and expulsion of the fœtus from the wives of men so employed have long attracted the attention of the profession. Should such a child be born alive, its vitality may be so lowered that it does not long survive. Fathers suffering from saccharine diabetes or albuminuria are frequently unable to beget living children. It is likely that during the progress of these diseases the sexual energies fall into abeyance to a certain extent, and so lower the vitality of the spermatozoa that pregnancy cannot be continued to the full term of gestation.

(To be continued.)

A SIMPLE AND ACCURATE METHOD OF SUBSTITUTE INFANT FEEDING.*

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In an article in the *New York Medical Journal* of November 4, 1899, I showed how completely cream rose on bottled milk, and that by using all the cream and different quantities of the remaining, or skim, milk weak creams, or top milks, containing almost any desired ratio between fat and proteids could be had from a quart bottle of milk as commonly delivered to families, and presented a dipper for removing these top milks from milk bottles.

In the *Journal of the American Medical Association* of July 14, 1900, I showed how good milk could be obtained, and gave assays of top milks taken from poor, medium, and rich whole milks, which showed by what small fractions the fat and proteids in the infant's food could be varied by simply varying the number of ounces removed from the top of the milk bottle and the number of times they were diluted. As this method of varying percentages is easy to apply and does away with all mathematical calculations, it has already been adopted by some of the leading pædiatricians and by many general practitioners.

It must not be supposed, however, that the problem of preparing a substitute for woman's milk consists of simply varying the percentages of fat, sugar, and proteids of cow's milk. The securing of good, clean milk and the choice of a diluent are factors equally important. It makes little difference for our purpose whether milk is rich or poor in solids, but it should be properly handled. Milk is rendered unfit for use by the growth of certain kinds of bacteria. The number of bacteria found in milk is an index of the care with which the milk has been handled. Lactic-acid bacteria, that are principally in the first three or four jets from each teat, cause souring; putrefactive bacteria come from stable filth; germs of typhoid fever and other infectious diseases usually come from milkers or infected water used in washing utensils.

Starting with clean milk, there are two practical ways of preventing the growth of bacteria in the milk: 1. By keeping the milk cool. 2. By heating the milk to kill the bacteria. Superheating or sterilizing milk is undesirable, but is practised in Europe because ice is scarce. New York uses in a week about as much ice as Paris uses in a year or London in about five months. Properly handled and *cooled,* milk shipped from Illinois, New York, and New Jersey to the Paris exposition last summer was in better condition when it arrived than the daily milk supply of Paris. To get good milk, have the cows kept *clean,* and when milking throw away the first two or three jets from each teat. Have the milk of several cows cooled to at least below 60° F. and mixed *immediately* after milking; put the milk into clean bottles, and keep them cool with ice or by setting them in cold water.

When this milk is delivered to families, even morning milk will have a layer of cream in the neck of the bottle, usually about six ounces. Very little can be told about the richness of milk or cream by its appearance in the bottles. On October 5, 1899, I had a quart bottle of milk bought from each of nine large dealers in New York and Brooklyn. These were all carried to the laboratory of the Health Department and set in a row. There was not over a quarter of an inch difference in the depth of the cream in any of these bottles. All these milks were tested for fat and ranged from 3.1 per cent. to 4.6 per cent. of fat. Only two quarts were found to be of the same richness. The skim milk in one bottle contained as low as 0.32 per cent. of fat, and that in another as high as 1.78 per cent. of fat. The skim milk of all the others contained between 0.5 and 1.5 per cent of fat.

The cream ran as low as 11.2 per cent. of fat and as high as 23 per cent. of fat. The cream in the neck of bottles is not uniformly rich in the different portions. Sometimes the cream at the mouth of the bottle is six times as rich as that near the skim milk.

There is no use in expecting accuracy in home modification of milk by mixing cream and milk, which vary so much, unless each lot can be tested, which is not practicable. All assumed or average compositions of milk or cream are useless and only confuse. Milk or cream standardized to the average composition is rarely fed to a baby. What can be procured must be used, and even in small towns different milkmen may supply several different grades of milk or cream, but the milk or cream of each dealer is usually fairly uniform in composition.

In *any quart bottle of milk* on which the cream has risen, the top nine ounces will contain about three times as much fat as the whole milk contained, and the top fourteen or fifteen ounces about twice as much, as will

*Read before the Medical Society of the State of New York at its ninety-fifth annual meeting, held in Albany on Tuesday, Wednesday, and Thursday, January 29, 30, and 31, 1901.

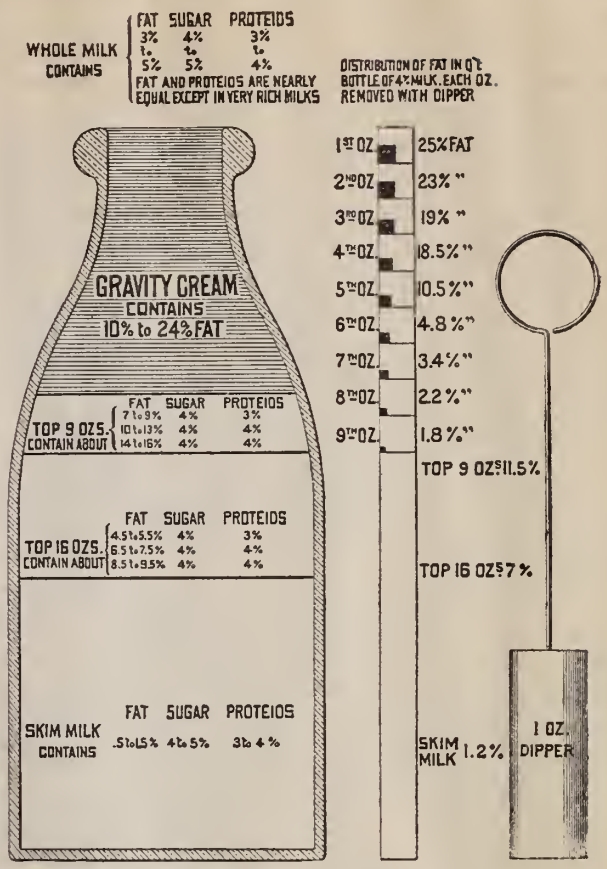
seen from the following assays made by the Babcock ethod, of poor, medium, and rich milks, as delivered bottles to families:

	Fat, Per Cent.	Fat, Per Cent.	Fat, Per Cent.
Whole milk	3.1	4.2	4.8
Top 6 ounces	13.4	19.0	23.0
" 7 "	11.6	16.4	19.8
" 8 "	10.2	14.1	17.3
" 9 "	9.2	12.6	15.5
" 10 "	8.4	11.4	13.9
" 11 "	7.7	10.4	12.7
" 12 "	7.1	9.6	11.7
" 13 "	6.6	9.0	10.8
" 14 "	6.2	8.3	10.0
" 15 "	5.8	7.8	9.4
" 16 "	5.5	7.4	9.0
Skim milk	0.7	0.6	0.4

These proportions are affected very little by uneven paration of cream. It is unusual to find a quart of ttled milk in which there is much less than 0.5 per nt. of fat or more than 1.5 per cent. of fat in the skim lk.

The table below shows a calculation of the percntage of fat in different top milks that can be taken m poor, medium, and rich whole milks, when the m milk contains 0.5, 1, and 1.5 per cent. of fat.

It is generally accepted that in nine tenths of all xed, or market, milks the quantities of fat and protds are nearly equal, and that in weak creams there is tt slight falling off in proteids from what are found in



Fat in whole milk	3 Per Cent.			4 Per Cent.			5 Per Cent.		
Fat in skim milk	.5	1.0	1.5	.5	1.0	1.5	.5	1.0	1.5
Fat in top, 6 ounces	13.8	11.6	9.5	19.1	17.0	14.8	24.5	22.3	20.1
" " " 7 "	11.9	10.1	8.3	16.5	14.7	12.9	21.0	19.4	17.5
" " " 8 "	10.5	9.0	7.5	14.5	13.0	11.5	18.5	17.0	15.5
" " " 9 "	9.5	8.1	6.8	12.9	11.7	10.4	16.5	15.2	14.0
" " " 10 "	8.6	7.4	6.3	11.7	10.6	9.5	14.9	13.8	12.7
" " " 11 "	7.8	6.8	5.9	10.7	9.7	8.8	13.6	12.6	11.7
" " " 12 "	7.2	6.3	5.5	9.8	9.0	8.1	12.5	11.7	10.8
" " " 13 "	6.7	6.0	5.2	9.1	8.4	7.6	11.6	10.8	10.1
" " " 14 "	6.3	5.6	5.0	8.5	7.8	7.2	10.7	10.1	9.5
" " " 15 "	5.9	5.3	4.7	8.0	7.4	6.8	10.1	9.5	9.0
" " " 16 "	5.5	5.0	4.5	7.5	7.0	6.5	9.5	9.0	8.5

e whole milk, so the top nine or ten ounces of a quart milk after the cream has risen will contain about ree times as much fat as proteids, and the top fifteen sixteen ounces about twice as much fat as proteids. these top milks we have about the ratios between fat d proteids found in woman's milk, but the quantities e too great for the infant's digestion and must be reced by diluting.

The whole situation is shown in the illustration.

Because chemical analyses of milks show little of eir differences, chemists divide milks into two classes: Milks that form *soft, flaky curds* with rennet, which clude woman's, mare's, and ass's milk. 2. Milks that m *hard, solid curds* with rennet, which include cow's d goat's milk.

There is a great difference between rennet curds and ir-milk curds. The natural souring of milk, or the dition of acids to milk, simply throws the casein out solution. Upon neutralizing the acid, the casein goes back into solution again. Rennet, which is an enzyme found in the stomachs of all animals, produces a chemical change in casein, clotting it very much as blood clots. In cow's milk, a clotted jelly or curd is first formed, which rapidly shrinks, squeezing out a clear, watery liquid known as whey, which contains the sugar and soluble albumin of the milk and another soluble proteid known as "whey proteid," which is not lactalbumin, but which is the result of the action of the rennet on the casein.

As the shrinking proceeds, a membrane forms on the curds which helps to hold the fat and bacteria of the milk in the meshes of the curd. If the curd is broken up before this membrane forms, the particles will readily unite again.

These curds are a breeding ground for putrefactive bacteria, and cheese made from milk containing much stable filth, which supplies putrefactive bacteria, develops a strong odor of decomposition.

Some authors call the rennet curds of milk *casein,* and the original proteid *caseinogen;* others call the curds *tyrein,* and the original proteid *casein.*

A food, to be easily digested, must be readily reduced to a finely divided state like that of chyme. It is not how quickly a certain kind of food may be peptonized, but how easily it can leave the stomach, that decides its suitability in cases of weak digestion.

Digestion of food is brought about by the action of digestive enzymes. Not much is known about these enzymes, except that to digest food they must come in contact with it, that they will digest practically unlimited quantities of food under proper conditions, and that their secretion is provoked, if not wholly controlled, by the absorption of nutriment. The digestive juices, which contain these enzymes, prevent putrefactive changes in food.

As during digestion there is an increased consumption of proteids and carbohydrates, it is significant that about one third of the proteids of woman's milk can be absorbed with very little digestive effort, and that the remaining two thirds form a soft, flaky curd which can easily leave the stomach; also, that the sugar of woman's milk is different from the sugar of cow's milk.

About one fifth of the proteids of cow's milk is in a soluble form, similar to albumin, and can be absorbed with little digestive effort, but when the milk is diluted for the infant, the *quantity* of this easily absorbed proteid becomes exceedingly small and the proteid that the infant actually gets has a tendency to contract and harden, exposing a small surface to the action of the digestive juices and forming a well-protected culture medium for putrefactive bacteria that may be present in the milk.

Diluting cow's milk with water does not prevent the formation of solid, leathery curds; diluting with a wheat, barley, rice, or oatmeal gruel, in which the starch has preferably been digested or dextrinized, breaks up the curds. The cellulose, or cell wall, of the cereal, which is left after the starch has been digested or put in soluble form, holds the curds apart and prevents their shrinking. Furthermore, digested starch is one of the forms of nutriment that are known to be rapidly absorbed and to promote the secretion of the digestive juices.

Here are two specimens of modified milk, one representing medium cow's milk diluted four times with water, and the other the same milk diluted four times with digested or dextrinized wheat-flour gruel; both were curded with rennet. All of the specimen prepared with digested wheat-flour gruel will go through a sieve having nine hundred meshes to the square inch; little or none of the specimen prepared with water will pass through the same sieve.

To prepare this dextrinized gruel, two heaping tablespoonsful of wheat or barley flour are beaten to a smooth, thin paste with a little cold water. A quart of boiling water is added and the gruel is boiled for about fifteen minutes. It is then cooled by setting the dish of gruel in cold water until the gruel is cool enough to be tasted, when a preparation of diastase is added. I have previously shown how an aqueous solution of diastase can be prepared at home by soaking malted barley grains in cold water, or there is obtainable a preparation of diastase known as cereo, made for this purpose; the thick malt extracts also contain diastase; the gruel is stirred and kept warm until it becomes thin and watery. The little particles of cellulose are then seen floating in the thin gruel.

In preparing the infant's food, follow these steps:

Have the milk bottled at the dairy and set on ice or in cold water to prevent bacterial growth and promote the separation of cream.

Dip off the top nine ounces or top sixteen ounces into a pitcher or bowl, and set aside the milk bottle to avoid confusion. It is much better to dip off the top milk than to siphon off the bottom milk. When a siphon is used, all the sediment in the milk goes into the infant's food, as it collects in the edges and at the bottom of the bottle. The siphon is also difficult to manipulate.

Prepare the gruel.

Dilute the top milk with the digested gruel and add sugar.

The food for a young infant should contain from one eighth to one third of the nine ounces of top milk.

The food for an older infant should contain from one sixth to two thirds of the sixteen ounces of top milk.

Diluting the top milk reduces the sugar in the food too much; additional sugar equal to from one twenty-fifth to one twentieth of the ounces of food brings this ingredient up to the proper quantity. Either granulated or milk sugar may be used. One dipperful of granulated sugar, or a dipperful and a half of milk sugar, equals one ounce. An even tablespoonful of granulated sugar equals half an ounce.

During hot weather, when the milk or food cannot be kept below 60° F., it will have to be pasteurized.

The digestion of each child must be made the standard.

By beginning with weak mixtures and gradually increasing the strength of the food, little difficulty will be encountered. When there is vomiting of food, the digested gruel may be fed temporarily, and a top milk poorer in fat used for making up the next feeding.

Each additional ounce removed from the milk bottle reduces the fat in the top milk from 0.5 to 1 per cent., which will make the reduction in the infant's food from one eighth to one third of 1 per cent., depending on the dilution. Proteids are varied by increasing or decreasing the dilution.

Fine adjustments of percentages or very low proteids are not needed by this method, for the cause of most digestive disturbances of infancy that require

hange of percentages is the neglect to alter the physical haracter of the proteids of cow's milk.

No matter whether milk is rich or poor, practically he same percentages will be attained by this method; ich milk will be diluted more, poor milk less; that is all. To other method has been devised for home use that ives such accurate percentage results, or is as easy of pplication, as this method has proved to be.

A CLINICAL REPORT ON THE USE OF CHLORETONE AS A HYPNOTIC.

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CHLORETONE, or trichlor tertiary butyl alcohol, is a ompound formed by the addition of caustic potash to qual weights of chloroform and acetone. Its valuable roperties as a local anæsthetic and hypnotic were first rought to the attention of the profession in an article y Houghton and Aldrich, which appeared in the *Jourial of the American Medical Association* for September 3, 1899. It appears as a white crystalline powder, havng a camphoraceous odor and taste. It is sparingly oluble in cold water, but freely soluble in chloroform, ther, and strong alcohol. The usual dose as a hypnotic s from fifteen to twenty grains. It may be conveniently dministered in the form of powders or compressed ablets.

During the past six months I have used chloretone in t least fifty cases in which sleeplessness was an importnt symptom. The best results were obtained in the nsomnia which was unassociated with organic disease. Thus, in five cases of neurasthenia in which the drug was used a single dose of twenty grains at bedtime would generally produce refreshing sleep lasting from six to eight hours. In two of these cases the action of chloretone was especially noteworthy, since opium gave rise to excitement, and chloralamide and trional, while not followed by any untoward effects, failed to secure the desired result. In a case of acute melancholia with delusions of persecution, it also acted favorably.

In chronic heart disease, when the symptoms were not very severe, chloretone was often useful, but when anxiety, restlessness, dyspnœa, and præcordial distress were prominent symptoms, morphine hypodermically was a far more satisfactory remedy. In chronic nephritis it generally gave good results. In one case, that of a middle-aged man, with uræmic delirium, it was given every night for two weeks, and rarely failed to quiet the patient and to secure a restful sleep of at least three or four hours' duration.

In several cases of pneumonia with moderate fever, but without delirium, the results were unsatisfactory. An hour's sleep would sometimes follow the exhibition of from 10 to 20 grains of chloretone, but often there would be no effect, or at most only a slight lessening of the restlessness.

In delirium tremens the drug was, as a rule, much less efficacious than paraldehyde, bromides, or hyoscine. In one man, however, in whom the delirium developed while he was under treatment for a compound fracture of the leg, chloretone acted very well. Twenty-grain doses always exerted a quieting effect, and would generally induce sleep lasting from five to six hours. On one occasion a dose of twenty-five grains had but little effect during the night of its administration, but the patient slept soundly all of the next day and the following night.

In phthisis the results, as is generally the case with somnifacients in this disease, were very variable. In the majority of cases, however, it did not succeed. No untoward symptoms were observed, but sleep rarely followed its use. The failures, it is worthy of note, were chiefly in the cases with well-marked febrile symptoms. Cough and night-sweats did not appear to be influenced in any way by the drug.

In typhoid fever, during the height of the disease, chloretone did not prove to be a very reliable hypnotic. Its value was far below that of opium, chloralamide, and sulphonal. During convalescence, however, from typhoid fever and other acute diseases the results were all that could be desired.

In a case of tic douloureux two doses of chloretone of twenty grains each failed to afford the slightest relief. In other painful affections, such as articular rheumatism, pleurisy, and neuritis, the remedy generally failed to induce sleep. In one case, however, of pelvic peritonitis its action was superior to that of opium, chloralamide, or sulphonal.

In view of the well-marked anæsthetic properties of chloretone when applied to a denuded surface, it was thought that the drug would be especially valuable in organic diseases of the stomach, both by relieving pain and promoting sleep; but in several cases of gastric cancer and in one case of gastric ulcer, the results were very disappointing and morphine had to be substituted.

In one case of morphinomania in which the daily dose of the narcotic had not exceeded two grains, chloretone was employed with satisfactory results; in two other cases, however, in which the habit was more pronounced the remedy proved useless.

In no case did chloretone give rise to any untoward symptoms or to unpleasant after-effects, except in a few instances in which it caused a feeling of drowsiness on the day following its administration. Nausea and vomiting were never excited by it. As a hypnotic its action is prompt, sleep usually following in from half an hour to two hours after its administration. The drug seems to have but little influence on the circulation; even in cases of chronic heart disease there was no evidence of a depressant action. It often loses its power to induce sleep when used continuously, and in this respect it is

probably inferior to opium, chloral, sulphonal, or paraldehyde. In several cases in which it had been very efficacious at first it completely failed after it had been exhibited for three or four successive nights. In insomnia due to pain it is of little value, and in insomnia due to extreme mental excitement it is inferior to hyoscine and paraldehyde. Repeated observations established the fact that it seldom was successful in the presence of fever, at least when the temperature was above 102° or 103° F. In ordinary doses it appears to be a perfectly safe drug. I have never given more than thirty grains at a single dose, but Houghton and Aldrich state that as high as sixty grains have been given at one time without producing any untoward symptoms, and Donald (*Therapeutic Gazette,* January 15, 1900) cites the case of a person addicted to morphine who, in a period of little more than forty-eight hours, took 192 grains of chloretone, and in consequence slept almost continuously for nearly six days, when he awoke none the worse for his experience.

In conclusion, it would appear that we have in chloretone a safe hypnotic of moderate power, which rarely gives rise to unpleasant after-effects, but of which a toleration is quite rapidly acquired; which is especially adapted for use in cases of insomnia unattended with pain, high fever, or pronounced nervous excitement.

Therapeutical Notes.

Chloral Liniment for Lumbago.—Lafond-Grellety (*Therapeutische Monatshefte,* 1901, page 54) recommends energetic rubbing of the affected portion for ten minutes with a mixture of chloral hydrate and olive oil. The chloral hydrate must be dissolved in a little water before adding it to the oil. Masse recommends a mixture of 60 parts each of lime water and oil with 30 parts of chloral hydrate.

Vasoliment is, according to the *American Druggist* for December 24, 1900, the title given by Bedall, a German pharmacist, to a liquid vehicle for the external application of medicaments, which is composed of 50 parts of oleic acid, 50 parts of spirit of ammonia, and 100 parts of liquid petrolatum. On heating the ingredients together, a clear liquid results, in which ichthyol (with a small residue), iodine, creosote, menthol, tar, etc., may be dissolved in almost any desired strength.

For Acne Vulgaris.—Captain W. D. Sutherland, I. M. S. (*Indian Medical Gazette,* November, 1900), gives the following notes from Dr. Karl Herxheimer's clinic at Frankfurt. The parts are daily smeared with this salve:

℞ Tannic acid. . . . . 5 parts;
Precipitated sulphur. . . . . .10 "
Vaseline. . . . . .85 "
M. Ft. unguent.

When the irritation caused by this treatment becomes very marked, the treatment is suspended for a couple of days or so, and is then resumed.

Or the parts may be painted daily with this lotion:

℞ Sulphur liniment. . . . . 6 parts;
Glycerin. . . . . 1 part.
M.

The sulphur liniment of the German *Pharmacopœia* has the following formula:

℞ Precipitated sulphur. . . . . .15 grains;
Almond water, Glycerin, of each. . . . . 2½ drachms;
Lime water. . . . . ½ an ounce.
M.

Another treatment is:

For half an hour, once daily, for five days, the parts are covered with Herxheimer's salve:

℞ Resublimated resorcin, Zinc oxide, Powdered starch, of each. . . .20 parts;
Vaseline. . . . . .40 parts.
M. Ft. unguent.

This is then removed with a spatula and oil rag, and at night the parts are thickly smeared with Wilson's salve:

℞ Zinc oxide. . . . . .60 grains;
Simple benzoin tincture. . . . . 1 drachm;
Lard or lanoline. . . . . 1 ounce.

M. Ft. unguent. To be applied nightly for five nights.

This is to be left on all night and washed off with soap and hot water in the morning. After five days' treatment with the two salves, the result is noted, and nothing done for at least ten days.

Nerium Oleander in Heart Disease.—For several years Mendelssohn, of Berlin (*Semaine médicale,* 1900, No. 29; *Indian Medical Gazette,* January), has been studying the action of this plant in cases of heart disorder, and finds that for commencing failure of compensation, chronic myocarditis, and fatty degeneration of the heart muscle, such as is frequently met with in old alcoholics, the following infusion is useful:

℞ Leaves of nerium oleander. . .7 to 15 grains;
Infuse in boiling water. . . . . 8 ounces.

Of this the patient takes a dessertspoonful every two or three hours.

In most cases one finds—provided that the heart muscle is not profoundly affected—that the pulse becomes slower and more regular, the palpitations rapidly disappear, diuresis is increased, and the peri-articular infiltrations—the heralds of anasarca—become less marked and finally vanish.

Where, however, the heart muscle is profoundly affected these satisfactory results cannot be obtained, unless digitalis is given.

Treatment of Arsenical Neuritis.—Dr. T. J. Paton writes to the *British Medical Journal* for February 9th with reference to the treatment of chronic neuritis as produced by the late arsenical epidemic. He has had a few cases, and in all of them has succeeded in curing it with citrate of iron and ammonium and liquor strychninæ, B. P. In one very bad case he had to increase the dose of the strychnine solution to seven minims, with a successful result. In the acute stage of catarrh, carbonate of ammonium was most successful.

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THE ARMY MEDICAL SERVICE AS A CAREER.

FROM time to time we have published official information for medical men who might be desirous of entering the medical corps of the army. In this issue we print the latest circular on the subject that has been issued by the surgeon-general. It will be seen that, owing to the recent enlargement of the regular army, there is an unusual number of original vacancies in the ranks of the assistant surgeons, namely, a hundred and twenty-nine. We learn that the prescribed age limit of candidates will be rigidly adhered to, so that it will be useless for those who are more than twenty-nine years of age to apply, unless they have had previous service as mentioned in the circular. We learn also that the requirement of hospital experience, or its equivalent in private practice, will be strictly insisted upon. Hospital work as an undergraduate will not be regarded as fulfilling this requirement; experience as a physician after graduation is what is meant. Two years of private practice will be considered as the equivalent of a year's hospital experience. The requirements and the examinations are rigid, as they always have been, and as they ought to be. Nobody but a well-equipped man, sound in body and mind, can enter the medical corps of the army; consequently it is a picked body, one to which it is a high honor to belong, and we predict that the government will find no difficulty in filling the unusual number of vacancies with the flower of our young medical graduates by the examinations that are soon to be held in Washington and in San Francisco.

Apart from quite exceptional aids to a successful career in medicine, we know of nothing more promising to the young physician than a life connection with the army. It is no more honorable than a like career in the navy, but it seems to us more attractive and richer in opportunities for active professional work. In the first place, there is the great advantage of the course in the Army Medical School, affording both additional education and an opportunity to learn much of the ways of the nation's capital. When the young medical officer comes to see actual service, it is almost sure in times of peace to be at a permanent military post or in connection with some department headquarters in a large city, for the old-time bugbear of "the plains," we take it, has become little more than a tradition. A military post, however exacting it may be for the line officers, is not by any means an uninteresting or uncongenial place for the medical officer. The society is of the best, and his professional duties, attendance upon the officers and men and their wives and children, together with sanitary inspection, and precision as to matters of record and report, are quite in line with what would occupy the mind of a busy civil practitioner in a community utterly free from paupers and tricksters and dominated by men and women of the highest type. Rarely, indeed, in civil life is such a community to be found.

All things considered, it must be admitted, we think, that the medical officer's remuneration, although none too large, is quite the equivalent of what the average well-trained medical graduate has to look forward to. Moreover, the provision for his old age, if not overabundant, is still such as to insure him against want. The army surgeon is not likely to become a man of wealth. Perhaps we may go further and say that the odds are greatly against his saving even a moderate competence, for he is almost of necessity a good, generous soul, either naturally or by force of association, giving freely for the purposes of entertainment. But he is not tormented with constantly having to take thought for the morrow.

Even in our new possessions, far from home as all of them but Puerto Rico are, the service will soon cease to be unattractive. The Hawaiian and Philippine Islands, and perhaps Guam, too, are doubtless destined soon to be largely peopled by Americans, and at the numerous permanent military posts that will have to be kept up in them army life will speedily come to be the pleasant life that it now is at the older posts. As he rises in rank, moreover, the medical officer of the army has, if he is active and ambitious, a reasonable prospect of serving at West Point, in the Army Medical Museum, in the Library of the Surgeon-general's office, or as a professor in the Army Medical School. Surely a man does not hide his light under a bushel when he enters the medical corps of the United States Army.

FANATICISM AND LAWLESSNESS.

AN incident that happened recently in Chicago may well lead those good people of fanatical tendencies who are not yet wholly unbalanced to pause and ask themselves what is the logical outcome of their two very objectionable methods for the suppression of such things as they consider evils to the community, viz., that of violence and that of undue restrictive legislation.

A certain Mrs. Carrie Nation has recently gained considerable notoriety in consequence of her crusade of violence against the liquor sellers. Her *modus operandi* has been now put into action by another set of fanatics, the faith healers. We learn that a well-organized body of middle-aged and well-dressed women, disciples of the faith-healing cult, recently made a crusade of violence, similar to that of Mrs. Nation, against the drug stores of Chicago, and not only destroyed the drugs, demolishing the "traffic of the devil," as they termed the necessities of the healing art, but even in some instances inflicted personal violence on the druggist himself.

It is true that in Kansas the traffic in liquor is illegal, and, while no civilized community can afford to tolerate the assumption of violent enforcement of the law at the hands of unauthorized individuals, there is, nevertheless, this difference between the two cases, that so long as Mrs. Nation confined her operations to the saloons of Kansas, her illegal acts were directed against what was in itself a breach of the law, while those of the Chicago fanatics were directed against that which is sanctioned by law in every State and has the moral and intellectual support of the overwhelming majority in every community. But Mrs. Nation has proposed to carry her measures into localities where liquor traffic is not a breach of the law, and, in fact, we understand, has in more than one instance already done so, and there is no doubt that her supporters hold her justified in so doing.

Now, if Mrs. Nation's belief and that of her supporters, that because in their eyes the liquor traffic is a work of the devil she is justified in using violence to suppress it, is tenable and worthy of commendation, it surely follows that the crusade against druggists and drugs (nay, why not against doctors also?) calls equally for justification and commendation.

It is undoubtedly the case that among the many fanatical adherents of prohibition in regard to liquor there are numbers who thankfully avail themselves in injury or disease of the services of the medical profession and its subsidiary arts, and who are firmly at one with the vast majority of mankind of all ages and places in regarding the healing art, however imperfect, as being a most beneficent institution and one worthy of honor and support.

We would advise any such person to ask himself how he would feel if, having a dearly loved one racked with pain, or possibly lying at the point of death, and waiting anxiously for the precious medicine to still the racking agony, or to fight the grim oppressor as he attacked the loved one's life at its last intrenchment, the messenger should return with the news that every drug store had been wrecked, and even the medicine he was bringing destroyed by a band of people acting on the honest conviction that medicine was the traffic of the devil; or if, for the same reason, the surgeon summoned by him to the relief of a serious accident should be forcibly detained?

Surely he would consider it an act of atrocious and unbearable tyranny. Surely he would be none the more inclined tamely to submit to such an invasion of his rights because he felt that these fanatics were honest in their conviction that medicine and the medical art were bad for him, and that, as one of the Chicago body is reported to have said, "all the ills of human kind can be cured by prayer."

Only one degree less pernicious than the method of violence is the increasingly frequent resort to restrictive legislation to check the abuse of a thing by altogether forbidding its use. This process is all of a piece with the principle of religious persecution and intolerance. The prohibitionist is convinced that the use of alcohol, or tobacco, or what not, is bad for the individual and for the community, and, not content with himself abstaining from their use, he would compel all others, whatever their opinion on the subject, to abstain also. But was not that exactly the standpoint of the mediæval religious bigot? Satisfied of his possession of the "true faith," he was not content to follow its precepts himself, but decided that, not only in the interests of the individual, but in those of the community also, all others should be legally forced into line.

People talk of the ages of religious intolerance and persecution as things of the past. Intolerance of all kinds is as rampant to-day as ever it was. The only difference is that methods of violence and brutality, which were then common, are no longer generally approved in any respect, and the warring of opinions shares equally with other things in this immunity. But it seems that there is a growing tendency on the part of many to revert to them, and Mrs. Nation's hatchet and the drug-

destroyers' canes look perilously like the thin end of the wedge inserted in the cleft made by undue restrictive legislation. Restrictive legislation aimed against the invasion by the individual of the rights of other individuals or of the community at large, is one thing, and is very necessary; but exercised with the purpose of imposing the will of one faction on the actions of another, not in self-defense, but out of paternal solicitude to compel the other against his will, into "the better way," is tyranny. And it is equally tyranny whether it be the imposition of the will of one upon fifty thousand or of fifty thousand upon one.

THE BACTERIOLOGICAL THERAPEUTICS OF CONSTIPATION.

THE treatment of habitual constipation is a well-worn subject, but it is one that will amply repay constant consideration, so common is the ailment and so far-reaching in its effects on the organism. Certain recent observations by Roos, of Friburg (*Münchener medicinische Wochenscrift,* October 23d, 1900; *Indépendance médicale,* January 9th), seem to be novel in one respect, namely, that they have reference to the employment of micro-organisms in correcting intestinal torpor. He remarks that there are many facts to lead us to suppose that the *Bacterium coli commune* has an influence on peristaltic action, and it occurred to him to study this supposed action of the microbe by making cultures from specimens obtained from persons whose intestinal action was free and introducing them into the intestine of constipated persons, whether *per os* or *per anum* is not stated. He experimented on himself and on several young physicians, five out of seven of whom were constipated. Three of the five were immediately relieved, and the amelioration lasted for a fortnight. He then tried the method on two patients, both women. One of them was relieved, but the other felt no effect. While, therefore, the author regards the action of the bacterium as indisputable, he thinks that further trials are necessary before one can pronounce upon the practical utility of its employment.

Pursuing his line of investigation, Roos thought that he could count upon the *Bacillus acidi lactici* as another harmless microbe that would probably serve his purpose. He accordingly made agar-agar cultures of this bacillus and inclosed them in gelatin capsules. In this form it was taken by five physicians. In four of them there occurred increased peristaltic action, with some tenesmus, and at the outset a great deal of flatulence, but the fæcal evacuations were hardly modified. Kephir had little effect, and gave rise to colicky pains. A solution of lactic acid was always effective, but its action was too transitory.

At last Roos tried yeast, a material that of late has come into varied use in therapeutics. He declares that he was surprised at the great success of his trials. He dried the yeast at a temperature of 86° F., and thus obtained a clear gray powder, which he gave in doses of eight grains two or three times a day, in the form of compressed tablets. Out of twenty patients, sixteen were so benefited that their evacuations were easy and copious, and in most of them the appetite was increased. The action of the yeast lasted for a considerable length of time after its administration was discontinued. It did not seem to be due to fermentation, for yeast with its germs killed by exposure for ten hours to a heat of 212° F. proved unexpectedly efficacious, acting like fresh yeast, but without giving rise to pain or flatulence.

THE HAVANA CONGRESS.

IT is much to be regretted that the attendance at the recent Third Pan-American Medical Congress, held in Havana, was not so large as had been expected, especially from the United States; also that many gentlemen from whom papers had been looked for failed to send their communications. We learn that the next meeting is to be held in Buenos Aires. To insure its success, the energetic men who in the past have exerted themselves in the interest of the congress will doubtless work with still greater activity.

A PROGRESSIVE SCANDINAVIAN JOURNAL.

THE *Nordiskt medicinskt Arkiv,* published in Stockholm, has for many years been one of the leading medical journals of the world. Its value has been much enhanced to those who do not read the language in which it is printed by the French abstracts of its original articles given in each number. It is now to be enlarged and published in two parts, a medical and a surgical, under the editorial charge of Dr. Axel Key; moreover, its entire contents will be translated into German, English, or French, as a rule. Its usefulness cannot fail to be largely increased.

HOW THE SUPPRESSION OF THE ARMY CANTEEN WORKS.

IT is working, and it is working promptly. Less than a mile from Fort Monroe there is a little village named Phœbus. The canteen was closed last week, and a weekly newspaper published in Phœbus is already exulting in the beneficence of the legislation that caused

it to be closed; many applications, it says, have been filed for licenses to open new saloons. The liquor traffic will flourish in Phœbus, and what does Phœbus care for what happens to the soldiers?

PRECEPT AND EXAMPLE.

A New Jersey school principal took occasion recently at a teachers' meeting to attack the use of short skirts by women teachers and that of tobacco by the men. The first was inconsistent, in this luminous-minded person's eyes, with dignity; and as regarded the last, he could not see how male teachers could teach the evils of the use of tobacco when they used it themselves. The compulsory teaching of a distorted faddism under the guise of physiology is surely infliction enough without one's being obliged to live up to it. As to the use of the short skirt, there are few reforms of recent days more practical and salutary, even were it true that some trifling loss of "dignity" attended it. We commend to the professor's attention, however, a thoughtful perusal of Havelock Ellis's chapter on the Evolution of Modesty for enlightenment on this subject.

THE YALE MEDICAL SCHOOL'S PROSPECTIVE NEW CLINICAL BUILDING.

The *Yale Alumni Weekly* for February 13th rightly sets forth the value of the projected new clinical building to the Medical School of Yale University. It is estimated that it will be finished in less than a year. It is to be a large building situated opposite the New Haven General Hospital. The school has always been creditable, and of late years it has shown itself very progressive.

THE ARCH-CHRISTIAN SCIENTIST'S GRACIOUSNESS.

Mrs. Eddy, the founder of so-called Christian Science, is at least to be credited with moderate concessions to the demands of an unalleviated average environment. She is reported to have said that she has always believed that her disciples should be law-abiding. If the law demands an individual to submit to vaccination, she recommends that he obey the law "and then appeal to the Gospel to save him from any bad effects." She would also have her followers report contagious disease to the proper authorities when the law so requires.

GALACTOCELE IN THE MALE.

Among the curiosities of surgery must be included a case reported by Kirmisson (*Bulletins et mémoires de la Société de chirurgie*, xxv, p. 707; *Centralblatt für chirurgie*, December 29th). It was that of a boy, thirteen years old, who, two months before, had received a blow on the left breast. There was a roundish, freely movable, painless tumor as large as a small mandarin orange, and the nipple was retracted. On puncture, about six drachms of pure milk was evacuated.

News Items.

Society Meetings for the Coming Week:

Monday, *February 25th:* Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

Tuesday, *February 26th:* New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynæcology); Richmond, Virginia, Academy of Medicine and Surgery.

Wednesday, *February 27th:* New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society.

Thursday, *February 28th:* New York Academy of Medicine (Section in Obstetrics and Gynæcology); New York Orthopædic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia.

Friday, *March 1st:* Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

Saturday, *March 2d:* Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending February 16, 1901:

Diseases.	Week end'g Feb. 9.		Week end'g Feb. 16.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	27	9	20	11
Scarlet Fever	369	30	404	24
Cerebro-spinal meningitis	0	0	0	0
Measles	145	5	159	7
Diphtheria and croup	260	40	296	50
Small-pox	17	6	25	6
Tuberculosis	282	165	280	189

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from February 2 to February 16, 1901:

Gandy, Charles M., Captain and Assistant Surgeon, is detailed as an additional member of the general court-martial at Fort Slocum, N. Y.

McCulloch, Champe C., Jr., Captain and Assistant Surgeon, will proceed to Zamboanga, Mindanao, Philippine Islands.

Marshall, Thomas R., Captain and Assistant Surgeon, will report to the commanding general, Department of Northern Luzon, Philippine Islands, for duty.

Phillips, John L., Major and Surgeon, will report to the commanding general, Department of Northern Luzon, Philippine Islands.

Shaw, Henry A., Captain and Assistant Surgeon, will proceed to Vigan, Philippine Islands, and assume command of the Military Hospital at that station, relieving Weston P. Chamberlain, First Lieutenant and Assistant Surgeon, who will proceed to Manila.

Stephenson, William, Major and Surgeon, will report to the commanding general, Department of Southern Luzon, Philippine Islands.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine Hospital Service for the Seven Days ending February 14, 1901:

Gardner, C. H., Passed Assistant Surgeon. Granted leave of absence for seven days.

Geddings, H. D., Passed Assistant Surgeon. Granted leave of absence on account of sickness for eight days from

January 26th. Granted leave of absence for thirty days from February 3d.

KALLOCH, P. C. Surgeon. Granted leave of absence for three days from February 17th.

McCOY, G. W., Assistant Surgeon. Granted leave of absence for fourteen days from March 18th.

MOORE, DUNLOP, Assistant Surgeon. To proceed to Port Townsend, Washington, and assume temporary command of the service during the absence on leave of the medical officer in command.

PARKER, H. B., Assistant Surgeon. To proceed to the Gulf Quarantine Station and assume temporary command of the service during the absence on leave of the medical officer.

SAWTELLE, H. W., Surgeon. Granted leave of absence for thirty days from February 20th.

Marine-Hospital Service Health Reports:

The following cases of small-pox, cholera, and plague were reported to the surgeon-general during the week ending February 16, 1901:

Small-pox—United States.

Oakland, California	Jan. 12-26	4 cases.	
Jacksonville, Florida	Feb. 2-9	2 cases.	
Jeffersonville, Georgia	Feb. 7	2 cases.	
Cairo, Illinois	Jan. 26-Feb. 9	8 cases.	
Chicago, Illinois	Feb. 2-9	2 cases.	
Pulaski County, Illinois	Feb. 2-9	5 cases.	
Ottumwa, Iowa	Jan. 5-26	2 cases.	
Lawrence, Kansas	Feb. 2-9	3 cases.	
Wichita, Kansas	Feb. 2-9	9 cases.	
Lexington, Kentucky	Feb. 2-9	1 case.	
New Orleans, Louisiana	Jan. 2-9	14 cases.	4 deaths.
Minneapolis, Minnesota	Jan. 26-Feb. 9	9 cases.	
Vicksburg, Mississippi	Feb. 2-9	4 cases.	2 deaths.
Omaha, Nebraska	Feb. 2-9	8 cases.	
Manchester, New Hampshire	Feb. 2-9	26 cases.	
New York, New York	Feb. 2-9	17 cases.	6 deaths.
Ashtabula, Ohio	Feb. 2-9	2 cases.	
Cleveland, Ohio	Feb. 2-9	48 cases.	1 death.
Toledo, Ohio	Feb. 2-9	1 case.	
Pittsburgh, Pennsylvania	Feb. 2-9	5 cases.	
Memphis, Tennessee	Feb. 2-9	16 cases.	
Nashville, Tennessee	Feb. 2-9	9 cases.	
Salt Lake City, Utah	Feb. 2-9	32 cases.	

Small-pox—Foreign and Insular.

Prague, Austria	Jan. 12-26	27 cases.	
Hong Kong, China	Jan. 5-12	1 case.	
Guayaquil, Ecuador	Nov. 24-Jan. 5		25 deaths.
Cairo, Egypt	Jan. 1-7		1 death.
London, England	Jan. 19-26	3 cases.	
Newcastle-on-Tyne, England	Jan. 19-26	5 cases.	
Paris, France	Jan. 12-19		6 deaths.
Bombay, India	Jan. 1-15		6 deaths.
Calcutta, India	Dec. 29-Jan. 5		96 deaths.
Karachi, India	Dec. 23-Jan. 6	7 cases.	3 deaths.
Madras, India	Dec. 15-Jan. 4		3 deaths.
Merida, Mexico	Dec. 20, 1900	Epidemic.	
Tuxpan, Mexico	Jan. 28-Feb. 4		3 deaths.
Ponce, Porto Rico	Feb. 8	22 cases.	
Moscow, Russia	Jan. 12-19	4 cases.	
Odessa, Russia	Jan. 12-19	31 cases.	5 deaths.
St. Petersburg, Russia	Jan. 5-19	6 cases.	2 deaths.
Glasgow, Scotland	Jan. 25-Feb. 1	180 cases.	

Cholera.

Bombay, India	Jan. 1-15		9 deaths.
Calcutta, India	Dec. 29-Jan. 5		31 deaths.
Madras, India	Dec. 15-Jan. 4		19 deaths.

Plague.

Hong Kong, China	Dec. 29-Jan. 5	2 cases.	2 deaths.
Hull, England	Jan. 30	2 deaths, crew of ss. Friary.	
Cardiff, Wales	Feb. 8		1 death.
Bombay, India	Jan. 1-15		550 deaths.
Calcutta, India	Dec. 29-Jan. 5		28 deaths.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending February 16, 1901:

ALFRED, A. R., Passed Assistant Surgeon. Detached from the *Culgoa* and ordered to the Cavite Naval Station, Philippine Islands.

ARNOLD, W. F., Surgeon. Detached from the naval recruiting rendezvous, Chicago, and ordered to the *New Orleans*.

BAGG, C. P., Passed Assistant Surgeon. Detached from the Cavite Naval Station, Philippine Islands, and ordered to the *Culgoa*.

BIDDLE, C., Surgeon. Detached from the Naval Hospital, Norfolk, Virginia, and ordered home to await orders.

CORDEIRO, F. J. B., Surgeon. Detached from the *New Orleans* and ordered home to await orders.

GRIFFITH, S. H., Surgeon. Detached from the *Prairie* and ordered to special duty in the Bureau of Medicine and Surgery.

LEWIS, D. O., Surgeon. Detached from the *Iowa* and ordered to the *Philadelphia*.

MOORE, A. M., Surgeon, retired. Ordered to duty at the naval recruiting rendezvous, Chicago.

The Harlem Hospital.—We are informed that Dr. John J. McGrath has been appointed as attending surgeon by the charity commissioner.

Dr. Seymour Oppenheimer has been appointed consulting otologist and laryngologist to the Hebrew Sheltering Guardian Society of New York.

New York Physician Denies Story of Assault.—Dr. Alfred Meyer, of 801 Madison Avenue, New York City, denies that he is the physician who was assaulted at El Paso, Texas, about a week ago.

The Bellevue Nurses on Trial.—The trial of the three Bellevue nurses on the charge of manslaughter in the first degree in connection with the death of Louis R. Hilliard, a patient in the insane pavilion of Bellevue Hospital, is now going on in Part II of the Court of General Sessions in this city before Judge Cowing.

Diphtheria Antitoxine Infected with Tetanus.—Twenty deaths from tetanus were reported recently in cases which had been treated with a particular lot of diphtheria antitoxine made in Milan, Italy. A rigid governmental inquiry has been set on foot and all this lot of antitoxine seized.

To Conduct an Investigation for the Netherlands.—The government of the Netherlands has asked Professor J. Playfair McMurrich, of the medical department of the University of Michigan, to conduct a research and make a report on the actinians found in the neighborhood of the Malay Archipelago.

Isolation for a Consumptive.—Health Inspector Kleibey, of West Hoboken, made application to Recorder Hensel recently for the isolation of a consumptive at Snake Hill, where small-pox victims are usually kept. He took the ground that consumption was a contagious disease of which the State health board takes cognizance, and his application was granted.

Poisonous Effects of Methyl Alcohol.—The Medical and Chirurgical Society of Maryland will, it is reported, bring suit against certain wholesale druggists of Baltimore for having made and sold essence of Jamaica ginger in which methyl or wood alcohol was substituted as a solvent for ethyl, or grain alcohol. It is asserted that numerous cases of blindness have been traced to the use of the methyl alcohol extract.

A Bronze Monument to Dr. Skene.—A movement is on foot to erect a bronze monument as a memorial to the late Dr. Alexander J. C. Skene, and the following committee has been formed for the purpose of determining what can be done toward the erection of such a monument: George Foster Peabody, Spencer Trask, Alexander E. Orr, Royal Peabody, Charles A. Moore, John Claflin, Hugo Hirsh, and William H. Snyder.

Nurses to be Restrained from Violating Confidences.—A bill has been introduced into the Assembly at Albany, N. Y., to restrict nurses from revealing information acquired in a confidential capacity concerning the ailments and afflictions of patients. The same restrictions as are now on physicians are placed on nurses, when acting under the direction of a duly licensed physician and surgeon.

City Restrained from Using a Detention Hospital.—An injunction has been served on the authorities of the city of Gloversville, N. Y., restraining them from using the detention hospital at Smith's Corners, the injunction being granted by Judge Nisbet on application of M. D. Murray, counsel for the town of Johnstown, in an action in the supreme court to prevent the city from establishing a detention hospital in the town.

Physician Sued for $5,000 Damages.—A singular suit to recover damages for the death of a child has been instituted in Philadelphia. In September last Mrs. Mary Nugent took her five-year-old son, John, to Dr. Harvey M. Richter, of 1443 South Second Street, for vaccination. A month later the little fellow died, and the mother, asserting that his death was due to blood poisoning caused by the use of impure virus, now brings suit for $5,000.

The State Lunacy Commission Bill.—The Senate judiciary committee has reported favorably the bill repealing the requirement that the president of the State commission in lunacy shall be a physician with at least five years' experience in the treatment of the insane. Under the bill Governor Odell can appoint any physician who has practised his profession for ten years. The salary of the president of the commission and of his two associates is put at $5,000, and each is to have $1,200 a year for expenses.

Dental Surgeons for the Army.—With the approval of the Secretary of War, Surgeon-General Sternberg has arranged for the immediate appointment of thirty contract dental surgeons for service in the army in accordance with the provisions of the new army law. They must be graduates of standard medical or dental colleges, trained in the several branches of dentistry, of good moral and professional character, and are required to pass a satisfactory professional examination. An examining board of three members was first appointed, before whom all subsequent appointees must pass an examination.

Memorial to the Late Dr. Rohé.—A memorial meeting to the late Dr. George H. Rohe was held in Baltimore recently by the Medical Society of the College of Physicians and Surgeons. The president, J. M. Barry, of the graduating class, presided. Addresses concerning the life and work of Dr. Rohé were made by Professor William Simon, Professor Aaron Friedenwald, and Professor J. W. Chambers. Short tributes were paid to the memory of Dr. Rohe by Dr. Henry M. Hurd, Dr. Wilmer Brinton, Dr. William R. Stokes, Dr. Thomas A. Ashby, Dr. H. H. Biedler, and Dr. John F. Crouch.

Neurologists Object to Amendments of the State Lunacy Commission Laws.—The proposed amendments to the law providing for the State lunacy commission and prescribing the qualifications of the commissioners do not meet with the approval of the local neurologists. At a recent meeting of the New York Neurological Society, held at the Academy of Medicine, resolutions were adopted condemning any amendment which does away with the clause providing that the medical member of the commission shall have had five years' actual experience in the care and treatment of the insane. Copies of the resolutions were mailed to members of the legislature at Albany. Opposition to the bill has also come from the board of managers of the State Charities Aid Association.

Against a Division of Fees.—A special committee of the Chicago Medical Society consisting of Dr. James H. Stowell, Dr. Frank Billings, Dr. J. B. Murphy, Dr. L. L. McArthur, and Dr. Edmund G. Wells, appointed to consider the matter of the division of fees, recommended the adoption of the following resolutions, which were adopted by a unanimous vote at a recent meeting of the society: "*Resolved,* By the Chicago Medical Society, that the soliciting or offering, giving or accepting, directly or indirectly, of any portion of a fee by a family physician, surgeon, or consultant, is dishonest, dishonorable, and unethical, and that any member of the Chicago Medical Society who shall be found guilty of such practice under such subterfuge shall be expelled."

A Dinner and Loving Cup to Dr. Quinlan.—A dinner was given and a loving cup was presented by a large number of physicians to Dr. Francis J. Quinlan in the banquet hall of the Hotel Gaston, New York, on February 7th. They had gathered to give testimony of their recognition of esteem and appreciation. Many speeches were made by members of the profession. Among those present were: Dr. Phelps, Dr. McGuire, and Dr. Smith represented St. Vincent's Hospital; Dr. John McGarth, the Post-graduate School; Dr. Joseph Bissell, Bellevue Hospital; Dr. Aspell, the Cornell Medical College; Dr. Bodine and Dr. Doherty, the New York Polyclinic; Dr. Thomas Manley, the Harlem Hospital; Dr. P. W. Burnett, the Brooklyn Eye and Ear Hospital; Dr. Laderman, Dr. Hepburn, and Dr. MacDonald, the Manhattan Eye and Ear Infirmary; Dr. Dalrymple, of New Rochelle; Dr. Nevin, of Jersey City, and Dr. Morris Manges, of Mount Sinai Hospital. The dinner was given under the auspices of the New York Celtic Society.

A Home for Physicians' Orphans.—A Physicians' Orphan Home, in which the medical profession throughout the country will be interested, is to be established in Bristol, Tenn., in the near future. The idea of a home for the orphans of deceased physicians originated with Dr. John S. Harris, of Pulaski, Giles county, Tenn. Dr. Harris is a relative of the late Senator Isham G. Harris. The organization has secured, in part, an elegant piece of property in Bristol, including a building of eighty-five rooms, and now has to raise only $45,000 to pay the balance on this property, valued at $100,000. When this amount is raised the orphanage can be put in operation. The plan of the organization is to raise eventually not less than $300,000, the purpose being to erect additional buildings and provide a fund for the maintenance of the institution.

Additional Surgeons Needed for the Navy.—Serious embarrassment prevails in the navy because of the inability of the medical corps to obtain competent young physicians willing to accept appointment as assistant sur-

geons. There are now fifteen vacancies, and two more will occur during the year by the retirement of Medical Director W. K. Scofield, senior officer of the medical corps, and Medical Director J. G. Ayers. Numerous applications for appointment are received, but so soon as the applicants learn that the rank to which they will be appointed is only that of lieutenant, junior grade, they reply that they prefer to enter the army, which promises higher rank and a better future. Surgeon-General van Reypen says it is impossible to lower the standard, and it is probable that, in order to induce superior men to enter the service, Congress will be asked to authorize greater inducements.

Trial of Dr. Pease, Christian Scientist.—At the first hearing in the trial of Dr. Charles D. Pease, dentist, surgeon, physician, and dispenser of Christian Science, who is charged by the health department with having violated Section 153 of the Sanitary Code, which requires physicians to report to the health department within one week from the day of first treatment any case of contagious disease. Dr. Alonzo Blauvelt was the first witness called. The specific case against the doctor was that of Helen Camilla Brush, who died of consumption on July 7, 1900, and the nature of whose illness, the health authorities contend, Dr. Pease failed to report. Dr. Blauvelt admitted upon cross-examination that he himself did not know the woman who had died of consumption, nor the nature of her disease. He did not know, except from hearsay, that the woman had really died from a contagious disease. Dr. Wootton also said that he knew of the case only from hearsay. The trial was adjourned to February 28th.

No Epidemic of Small-pox in Chicago.—Dr. Arthur R. Reynolds, commissioner of health for Chicago, referring to a statement concerning an epidemic of small-pox in Chicago published in our issue for February 16th, informs us that there has not been any epidemic of small-pox in Chicago since 1894, and that no schools have been closed. From the appearance of the first case, in November, 1900, up to February 18th, one hundred and seven cases of small-pox have been reported, of which sixty-two were imported from surrounding States. On the date named there were thirty-nine cases in the isolation hospital, and among the whole one hundred and seven cases but one death has occurred. None of the employees of "The Fair" is or has been afflicted with the disease.

Small-pox.—Small-pox has been in evidence recently at Albany, N. Y., and its vicinity; at St. Joseph, Mo.; North Dakota, Nebraska, Washington, D. C., and New York City. A case was accidentally discovered on a trolley car in Staten Island. Deaths have been infrequent. ——Dr. Matthew J. Rodermund, who purposely exposed himself and many other persons to small-pox contagion, holding that the disease is not contagious, has been released at Milwaukee, Wis., the period of quarantine having passed. Dr. Rodermund showed no symptoms of the disease, and there is no record of any one taking it through him. It is now said that the case to which he exposed himself was not in a contagious stage. The doctor threatens to bring suit against the city.——An anti-vaccination bill was presented in the Pennsylvania legislature recently. It repeals that section of the public health act which compels all principals or other persons in charge of public schools to refuse the admission of any child except upon a certificate signed by a physician setting forth that the child has been successfully vaccinated or that it has previously had small-pox. In this connection it is not unlikely that Dr. G. C. Groff, formerly chief of the vaccination bureau of Puerto Rico, and brigade surgeon in the volunteer army, will be called upon to appear before the committee on health and sanitation when this bill comes before it. Dr. Groff, in a lecture in the House of Representatives, stated that one year ago there were 3,000 cases of small-pox on the island of Puerto Rico. The health authorities immediately ordered a general vaccination of all the inhabitants, and over 800,000 persons were vaccinated. When he left the island several months ago there were just three cases of small-pox reported in Puerto Rico.

The Detroit Medical Society held a meeting on February 6th. Dr. Albert E. Carrier read a paper on The Doctor in Public Life.

The St. Louis Medical Society of Missouri.—At the last regular meeting, on Saturday evening, the 16th inst., Dr. W. E. Saunders read a paper entitled Veratrum Viride: Its Undeserved Neglect.

The Calcasieu Parish Medical Society was organized at Lake Charles, La., on February 2d, and the officers are: President, Dr. E. J. Lyons; vice-president, Dr. V. A. Miller; secretary, Dr. C. P. Munday.

The New York Academy of Medicine.—At the last stated meeting, on Thursday evening, the 21st inst., Dr. A. Lartigau read a paper on The Rôle of the Colon Bacillus in Human Affections.

At the next meeting of the Section in Laryngology and Rhinology, on Wednesday evening, the 27th inst., the following papers will be read: A Remarkable Case of Glosso-pharyngo-labial Paralysis, by Dr. Wolff Freudenthal; and A Combined Intra-nasal and Extra-nasal Operation for the Correction of a Congenital Concave, Vertical, and Lateral Deformity of the Nose, by Dr. B. S. Booth. Cases will be presented and new instruments and specimens will be exhibited.

The Philadelphia Neurological Society will hold a stated meeting on Monday, February 25, 1901, at 8.15 P. M., in the hall of the College of Physicians and Surgeons. Dr. William H. Teller and Dr. F. X. Dercum will exhibit A Case of Astereognosis. Dr. George L. Walton and Dr. Walter E. Paul, of Boston, will, by invitation, read a paper entitled Astereognosis, with Illustrative Cases. At the close of the meeting a reception will be tendered Dr. Walton and Dr. Paul at the University Club. Members and others are cordially invited.

Governor Odell Appoints Hospital Managers.—Abram S. Stothoff, of Schuyler county, N. Y., has been named by Governor Odell as manager of the Willard State Hospital to succeed himself, and Erwin C. Fisher, of Cattaraugus county, has been nominated to succeed Edwin H. Wolcott as manager of the Gowanda State Homœopathic Hospital for the Insane.

Alleged Kings County Hospital Abuses.—Adolph H. Goetting, commissioner of charities for Brooklyn and Queens, recently forwarded to the board of estimate and apportionment reports of physicians connected with the Kings County Hospital, which show a deplorable system of housing persons sent to that institution for the purpose of having inquiry made into their sanity. Because

they have no room, the physicians say, they are compelled to give up any attempt to classify patients, and must place in what is practically the same apartment raving lunatics and sufferers from melancholia, persons whose sanity is only under suspicion and alcoholic cases, criminals and other unfortunates.

The New Clinical Building of the Yale Medical School.—The anonymous gift of $100,000, just made to the Yale Medical School, will be used for the construction and equipment of a clinical building, of which the school has been in great need. The building will be in the free Renaissance style, constructed of North Haven red brick and East Haven stone. The trimmings will be of Long Meadow stone and terra cotta. The inside arrangement will provide for a vestibule and a large hall, which will be used as a public waiting room, a room given over to orthopædics, and a surgical clinic, which will comprise four rooms. There will also be an apothecary room and prescription department. Four rooms will be occupied by the medicine clinic. There will be special clinics for the study of neurology, pædiatrics, obstetrics, gynæcology, laryngology, ophthalmology, and dermatology. There also will be a dark room, a lecture room, an x-ray room, baths, and physicians' rooms. The building will be fireproof and as little woodwork as possible will be used

Hospital Buildings and Endowments.—An endowment of free beds in Chicago hospitals is proposed as a memorial to the queen. Former British subjects think that such an endowment would more fittingly perpetuate her memory than a monument or statue. This form was taken to commemorate the diamond jubilee, and free beds were then established in St. Luke's and the Presbyterian hospitals. There is a surplus of $400, which sum will furnish the nucleus for the free bed fund.——A bill has been introduced into the California legislature appropriating $10,800 to erect a hospital at the asylum for the deaf and dumb and the blind at Berkeley, Cal. ——A bill has been introduced into the New York State legislature providing for the acquisition by the city of New York of certain lands and water rights around Ward's Island in the East River, as an addition to the grounds of the Manhattan State Hospital.——A bill has been introduced into the Senate authorizing New York City to expend $200,000 for the establishment of a hospital in the Borough of the Bronx.——By the will of the late Nathaniel C. Brockway, of New Haven, Conn., $2,000 each is left to the Albany Hospital and the New York Homœopathic Hospital and Dispensary.——The management of St. Luke's Hospital, Aberdeen, S. D., has decided to erect a fine brick and stone hospital building the coming summer. Plans and specifications are being prepared.——Ground has been broken for the Cable Memorial Building of the Evanston Hospital at Chicago. The new structure will have three stories and an attic, will cost $25,000, and will provide thirty rooms for patients.

Births, Marriages, and Deaths.

Married.

BRINGIER—MCGALLIARD.—In Donaldsonville, Louisiana, on Saturday, February 9th, Mr. Mather Dubourg Bringier and Miss Jennie McGalliard, daughter of Dr. William M. McGalliard.

CASSIDY—HALL.—In Willimantic, Connecticut, on Tuesday, February 12th, Dr. Patrick J. Cassidy, of New London, Connecticut, and Miss Jane Hall.

DEACON—WARD.—In Oakland, California, on Thursday, January 31st, Dr. A. P. Deacon and Miss Louise J. Ward.

TREGO—LONG.—In Cleveland, on Thursday, February 7th, Dr. W. Edgar Trego and Miss Katherine L. Long.

Died.

BARCLAY.—In Newburgh, N. Y., on Monday, February 11th, Dr. Peter Moir Barclay, in the sixty-seventh year of his age.

BOND.—In Brooklyn, on Monday, February 11th, Dr. Frank Bond, in the seventy-fourth year of his age.

BUSEY.—In Washington, on Tuesday, February 12th, Dr. Samuel C. Busey, in the seventy-second year of his age.

CUNNINGHAM.—In Binghamton, N. Y., on Monday, February 11th, Dr. M. G. Cunningham, aged forty-eight years.

DOAN.—In Fremont, Nebraska, on Wednesday, February 6th, Dr. Ira Doan, of North Bend, Nebraska.

EDSALL.—In Highland Falls, N. Y., on Saturday, February 9th, Dr. William H. Edsall.

HESS.—In Oakland, California, on Tuesday, January 29th, Dr. Luther P. Hess, in the sixty-ninth year of his age.

KIRBY.—In Raleigh, N. C., on Tuesday, February 19th, Dr. George L. Kirby.

MANNING.—In Washington, on Saturday, February 9th, Dr. William P. Manning, aged fifty-six years.

MORRISON.—In Rockbridge Baths, Virginia, on Monday, February 4th, Dr. Samuel Brown Morrison, in the seventy-third year of his age.

MURRAY.—In Key West, Florida, on Saturday, February 16th, Rebah, second daughter of Dr. Robert D. Murray, United States Marine-Hospital Service.

PARSONS.—In Newark, N. Y., on Sunday, February 10th, Dr. Orrin C. Parsons, in the seventy-eighth year of his age.

PERKINS.—In Springfield, Maryland, on Thursday, February 7th, Dr. James Turner Perkins.

WEDGEWOOD.—In Lewiston, Maine, on Tuesday, February 5th, Dr. Newton J. Wedgewood, in the fifty-fourth year of his age.

Obituaries.

SAMUEL C. BUSEY, M. D.,

OF WASHINGTON.

DR. SAMUEL CLAGETT BUSEY, one of the oldest and most prominent physicians of Washington, and a man of national reputation, died on Tuesday, February 11th, in the seventy-second year of his age. He was a native of Maryland. Dr. Busey was not a voluminous contributor to medical literature, but his books and his articles in the journals were all characterized by soundness of judgment, learning, and clearness of expression. In 1876 he delivered the address in obstetrics and diseases of women and children before the American Medical Association. He was one of the early members of the American Gynæcological Society, and served a term as its president. Perhaps his most notable work was a book entitled *Congenital Occlusion and Dilatation of Lymph Channels,* published in 1878. He was a graduate of the University of Pennsylvania, and for a number of years he was a member of the faculty of the Georgetown Medical College.

Dr. Busey was highly esteemed as a physician and as a man. He had rather a military bearing, and his personality was eminently attractive. He was as genial as he was handsome, and he will long be remembered by those of his professional brethren who were so fortunate as to know him personally, including almost all the more prominent men of his time. It was not in medicine alone that he was well known; he was a diligent worker in history, especially as it pertained to the District of Columbia.

Pith of Current Literature.

Philadelphia Medical Journal, February 9, 1901.

Case of Blindness from Sympathetic Ophthalmitis, Complicated with Secondary Glaucoma. Restoration of Vision by Two Iridectomies, One with Extraction of Lens, an Iridectomy, and Tyrrell's Operation of Drilling. By Dr. Charles A. Oliver.

A Case of Unilateral, Progressive, Ascending Paralysis. By Dr. William G. Spiller.—The author refers to a similar case, reported in April by Dr. C. K. Mills, and it would seem that medical literature affords no other case that corresponds with these two. The possibility of a cerebral lesion implicating, first, the centre or the nerve fibres for the lower limb, and, later, those for the upper limb and face, must be considered. Dr. Mills believes that a gradual degeneration of one pyramidal tract would best explain the symptoms in his case.

Cavite Fever. By Dr. B. L. Wright.—This is an acute infectious disease, characterized by an abrupt onset, high temperature, severe muscular pain, and extremely tender and painful eyeballs. The exciting cause is undoubtedly micro-organismal; the predisposing causes are high temperatures, low, damp localities, overcrowding, and proximity to salt water. The period of incubation is from two days to two weeks, and every newcomer at the Cavite Naval Station contracts the disease within the first two or three weeks—hence its name.

Exophthalmic Goître of Syphilitic Origin. By Dr. R. Abrahams.—The author presents three cases of exceeding interest, and his conclusion seems to be justified, in part, that the old dictum relegating the origin of exophthalmic goître to a disturbance in the cervical sympathetic system should receive attention only after the existence of syphilis, present or past, has been absolutely excluded. Those cases which yield to mercury or iodides should be favorably looked upon as being of syphilitic origin.

The Surgical Importance of Apparently Simple Carbuncles and Furuncles of the Upper Lip. By Dr. Charles A. Powers.—Unless these carbuncles or furuncles are promptly and thoroughly excised, rapid thrombosis of the facial veins, extending to the cerebral sinuses, is apt to ensue, and a speedy and fatal pyæmia supervenes. Excision had best be done under general anæsthesia. The danger in all these cases is, not from the bacteriological form of the infection, but from its location.

A Case of Cocaine Habit of Ten Months' Duration Treated by Complete and Immediate Withdrawal of the Drug. By Dr. George William Norris.—Strychnine sulphate, one thirtieth of a grain, every quarter of an hour, and sulphonal, twenty grains, repeated in two hours, was the only therapeutic substitution, yet the patient, after twelve hours, experienced no ill effects from the complete withdrawal of the cocaine and was pronounced cured after one week. The author asserts and regrets that cocainism is yearly becoming much more common.

Report of a Case of Enormous Ventral Hernia; of a Case of Dermoid Cyst of the Ovary; and of a Case of Profound Shock Following a Crush of the Arm. By Dr. Francis T. Stewart.

The Treatment of Postoperative Hernia. By Dr. Irving S. Haynes.—According to the author, the radical treatment depends for its success upon two factors: First, isolation of the various layers forming the abdominal wall; and, secondly, the accurate and separate apposition of the several layers for a sufficiently long time to obtain solid union. Rest in bed for at least three weeks should be observed when possible.

On the Dietetic Management of Typhoid Fever. By Dr. David Inglis.—The author argues with much cogency against the use of milk as a diet in typhoid fever; it is logically unsound. Milk is a liquid in the tumbler, but we ought to think of it as a solid food. It becomes solid in the stomach, it enters the small intestine a solid, and it passes through as a solid. He advocates the use of sugar. In reality sugar is highly nutritious—no other hydrocarbon is more promptly and easily absorbed—and it leaves no detritus. A typhoid patient can take it up rapidly.

Sudden Death in Pleurisy. With Report of a Case. By Dr. Charles Lewis Allen.—This occurrence, though exceptional, is by no means uncommon. Of ten cases of which Leichtenstern gives a summary, nine were due to thrombosis and one to embolism.

February 16, 1901.

Perforating Ulcer of the Stomach; Operation; Recovery. By Dr. John H. Musser and Dr. Henry R. Wharton.

Recent Progress in the Treatment of Acute Lobar Pneumonia. By Dr. James K. Crook.—The author speaks strongly against the promiscuous drugging which is still only too prevalent, and he concurs in the admonition of late writers to withhold drugs until the indications for them arise. The use of antipyretics is condemned by almost all the writers of the year. Regarding the use of opiates, however, the profession is still at variance, while the best sense of the profession at the present day is not in favor of the routine use of alcohol in pneumonia. On the use of antipneumotoxine nothing can be said, and the net result of the year's endeavors appears to leave us about where we were one year ago. The study of antipneumotoxine is still in an elementary phase of development, and we must await further progress before expressing positive opinions as to its value.

Periodical Insanity. By Dr. A. R. Defendorf.—Periodical insanity is a mental disease characterized by a definite symptomatology, course, and outcome, and in point of numbers is one of the most prominent psychoses. The symptoms are sufficiently characteristic to permit a distinction between it and other forms of mental disease in the first attack, and to allow of a forecast of the whole course of the disease, *i. e.*, recurrence of attacks throughout the life of the individual, mostly of the character of the first, with lucid interval of a length varying from weeks to years, except in a very small percentage of cases, without a tendency to mental deterioration, except in cases where the attacks have been long, frequent, and severe, and even then it is of a light grade.

Medical Examination of School Children. By Dr. Edward M. Greene.—In regard to establishing a system of daily medical inspection in all public schools, important questions arise as to how comprehensive and searching an inspection is desirable or practicable, and how to organize and conduct the work in the most efficient manner. With the purpose of answering these questions, the author gives the details of the system in use in Boston and the results of seven years' experience as a medical inspector.

Tetanus Following Clean Operation Wounds. By Dr. Joseph B. Bissell.—The author reports two cases which apparently justify his choice of heading for this article. He says, however, that such adjectives as idiopathic, rheumatic, spontaneous, and auto-infectious, to describe the cause of tetanus, are subterfuges unworthy of the scientific. As regards antiseptic measures, the author says that the ordinary disinfection of the hands and the wound, as practised in hospitals and in private cases, will not destroy this bacillus; and, until we have some more certain way than that at present in use, we can never be sure, in the presence of this bacterium or its spore, of preventing tetanus. In treatment, a combination of the serum treatment, chloral, and the bromides should always be used, and it offers the best hope of a favorable result.

Adhesion of the Soft Palate to the Posterior Wall of the Pharynx. By Dr. Agustus Koenig.

The Treatment of Erysipelas. By Dr. N. G. Keirle.

Boston Medical and Surgical Journal, February 7, 1901.

Gonorrhœal Infection. By Dr. Benjamin Tenney.—The author endorses the conclusion of Guiard that every case of urethral inflammation lasting more than a few days is, or, at least, may have been, at the start a true infection by the gonococcus. Reference is made to the recent work of Christmas, who, from the gonococci cultivated on a medium composed of three parts of human ascitic fluid with one part of rabbit bouillon, has produced a poison, .002 of a cubic centimetre of which kills a guinea pig in from five to seven hours. Smaller doses produce death after a longer time or else a form of intoxication from which the animal recovers with a certain acquired immunity to the poison. He has succeeded in producing a powerful antitoxic serum, which has, however, no effect when injected *after* the toxine. It remains to be seen whether this work has any practical value to the human animal. As to the proportion of the community which becomes infected at some period of life, the author's impression is that twenty per cent. of the males and five per cent. of the females are involved, but no more.

The Bacteriological Diagnosis of the Gonococcus. By Dr. Oscar Richardson.—The author comments on the frequent negative results of the bacteriological examination of inflammatory conditions supposed to be due to the gonococcus. He explains these results as being due to the destruction of the gonococci after their arrival in the tissues, and not to the results of a toxine imported there from a distance. It is also known that the bodies of dead gonococci have irritating and pyogenic properties.

Treatment of Acute Gonorrhœa. By Dr. Franklin G. Balch.—As to injections, the author has been more successful with nitrate of silver than with anything else. It is unwise to use a solution of greater strength than three grains to the ounce. The author has obtained good results from the use of methylene-blue internally. It is best given in capsules containing one grain of methylene-blue, one drop of oil of cassia, and one drop of oil of sandalwood. Three capsules a day are of use. Excepting peppery and spiced foods, there are few things that do harm in the diet, though a simple diet is best. Quiet is necessary; a suspensory bandage lessens the liability to epididymitis; alcohol should be avoided.

Gonorrhœa in Women. By Dr. W. L. Burrage.—The author has written an excellent text-book article on the subject. In suspected cases, he recommends examination near the menstrual period, because relatively few gonococci at the intermenstrual time may be multiplied into many at the menstrual epoch.

Treatment of Chronic Gonorrhœa. By Dr. Gardner W. Allen.—In the treatment of this condition the objects to be aimed at are the removal of fibrous deposits, the restoration of the thickened and rigid mucous membrane to approximately its original soft and elastic condition, and the cleaning out of diseased follicles and glands. For local applications through the endoscope, nitrate of silver in solutions of a strength of from three to ten per cent. gives the best results.

The Seminal Vesicles in Gonorrhœa. By Dr. Charles L. Scudder.—The author lays great stress upon the importance of examining the urine in cases of acute seminal vesiculitis. Massage of the vesicles should be tried before resorting to extirpation, which should be reserved for extreme cases associated with serious or severe subjective symptoms.

Gonorrhœal Prostatitis. By Dr. John Babst Blake.—The treatment of the chronic condition consists of cold baths, general tonics, healthful habits, and, locally, cold sounds, deep injections of nitrate of silver, and, in the absence of acute symptoms, massage of the prostate.

Gonorrhœal Conjunctivitis. By Dr. Charles H. Williams.

When is a Gonorrhœa Cured? By Dr. Paul Thorndike.

February 14, 1901.

A Case of Cæsarean Section for Complete Placenta Prævia. By Dr. C. H. Hare.—In this case the mother died eleven hours after the operation, and the child died of acute inanition when thirteen days old. Both would probably have survived had the operation been done when first advised. The author believes that Cæsarean section, in most cases, is fully as safe for the mother as delivery by the older methods, and that Cæsarean section will save far more babies.

The Woolen Yarn Truss in Infantile Inguinal Hernia. By Dr. E. S. Boland.—The author argues that the use of some retentive apparatus will hasten and assure the natural tendency toward cure in infantile hernia, and, in favor of the woolen yarn truss, he asserts that it is easily made to measure at the bedside; it is cheap and comfortable and can be worn by frail or delicate infants where the ordinary truss would be useless or too irritating. With this or any other truss, however, vigilance and intelligence must counteract the underlying or associated causes of the hernia.

Disinfection Within or Without the Body in Diphtheria. By Dr. M. A. Veeder.—The author lays great stress upon the danger of the physician infecting his own patients, and it is the author's practice to be provided with squares of antiseptic gauze and corrosive sublimate tablets. A square of such gauze is held over the mouth and nostrils with the left hand, while the right is free to use the tongue depressor or swab. Both hands and face are wetted, before and after, with the sublimate solution, and the gauze is burned after using it. The fact that the diphtheria bacillus does lodge in cavities of the teeth and grow therein is used as a text in urging that a great amount of care be taken to rid the mouth and throat of diphtheria infection by methods of disinfection.

A Case of Idiopathic Dilatation of the Colon. By Dr. Maurice H. Richardson.—The explanation of the

dilated and hypertrophied coil lies in the existence of some kind of a chronic intestinal obstruction, the nature of which we do not as yet understand. Surgical intervention would seem to offer but a temporary relief, as a recurrence of the condition is common—the author's case is no exception.

Placenta Prævia Centralis: Report of a Case. By Dr. John W. Dewis.—A striking point in this reported case is that there had been no hæmorrhage and no warning of danger throughout pregnancy, and yet it proved a complete "placenta prævia." The author believes that the general practitioner who does obstetrical work should be competent to do a Cæsarean section.

A Case of Complete Placenta Prævia. By Dr. Frederick Coggeshall.—In this case the mother recovered, but the child died on account of the lack of proper care.

Medical News, February 9, 1901.

Some Unusual Cases of Infectious Diseases—A Clinical Report. By Dr. Delancey Rochester.

Remarks upon the Construction of Amputation Stumps, with a Report of Two Cases of Amputation by the Osteoplastic Method of Bier. By Dr. Alexis V. Moschowitz.—The author believes that Bier's method of amputation is the operation *par excellence* in all cases, with the exception, perhaps, of diabetic and senile gangrene.

Parasites in the Blood. By Dr. Leon T. Le Wald.

General Remarks on the Combination of Ether (57 parts) and Chloroform (43 parts) Known as the M. S. Mixture. By Dr. Edward Adams.—According to the author, the chief advantages of M. S. are the following: (1) Stage of excitement and struggling are not so marked; (2) short time required to get the patient under; (3) small amount of the anæsthetic required, about forty cubic centimetres an hour; (4) it is a comparatively safe anæsthetic; (5) it is very pleasant to take; (6) the after-effects are not marked; (7) patients recover quickly; (8) it can be used in nearly every condition in which either chloroform or ether is employed.

A Report of some Cases of Abdominal Surgery, with Remarks on the Diagnosis of Carcinoma of the Cæcum and the Surgical Treatment of Carcinoma of the Liver and Gall-bladder. By Dr. Charles Greene Cumston.

February 16, 1901.

A Hair-cast of the Stomach; its Successful Removal by Laparotomy. By Dr. Nathan Jacobson.—There have been but nineteen similar cases previously recorded. In nearly every instance the habit of hair-swallowing was of years' continuance. Of the nineteen cases, ten were discovered *post-mortem* and nine upon the operating table. All those operated upon, including the author's patient, a girl of eleven, recovered.

Scurvy and Rickets in Young Children. By Dr. H. A. Hare.—The peculiar characteristics of scurvy in infants are the very grave appearance of the child when suffering from the disease in its severe forms, the rapidity with which it improves under proper treatment, and the rarity with which death occurs as a direct result of the malady, since a fatality is usually produced by some intercurrent disease, which speedily saps the vitality of a child whose vital resistance is already so impaired. The author points out, as a particular feature, that this disease is distinctly a disease of the well-to-do, as distinguished from rickets, which seems to be a disease of the poor. He condemns, as a cause of scurvy, the use of artificial foods for long periods of time. When scurvy has developed as a result of the use of these foods, they should be cut out of the diet list and natural food should be largely introduced; orange juice should be freely given, and beef juice should, for a time at least, form an important part of the child's food.

The Relation of Tuberculosis to the Tenement House Problem. By Dr. Arthur R. Guerard.—The author points out many of the evils that result from overcrowding and insanitary conditions in tenements. It has been repeatedly observed that some houses in these overcrowded districts, after a time, seem to become permanently infected with tuberculosis, as evidenced by a repetition of cases of the disease. There can be but little doubt that in many instances such a "family house" is a far more important factor in the production of consumption than any supposed "family predisposition." Putting a pecuniary value on the lives and services of consumptives, the author estimates the annual loss to the city of New York at eight and a quarter million dollars. By these and similar arguments, the author urges the combination of all interests in the great work of practical sanitation.

Treatment of Lupus. By Dr. H. Rockwell Varney.—After a general consideration of the subject, the author turns to the treatment by means of exposure to the x-rays. He believes that the stimulating influence on the tissues exercised by the x-rays is produced by the action of the stronger chemical colors. After describing an experiment which proved that the only effect of the x-rays upon tubercle bacilli was to accelerate their growth, he concludes that the action of the x-rays on lupus lesions is not an antiseptic one. A typical case in which this treatment produced a favorable effect is given.

A Report of Some Cases of Abdominal Surgery, with Remarks on the Diagnosis of Carcinoma of the Cæcum and the Surgical Treatment of Carcinoma of the Liver and Gall-bladder. By Dr. Charles Greene Cumston.—The author believes that at the present time the only proper treatment of cases of carcinoma of the gall-bladder and of the liver is cholecystectomy and resection of the diseased portion of the liver. A cholecystectomy as a typical operation should be confined to cases of severe inflammatory lesions and malignant tumors of the gall-bladder.

Pregnancy and Typhoid. By Dr. G. H. B. Terry.—A case that demonstrates that pregnancy does not confer immunity to typhoid, and, also, that it does not necessarily interfere with its favorable termination.

Foreign Body in the Urethra. By Dr. H. W. Clouchek.—A seven-inch straw of "barn grass" used as a catheter was the offending substance in this case.

Medical Record, February 9, 1901.

Summary of the Progress Made in the Nineteenth Century in the Study of the Propagation of Yellow Fever. By Dr. Charles Finlay.—The author gives a very interesting account of the evolutive phase of the mosquito theory. He considers it to be proved with almost mathematical precision that the *Culex fasciatus* does transmit the disease from one patient to the next, and also that when the contaminated mosquito has been excluded the yellow fever infection is no longer transmitted.

Investigations upon Corporeal Specific Gravity, and upon the Value of the Factor in Physical Diagnosis. By Dr. Heinrich Stern.—By the author, the body density of an individual is considered to be an important factor in estimating: 1. Body soundness; a volume weight in the healthy adult male below 1.063 or above 1.073 denotes unsoundness of the organism. 2. Body immunity; a volume weight below the normal signifies that the system is predisposed to infectious disease; one above the normal announces its susceptibility to, or the presence of, eliminative disorders. 3. Qualifications as to physical work; a volume weight above or below the normal indicates a lack of the strength and endurance that accompanies the normal. 4. Probable duration of life; individuals whose specific gravity is abnormal should be considered bad risks by life assurance examiners.

Abnormal blood densities undoubtedly correspond to abnormal body densities.

The Use of the Aqueous Extract of the Suprarenal Capsule as a Hæmostatic. By Dr. W. H. Bates.

The Clinical Significance of Dulness in Appendicitis. By Dr. J. H. Miller.

February 16, 1901.

The Problem of Appendicitis from the Medical and Surgical Points of View. By Dr. Robert Abbe.—In an exhaustive article, the author deals with a subject which has few rivals in the surgical field, and takes rank to-day with typhoid, pneumonia, and rheumatism in medical thought. The fact that when operations are properly done there need be hardly any deaths does infinite credit to modern surgery. The glaring inaccuracy of comparative estimates of cures by medical and surgical measures is self-evident, when we realize that every case coming to operative cure represents from five to twenty medical cures, for careful search of the histories shows every patient to have been under physicians, time and again, in previous years for a two days' or a week's illness, and each time "cured." A medical cure means only that a lull has occurred. As to the cases of spontaneous recovery, the author expresses himself as being ready to believe that every cell is sentient and acts with a purpose by volition, "for will cannot be placed in any cell or group of cells, and why may it not be universal?" He thinks it possible, apparently, that there may be concerted action among the body cells to produce a cure, just as Lubbock's ants "build, colonize, police, go to war, lay by stores for seasonable use, etc."

The Causes of Failure of Compensation in Diseases of the Heart. By Dr. Morris Manges.—The author refers with special emphasis to a class of cases in which the failure of compensation is not due to disease, but to the physician, or to the patient himself. By this he refers to the abuse and improper administration of cardiac drugs by doctors to whom the presence of a murmur is the signal for the prompt and heroic administration of digitalis, etc. The constant and uncalled-for demands upon the reserve energies of the heart by such means not infrequently precipitate cardiac failure. At present, according to the author, the abuse of the Nauheim method, Zander exercises, etc., in the hands of many physicians is doing more harm than good in destroying compensation rather than in improving the condition of the heart. Following fads is one thing; judicious employment of these rational methods after comprehending these underlying principles is another.

Strabismus and its Management. By Dr. J. H. Woodward.—In conclusion, the author states that heterotropia is vastly more difficult to deal with satisfactorily than are most cases of cataract, notwithstanding that the truth of the proposition depends upon one's conception of what constitutes a good result. Operations for heterotropia should not be undertaken by one who is not familiar with the anatomy, physiology, and pathology of the visual apparatus; and only those operators whose technique is characterized by a scrupulous surgical cleanliness should be permitted to engage in such work. In general terms, we have to deal (in non-paralytic strabismus) with an over-acting and often contractured muscle on the one hand, and on the other with an overstretched and enfeebled muscle. The principle that ought to control operative interference is that we should weaken the one by judicious tenotomy, and strengthen the other by advancement of its insertion. Upward deviation, so often overlooked in convergent strabismus, must be corrected by "graduated" tenotomies, in order that the object sought may be obtained. The ideal result consists not only in reduction of the apparent squint, but in the establishment of normal binocular excursions of the eyeballs, and in restoration of binocular vision.

Journal of the American Medical Association, February 9, 1901.

The Technique of Bloodless Work. By Dr. Robert H. M. Dawbarn.—The author describes the present method of stripping by the fingers, for some minutes, the blood out of the elevated limb and then applying constriction at the desired point by means of a stout rubber bandage or a very large rubber tube. In applying constriction we should *select* the middle of the thigh and *avoid* the middle of the arm. When there is reason to fear collapse from the anæsthetic, the author recommends the manœuvre suggested by Dr. David Webster, who advised the maintenance, by cording the extremities, of a reserve guard of some quarts of pure blood. By the application of Spanish windlasses to the extremities, an attack of apoplexy, which might otherwise prove fatal, may very often be reduced to a comparatively small one.

Analgesia from Spinal Subarachnoidean Cocainization. By Dr. John B. Murphy.—In a conservative article the author gives the present status of this method of inducing analgesia, and has made an attempt to collate all the cases reported to the present time. Of the 631 cases, the method was successful in 596, partially so in 14, while in but 21 cases did failure result. Of the substitutes for cocaine, the author mentions eucaine β and antipyrine as being used either separately or in combination with cocaine or morphine.

Rheumatic Diseases of the Eye. By Dr. H. W. Woodruff.—The author reports three cases representing, respectively, iritis, episcleritis, and scleritis of undoubted rheumatic origin.

Ovulation and Menstruation not Interdependent Functions. By Dr. C. C. Thayer.—In support of his contention, indicated in the title, the author reports cases of ovulation occurring apart from menstruation, and *vice versa,* and asserts that, in Syria and Asia Minor, where girls marry before the appearance of the catamenia, it is not unusual for a child to be born before the mother has menstruated.

Dysmenorrhœa. By Dr. George Tucker Harrison.—In the matter of local treatment, the author agrees with the view expressed by Fritsch that, by the gradual dilatation with laminaria tents, better results can be ob-

tained than by the use of forcible dilatation at one sitting. With strict aseptic and antiseptic precautions no infection need be feared.

Treatment of Menorrhalgia of Pelvic Origin by Electricity. By Dr. G. Betton Massey.—According to the author, the electricity does not owe its value in these cases to its dilating effect, but rather to the cure of the endometritis.

Movable Kidney from the Standpoint of the General Practitioner. By Dr. Alexander Marcy.—The author recommends the examination of every person who weighs less than one hundred and twenty pounds and who complains of general nervous symptoms, indigestion, palpitation, etc., for movable kidney. Two, or even three, examinations may be necessary to demonstrate the condition. The medical treatment would consist in the use of such measures as would improve the general health of the patient, together with the accumulation of surplus fat. The rest treatment is only temporarily beneficial. Tincture of nux vomica in large doses, together with cold douching of the spine, followed by brisk rubbing, will benefit the nervous system. The value of the mechanical treatment is doubtful. The ideal treatment is the surgical.

Some Notes on the Climatology of Arizona. By Dr. William Duffield.—The author regrets the absence of climatological teaching and the dearth of literature pertaining to the subject. As for Arizona, it offers any altitude from sea level to 13,000 feet, and it has mineral and thermal springs whose virtues are just beginning to attract attention. There is a maximum of sunshine with a minimum of moisture.

Preventive Treatment of Migraine. By Dr. E. W. Mitchell.—The regulation of the diet is important, and red meats, rich and highly spiced foods, coffee, tea, and alcoholic beverages are to be avoided. Meals should be taken at regular intervals and overloading of the stomach should be avoided. Plenty of outdoor exercise should be taken, and the medicinal treatment should regulate the bowels, promote intestinal antisepsis, and stimulate the liver. The various salicylates are all useful, and in obstinate cases an occasional mercurial is required.

Cases Illustrating the Value of Rectal Injections of Salt Solution in Hæmorrhage and Threatened Collapse. By Dr. T. B. Greenly.

Physiologic Resuscitation of the Stillborn. By Dr. Daniel Lichty.

Clinical Report. Case of Ectopic Pregnancy. By Dr. J. Henry Barbat.

February 16, 1901.

The Major Obstetrical Operations. From the Standpoint of the General Practitioner, with a Tabular Report of Twenty-three Consecutive Successful Cases. By Dr. Edward Reynolds.—When the mechanical conditions make the intrapelvic delivery of an intact child at term impossible or unduly difficult, the author believes that the great superiority of Cæsarean section over the induction of premature labor in fœtal mortality, and its extremely low maternal mortality, render it the preferable operation. When the ordinary operations fail and the woman is in the unfavorable class, symphysiotomy is the operation of choice, and may be expected to lead to a favorable result for both mother and child in the great majority of cases, provided always that the degree of mechanical difficulty permits of its application. When in the unfavorable class of cases, the degree of relative disproportion between head and pelvis is too great to admit of a safe symphysiotomy, craniotomy to the living child should be unhesitatingly chosen, since the maternal mortality of either form of the section is so enormous.

Treatment of Sessile and Certain Other Ovarian Cysts. By Dr. H. B. Stehman.

Paralysis Agitans without Tremor. By Dr. Augustus A. Eshner.—Though, strictly speaking, the tremor was not wholly absent, it was at times so inconspicuous as not to be viewed as a symptom of importance, much less of diagnostic utility. The author's object in reporting the case is to invite renewed attention to the fact that the disorder under consideration may be unattended with tremor, and, further than this, when present, may be accentuated by voluntary action.

New Methods for the Application of Old Principles in the Treatment of Fractures and Deformities of Limbs. By Dr. James G. Hughes.

Possibilities of Liquid Air to the Physician. By Dr. A. Campbell White.—The author considers liquid air to be preferable as an anæsthetic in many cases—for example, opening of an abscess, incising a paronychia, and in cardiocentesis, and paracentesis thoracis or abdominis. He mentions also the almost invariable success resulting from the application of liquid air over the spinal end of the nerve in neuralgias and herpes zoster. In lupus and carcinoma, and as a stimulant in the treatment of chronic ulcers, it is of use, and also as a cauterizer.

Movements of Intestines. By Dr. Albert Bernheim.—This paper consists mainly of the report of the author's experiments with anæmias, by which he demonstrates the possibility of carrying medicine to the stomach by means of rectal injections. To a mulatto, for instance, who had previously been fasting, was given by anæmia three hundred cubic centimetres of a physiologic salt solution, with the addition of twenty-five grape seeds. Five hours later, in vomited fluid, three grape seeds were discovered. Of a total of twenty such experiments, thirteen proved positive. Whether antiperistalsis is the rule or the exception, however, will have to be demonstrated by further experiments.

The Ætiology of Yellow Fever. An Additional Note. By Dr. Walter Reed, Dr. James Carroll, and Dr. Aristides Agramonte.—At the end of a very interesting paper the authors briefly recapitulate their conclusions. The *Culex fasciatus*—the intermediate host for the parasite of yellow fever—becomes capable of conveying the infection when an interval of twelve days have elapsed since its own contamination. An experimental form of the disease can be produced by the subcutaneous injection of blood taken from the general circulation during the first and second days of this disease. An attack of yellow fever produced by the bite of the mosquito confers immunity against the experimental form of the disease. The period of incubation has varied in thirteen cases of experimental yellow fever from forty-one hours to five days and seventeen hours. Yellow fever is not conveyed by fomites. The spread of yellow fever can be most effectually controlled by measures directed to the destruction of the mosquitoes and the protection of the sick against the bites of these insects. The specific cause of the disease remains to be discovered.

The Metric System. By Dr. Frank G. Wheatley.—The system is recommended because (1) it is simple, (2) it saves time, (3) it is cosmopolitan, (4) it is scientific, (5) it is in use in the United States Coast Survey

Service, in the Marine-Hospital Service, and in the United States Army.

Evolutional and Involutional Types of Mental and Nervous Disease. By Dr. Edward E. Mayer.—The author considers the different epochs of life as factors in the production and in the exacerbation of nervous instability, and he asserts that they are rarely passed through, even in the most healthy individual, without some psychical or physical manifestation. In childhood, inherited strain is rarely noticed. In writing of the period of childhood the author refers to the transient exaltation so common among children. Parents stand complacently observing it and do not seek to repress this unnatural excitation until suddenly the picture changes, the child becomes listless, cries, and upon being taken to bed tosses about, and after it has gone to sleep, awakes frequently with a cry of anxiety. Further on he says that even the laity is apt to be suspicious of a too bright mind in a frail body, and he asserts that most often a neurotic taint is back of it.

Lyon médical, January 20, 1901.

Albumosuria (Bence-Jones) and Albumosic Urines.—M. L. Hugouneng says that the albumoses, the intermediate products between the peptones and the albumins, may be divided into two distinct groups: 1. Albumosuria of Bence-Jones, characterized by the fact that heated urine, without the addition of any chemical, is coagulated at about 212° F., and redissolves on boiling. It is very rare and is seen mainly in skeletal diseases, as in osteomalacia. 2. Ordinary albumosuria, without the characteristic sign of the first group. It is frequently seen in nephritis, but may exist independently of it.

True Calcification of the Lung. M. Devic and M. Peviot.—A pathological study. (*Concluded.*)

Presse médicale, January 19, 1901.

Disturbances of Sensation in Syringomyelia. By M. E. Huet and M. Georges Guillani.

Combinations of Terebene with Phosphorus, Iodine, and Bromine. By M. J. Hulot and M. F. Ramond.

Prognosis of Typhoid Fever by Cryoscopy of the Serum.—M. R. Romme says that the elevation of the cryoscopic point (Waldvogel) of serum is not always attributable to uræmia; in typhoid fever it stands in relation to the formation of antitoxines. If, in a given case of typhoid fever, the cryoscopic point sinks a little below normal and remains at or goes below 0.7, the prognosis becomes very grave.

Gazette hebdomadaire de médicine et de chirurgie, January 24, 1901.

Clinical Researches upon the Respiration, Laughter, Crying, and Yawning of Hemiplegics (*abstracted from the Italian*).—M. Giovanni Boeri says that the two cerebral hemispheres do not, so far as can be proved, act with absolute harmony in controlling the automatic or synergetic functions exercised on the two halves of the body. Thus, the two sides of the thorax do not expand equally in quiet or forced respiration or in the respiratory acts accompanying the so-called psychoreflex functions, such as laughing, crying, and yawning. In hemiplegics, the paralyzed side may show an increased movement in automatic acts in striking contrast to the diminished motility in the voluntary muscles. This may be due to a heightened excitation or to a suppressed inhibition (as in a cortical lesion). The exaggeration of respiratory movements in an access of convulsive laughter or crying on the paralyzed side is not necessarily followed by a similar exaggeration during quiet respiration. The author believes that the bulbar centres presiding over tranquil breathing will be found to be distinctly different from the tracts controlling the augmented thoracic movements in convulsive laughing, crying, and yawning. When these tracts can be differentiated, new elements for the localization of certain cerebral lesions will have been found.

Revue de médecine, December 10, 1900.

Ætiology of Vitiligo.—M. E. Gaucher divides the pigmentary dystrophies of the skin into two classes: (1) vitiligo of nervous origin; (2) vitiligo of toxic origin. In the latter group are included the chromic changes due to poisons, as arsenical melanoderma, the leucomelantic, cutaneous disturbances of syphilis and leprosy, and the vitiligo of disordered nutrition.

Re-education of the Movements of the Heart by Methodical Exercises. By M. F. Lagrange. (*Continued article.*)

Variations in Oxyhæmoglobin of Nurslings Treated by Injections of Artificial Serum.—M. Labbé says that newborn infants possess a larger percentage of oxyhæmoglobin than adults, averaging from fifteen to sixteen per cent. In pathological conditions, the oxyhæmoglobin becomes diminished by the injection of artificial sera, although the weight and general condition show an improvement. The change is due either to the dilution of the blood or to the lack of manufacture of new blood because of the exhaustion of the blood-making organs. From these data the author concludes that it is not wise to prolong the use of artificial serum for too great a time in infants.

Heroine as a Substitute for Morphine. By M. A. Morel-Lavallée.

Pleurotyphoid.—M. P. Remlinger reports eight cases of typhoid complicated by pleurisy. The author regards the condition as a distinct entity. The prognosis of pleurisies complicating typhoid fever is always serious, and is grave if the effusion is purulent. The later such a pleurisy appears, the more likely it is to become purulent. The effusion is usually on the left side, subacute in its course, and slow of absorption.

Notes on Chinese Medicine. By M. J. Regnault.

Gastric Crises and Syringomyelia.—M. R. Pauly and M. R. Pouly report a case of undoubted syringomyelia with gastric crises. The point raised is interesting as showing the relationship between syringomyelia and tabes.

Origin of the Leucocytes in Bone Marrow.—M. O. Josué says, as a result of his experiments, that in infections the bone marrow produces leucocytes. He has found them in all forms, except the lymphocytes, from myelocytes to polymorphonuclear forms. It appears that the products of the development of the staphylococcus are active in infections, in evoking the leucocytotic power of the bone-marrow, rather than the influence of the nervous system.

Centralblatt für Gynäkologie, January 12, 1901.

On Gersuny's Paraffin Injections for Urinary Incontinence.—Dr. J. Pfannenstiel gives warning against the use of Gersuny's method, which is as yet not firmly

established as a curative agent. He has made trial of it in one case, and his patient suffered from pulmonary and cerebral embolism of paraffin. While he favors the idea as rational and ideal, he is fearful of its consequences.

Subcutaneous Incision of the Sphincter in Perinæorrhaphy. By Professor Fritsch.

Case of Uterine Myoma Complicated with Diabetes. By Dr. Jahreiss.

January 19, 1901.

Gynæcological Massage.—Professor R. Olshausen says that much evil is done by promiscuous and uncomprehended massage in female pelvic diseases. The only cases which are suitable for massage are the exudates into the pelvic connective tissue when they have run their course and all signs of active inflammation have disappeared. These exudates form suitable cases, too, only when the external hand can reach them, so that only the abdominal parietes lie between the external and internal hands. Tumors of the tube can rarely be successfully massaged, and only when they are hydrosalpingitides whose contents can be brought to discharge themselves through the uterus. Massage of the tubes with thickened walls, without fluid contents, can be productive of good only because the surrounding infiltration yields to the treatment. Peritoneal adhesions, hæmatoceles, displacements of the uterus and vagina are not suitable lesions for massage, even though the massage of the surrounding exudates may occasionally be indirectly useful in displacements.

Pregnancy; Uterine Cancer. By Dr. T. Michalitsch.

January 26, 1901.

Proof of Traces of Bullet Forceps on the Cervix.—Professor R. Chrobak says that his observations have led him to believe that after four days, traces of bullet forceps used in operations are not visible upon a puerperal uterus, while it takes nine days for the puncture wounds to heal upon a non-puerperal uterus. He explains the difference by the greater rapidity of the epithelial growth in the former class. The subject is of forensic importance.

Küstner's Suprapubic Horizontal Incision. By Dr. Fritz Kühne.

Puerperal Gangrene of the Lower Extremities. By Dr. E. Wormser.

Centralblatt für Chirurgie, January 12, 1901.

Treatment of Recent Luxation of the Peronei Tendons.—Dr. H. Reerink reports the case of a man who, while mounting his horse, slipped and dislocated the tendons of the peroneus group of muscles just behind the external malleolus. When the swelling had disappeared, perpendicular strips of zinc adhesive plaster were applied, and these held the tendons securely in place. After a few weeks recovery was perfect.

Simplification of Plastic Achillotomy. By Professor Carl Bayer.

New Operating Table. By Dr. Rathmann.

January 19, 1901.

How to Secure Deep, Regular, Quiet Breathing at the Beginning of Anæsthesia.—Dr. C. Hofmann urges competent assistants as anæsthetizers. He has achieved good results by giving ether by the drop method. To secure regular, quiet respirations at the beginning of anæsthesia, he instructs his patients to count backwards, beginning at 200, so that the figures are somewhat difficult to pronounce, and to breathe deeply between the pronunciation of each two figures. The counting requires such a concentration of thought that the mind is freed from the contemplation of the operation and mental distraction allows the anæsthetic to be pushed.

New Method of Forming Double Flaps in Plastic Operation on the Cheek. By Dr. F. Neugebauer.

Sterilization of Silk Catheters.—Dr. M. W. Herman recommends the boiling of silk catheters for several hours in a saturated solution of ammonium sulphate. The procedure does not injure the catheters in any way. Boiled from three to five minutes, they are rendered absolutely sterile and may be used at once for catheterization.

Wiener klinische Wochenschrift, January 10, 1901.

Lactic-acid Bacilli.—Dr. Rudolf Schmidt has investigated the flora of the stomach. He says that the bacillus of Boas-Kaufmann (the lactic-acid bacillus) attains a very luxuriant growth on streak cultures from a carcinomatous stomach when blood is added to them; thus the absence of the bacillus in benign processes may be attributed to the absence of blood, which forms an excellent culture medium for it. Other features that aid its growth are, probably, stagnation of the gastric contents, diminished or absent hydrochloric acid, absence of fermentation, presence of albumin and blood from an ulcerating lesion. In carcinomatous stomachs, there may be a profuse growth of colon bacilli with no gastrointestinal fistula.

The Crossed "Sciatic Phenomenon." By Dr. J. Fajirsztajn.

Theories of Cardiac and Renal Disease. By Dr. Otto Gross.

January 17, 1901.

Relations between the Nose and Female Genitals.—Dr. Arthur Schiff accepts the work of Fliess, that the nose contains two so-called "genital spots" situated at the tuberculum septi. During menstruation, these areas become congested, swollen, and very sensitive to gentle touching with the sound. In cases of dysmenorrhœa, these areas are especially sensitive; if they are thoroughly anæsthetized, the pain disappears and the menstrual flow proceeds painlessly. It is important that perfect anæsthesia should be secured, and to this end the author advises the use of twenty-per-cent. solution of cocaine. A mere application to the nose is useless; anæsthesia of the "genital spots" must be secured. This is best accomplished by a visual application of cocaine through a nasal speculum.

Case of Unilateral Diffuse Mammary Hypertrophy.—Dr. Bernard Engländer reports such a case in which the right breast of a woman reached a colossal size.

Phosphorus in Rhachitis.—Professor Monti, in an elaborate clinical paper, says that the phosphorus treatment of rickets dates from the time of Trousseau. The cure of the disease has not yet been established by this method of treatment, especially since experimenters have not yet succeeded in curing the disease in its early stages when it is induced in animals. In spite of the use of phosphorus, the disease advances steadily in man. If beneficial osseous changes take place while phosphorus is being administered, they are rather to be ascribed to

the hygienic measures instituted at the same time. Exact measurements and weights of the body at intervals alone can determine the value of phosphorus as a therapeutic agent.

Centralblatt für innere Medicin, January 12, 1901.

Action of Morphine upon the Stomach.—Dr. Alfred Hirsch deduces from his experimental studies the following conclusions concerning the usual hypodermic doses of morphine given to man: (1) the gastric peristalsis is decidedly diminished; (2) the secretion of hydrochloric acid is at first diminished, later increased; (3) this influence varies with the dose employed and is more pronounced if the drug is given hypodermically than by mouth. The author thinks that the initial inhibition of hydrochloric-acid secretion is evoked by the excretion of the morphine by way of the gastric glands, while the subsequent increased secretion is due to central influences.

Action of Thyreoid Preparations in some Unusual Diseases.—Dr. Arthur Jaenicke reports successful results from the use of thyreoid extract in a case of malignant disease of the mamma, in two cases of lymphoma, and in one of pseudoleukæmia.

January 26, 1901.

Study of Disturbances of Pulmonary Circulation.—Dr. Joseph Esser says that the main causal element of a disturbance of the pulmonary circulation lies in the rigidity of the vessels due to sclerosis, a condition not as rare as is commonly supposed. The rigidity interferes with the work of the right heart as well as with the elastic distension of the alveoli in respiration.

Berliner klinische Wochenschrift, December 31, 1900.

Experimental Studies on Alopecia.—Dr. A. Buschke reports the case of a young woman who was taking one grain and a half of thallium acetate for the night-sweats of phthisis. After a few doses, severe neuralgias appeared in various parts of the body, including the head, and a general alopecia of the scalp then followed. The author succeeded in inducing alopecia in animals by the local and subcutaneous use of thallium. He does not explain the action of the drug.

Agglutinizing Substances from Blood-cells in the Urine. By Dr. E. Friedberger.

Severe Spinal Symptom-complex Due to Serpentine Aneurysm (*conclusion*). By Dr. Felix Brasch.

Simplification of the Phenylhydrazine Test for Sugar. By Dr. A. Neumann.—A polemic article.

Deutsche Medizinal-Zeitung, January 21 and 28, 1901.

Obesity and its Treatment.—Dr. H. Strebel considers all the methods of reducing fat in obese people and gives in minute detail the methods he pursues, a combination of well-known measures. The paper is too full of minutiæ to abstract.

Riforma medica, January 2 and 3, 1901.

Traumatic Syringomyelia. By Dr. G. Rummo.—The author reports a case of syringomyelia in a man aged twenty years who gave a history of severe traumatism. In speaking of the treatment, the author says that the first indication is to promote the nutrition and to stimulate the tone of the arteries in the spinal cord. For this purpose cannabis indica, ergot, and belladonna should be used. If there are symptoms of irritation, we must have recourse to belladonna or atropine. The second indication is to promote the nutrition of the centres. For this purpose we may use drugs that are beneficial in stimulating the functions of the nerve centres, such as iron, phosphorus, and arsenic. Iodide of sodium must be used cautiously, as the iodides promote vasodilatation and oppose the formation of new connective tissue. In some places vasodilatation is beneficial, in others it is injurious. A favorite formula of the author's is as follows:

	Grammes.	
℞ Pyrophosphate of iron and sodium	4.0	1 drachm;
Phosphate of zinc	0.06	1 grain;
Calcium glycerophosphate	10.0	2½ drachms;
Sodium arsenite	0.01	$\frac{1}{6}$th of a grain;
Hydro-alcoholic extract of ergot, Extract of nux vomica,	of each. 2.0	½ an ounce;
Extract of cinchona, Extract of coca,	of each. 3.0	45 grains.

Make 120 pills, and give one three times daily.

January 4 and 5, 1901.

On the Possibility of a Return Flow of Urine from the Bladder into the Ureters. By Dr. Filiberto Iacobelli:—A series of experiments on animals, undertaken with a view of determining the very interesting question as to the mechanism of renal infection as the result of cystitis, etc., leads the author to the following conclusions: The chief defense of the kidney and ureters is the current of urine that issues continuously from the pelvis of the kidney. So long as this current flows with normal intensity, there is but little chance of renal infection. If, however, this current is interrupted, *e. g.*, by an obstruction above the bladder, or if it is impeded by an overfilling of the bladder (retention), bacteria easily reach the kidney. The author has experimented with the *Bacillus pyocyaneus* only, but will continue his researches in the same line, and hopes to be able to show that other bacteria act in the same way. The influence of urinary retention upon renal infection is therefore really indirect, and not, as has been heretofore taught, direct and due to backward flow of urine.

January 7 and 8, 1901.

Resection of a Portion of the Liver for Syphiloma. By Dr. E. Tricomi.—In 1889 the author published an account of five partial hepatectomies (two for adenoma, two for syphiloma, and one for ecchinococcus cysts). He adds another case in which he performed this operation for a syphilitic tumor. The patient was a man aged thirty-six years, who had the primary syphilitic ulcer at the age of twenty years, but who denied the occurrence of secondary symptoms. Six years ago, without apparent cause, he was seized with a sudden intense pain in the right hypochondriac region, radiating to the right shoulder. A blister was applied, and the pain gradually disappeared in two days. Three years ago he had a second attack of this kind, which was followed by a third within two weeks, and by a fourth within a month. Ten months before admission he had a fifth attack of extraordinary severity, and during this paroxysm he noticed a swelling at the site of the pain. At first this swelling was small, but it grew until it reached its present size. During the last ten months the patient had had six attacks of severe pain in the same region, accompanied by vomiting. A slight jaundice followed each attack. He

had constipation alternating with diarrhœa, but no calculi were passed in the fæces. On examination, no syphilitic manifestations were found externally. The swelling was found to be of the size of an adult's fist, hard, elastic, smooth, movable laterally and from below upward, but not from above downward. The tumor moved with the respiration and extended below the level of the umbilicus, internally to the parasternal line, externally to a line drawn through a point two fingerbreadths outside of the nipple. There was slight jaundice. The diagnosis was uncertain between syphiloma and biliary calculi. An exploratory operation was performed. The incision was oblique, parallel to the margin of the ribs, and two fingerbreadths away from this margin, beginning at the outer border of the rectus and ending at the prolongation of the anterior axillary line. A reddish-gray tumor situated on the right lobe of the liver was discovered as soon as the peritonæum was opened. The gall-bladder was normal. The tumor was not adherent to the intestines, was pyriform in shape, attached to the hepatic margin by a pedicle, and was slightly nodular in character. As the anæsthesia did not proceed favorably, the author decided to remove the tumor in two operations. He tied the pedicle with a rubber tube and sewed the liver capsule to the peritonæum. The hepatic tissue around the pedicle tore somewhat when the tube was drawn tight, but the hæmorrhage was slight. Eight days later the cutaneous sutures were removed, and ten days later the tumor and the adjoining portion of liver were found almost detached from the rest of the organ, and the separation was completed with scissors. While the patient remained in the clinic he received antisyphilitic treatment. He was discharged on the thirty-fifth day.

January 10, 1901.

Histologic Researches Concerning the Modifications in the Organs of Hibernating Mammals. By Dr. Luigi Baroncini and Dr. Arturo Beretta.—This is the third of a series of articles dealing with the subject, the two others having been abstracted in this column of this journal for May 26, 1900, p. 834, and August 18, 1900, p. 301. In the present article the authors take up the consideration of the changes in the suprarenal capsule during hibernation. They have found that there is a progressive diminution of the fat which is deposited in various parts of the organ at the beginning of hibernation. There is also a cloudy swelling of the whole gland, and in the cells a small corpuscle, having all the characteristics of a nucleolus, appears, while the nucleolus itself can no longer be demonstrated after hibernation.

January 11 and 12, 1901.

Concerning the Limitations of the Elastic Bandage in Surgery. By Dr. Guido Turazza and Dr. Gioacchino Avesani.—A report of a series of surgical operations, including various amputations, etc., performed with the aid of the Esmarch bandage. The discovery of the principle of elastic compression as represented by the Esmarch bandage is credited to an Italian, Grandesso-Silvestri.

Roussky Archiev Patologyi, Klinitcheskoy Meditsiny i Bakteriologyi, November, 1900 (Russian Archives of Pathology, Clinical Medicine and Bacteriology).

The Influence of the Fæces on the Blood. By Dr. G. Borodouline.—While it is well known that the gastro-intestinal tract is a laboratory in which are formed certain products of decomposition, which, if retained, may give rise to pronounced morbid phenomena, such as headache, vomiting, vertigo, etc., it is by no means clearly evident as yet in what way these excrementitious products act upon the blood. The author has studied this question experimentally by injecting solutions of fæcal material into rabbits and dogs, the fæces always being taken from the same species of animals as those into which the solution was injected. The solutions were prepared with water, alcohol, or ether, or with a mixture of alcohol, water, and ether. The watery solution was prepared as follows: One gramme of fresh fæces was mixed daily with ten cubic centimetres of distilled water and carefully rubbed with a glass rod, allowed to stand for one hour and a half, filtered through a double filter, the filtrate evaporated on a water-bath, and the residue dissolved in five cubic centimetres of water, boiled, and injected. The ethereal solution was prepared by adding eight cubic centimetres of ether to two grammes of fresh fæces, mixing for five minutes, filtering, allowing to stand until the ether had evaporated, and dissolving the residue in five cubic centimetres of water, boiling, rubbing once more with a glass rod, and injecting. The alcoholic extract was prepared by adding ten cubic centimetres of alcohol (92°) to four grammes of fresh fæces, mixing, allowing to stand for one hour, filtering, evaporating the filtrate, dissolving the residue in five cubic centimetres of water, boiling, and injecting. The extract prepared with a mixture of ether, alcohol, and water was obtained as follows: The fæces (200 grammes) were first dried at 100° C. for an hour, then 600 cubic centimetres of ether were added, the dried fæces rubbed up, and allowed to stand for twenty-four hours in a closed vessel. The solution was then filtered through a double filter, and allowed to stand until the ether had evaporated. The residue on the filter was extracted with alcohol and filtered, and the residue of the second filtration was extracted with water. The three extracts were then mixed and injected into the animal. The author gives a full account of his experiments and observations. The latter may be summed up as follows: If we consider what constituents of fæces are soluble in water, alcohol, or ether, we find that only a small percentage of the constituents are so soluble, and yet all products of bacterial life and of decomposition are soluble in one of these solvents. Thus, water dissolves phenol, cresol, and all the allied derivatives, and also the fatty acids with low amounts of carbon, the amines, leucine, and some of the ptomaines. All these substances affect the blood when introduced into the circulation. Thus the phenols will produce pernicious anæmia. It may therefore be assumed that a part of the effects of the injection of fæces into the blood is due to the phenols and their derivatives, and to the amines. The substances which are dissolved by alcohol produce such unimportant effects that they need not be considered, except, perhaps, the effect of a portion of the phenol which is soluble in alcohol. On the other hand, the substances dissolved in ether belong to the most poisonous constituents of the fæces. Such, for example, are excretin, liquid ptomaines, etc. Which of these substances produces the changes observed in the blood of the animals tested, the author cannot say. He concludes as follows. 1. Aqueous extracts of fæces injected in small doses into animals will produce pernicious anæmia. 2. Alcoholic extracts of fæces under the same conditions will produce a mild anæmia. 3. Ethereal solutions will produce an anæmia not so severe as that caused by aqueous extracts, but, in addition, there will be hæmor-

rhages in various organs. 4. Extracts prepared with ether, alcohol, and water, will produce pernicious anæmia and hæmorrhages. The clinical deduction is that in man a certain number of idiopathic anæmias depend upon self-intoxication as the result of absorption of products of decomposition from the intestine. Under normal conditions the products of intestinal decomposition go to the liver after having been absorbed by the portal vein. In the liver they are changed and become harmless; but if an excess of these substances is absorbed, as in constipation, the liver cannot take care of them, and they reach the blood in an unchanged state.

The Diagnosis of Acute Inflammations of the Spinal Cord. By Dr. V. A. Mouratoff.—The author reports two cases of acute myelitis presenting some interesting features, and takes these cases as a text for a discussion of the diagnosis of acute inflammatory processes in the cord. His conclusions are as follows: 1. The parenchymatous changes in the fibres and cells do not depend on lesions of the blood-vessels—on the contrary, they are primary, and due to toxic causes. 2. One may distinguish three forms of acute myelitis according to the clinical features and the results of the autopsies: (*a*) Acute hæmorrhagic myelitis. This is manifested by a sudden onset and irreparable symptoms due to mechanical pressure. (*b*) Acute interstitial myelitis, accompanied by various sets of symptoms, some temporary, others permanent. These two forms may exist as focal or disseminated myelitis (Westphal's type). The first is manifested by a sudden onset and localized symptoms; the second by a sudden onset, by remissions, and by the appearance of new sets of symptoms indicating dissemination. (*c*) Diffuse parenchymatous myelitis, characterized by an ascending or descending progression. It is distinguished from polyneuritis by the segmentary character of the symptoms. In polyneuritis the symptoms are localized in certain nerves. 3. Lesions of the spinal cord complicating Landry's paralysis are not always "medullary," as Leyden states; a true parenchymatous myelitis may be found in this disease.

Concerning Fragmentation and Brown Atrophy of the Heart Muscle. By Dr. V. A. Taranouchine.—The author has found the following lesions in the heart of a man aged sixty-five years who had died suddenly without any apparent cause: Sclerosis of the coronary artery; diffuse myocarditis; fatty degeneration of the cardiac muscle; marked fragmentation of the muscular tissue, and brown atrophy of the muscles of the heart, with the usual disposition of the pigment near the poles of the nuclei, as well as with bead-like masses between the fibres. He has studied the last two changes in detail, and draws the following conclusions as to fragmentation and brown atrophy in the heart muscle. 1. In view of the coexistence of marked narrowing of the coronary artery and of acute fatty, pigmentary, and sarcolytic degeneration, together with diffuse myocarditis, it may be said that the fragmentation of the cardiac muscle fibre is a complex phenomenon. It depends on an acute and a chronic process. The former is simple fragmentation, due, perhaps, to a strong vicarious contraction of the previously torn fibres during the death agony; the latter is the fragmentation that takes place as a result of sarcolytic changes in the muscle, due to malnutrition, developing slowly, and capable of producing myofibrosis. As regards the origin of the pigment, all the author's observations speak in favor of an albuminogenous nature of the pigment. The method of formation of this pigment is left to further investigations, but the author calls attention to the rarity of the arrangement of the pigment which he has observed—the bead-like rows of granules between the fibrils of muscle tissue.

Concerning Artificial Cultures of the Germ of Leprosy. By Dr. V. I. Kedrovsky.—The attempts of numerous investigators who have experimented with the bacillus of leprosy with the intention of producing artificial cultures of this germ, have not been particularly successful, and the author took the opportunity of investigating the cultural peculiarities of this germ in three cases of leprosy which he had at his disposal. His experiments included a number of attempts at cultivation and staining, and the results may be summed up in the following conclusions: 1. The germs of leprosy suffer a number of alterations in their characteristics when grown outside of the body. 2. Babes classes them as members of the diphtheroid group, and styles them diphtherideæ, on account of their morphologic features. A more complete acquaintance with their biology, as the result of the observations of the author and of Barannikoff, shows that they should be classed in the group of ramifying germs, which has been until now known by the somewhat confusing terms *streptothrix, cladothrix, actinomyces,* etc. It is possible, however, that there is no considerable difference between the groups diphtherideæ and cladothrix, and that further study will show both groups to be members of the same class. 3. In artificial cultures, the bacilli of leprosy retain their power of resistance to acids in exceptional cases only. In the majority of cases this resistance is lowered, or is retained only in a certain stage of development, or, finally, this resistance may be present only in a part of the organism (metachromatic granules of Babes). 4. In some cases the germs are cultivated easily on artificial media; in others this is impossible or only feasible with great difficulty. The author used a medium which he had devised for the purpose of cultivating the lepra bacillus under the most favorable conditions of nutrition. This new medium is prepared as follows: A freshly expelled human placenta is finely chopped in a meat-chopping machine and is extracted for from eighteen to twenty-four hours in from one part and a half to three parts of distilled water. The resulting dark-red, thick fluid is passed through a filter and sterilized. The amount of water depends upon the quality of the placenta itself. The more full-blooded and rich in nutritious tissues the latter is, the less of it will be required for the culture medium. The filtration should be carried on slowly but accurately in a Chamberland filter. The medium is then poured into sterile tubes and may be kept for a considerable time without altering its nutritive value, although after a few weeks it may become brownish in color.

Concerning the Pollution of Streams by Sewage and the Measures to be Adopted for the Purpose of Removing the Latter. By Dr. G. V. Chlopine.—The author's conclusions, based on an extensive study of the subject, are as follows: 1. The most perfect method of purifying sewage is by subsoil irrigation of fields with the impure water. 2. Simple or periodic filtration does not give satisfactory results. 3. The so-called biological methods are better than the various modes of filtration. 4. Chemical purification, with subsequent sedimentation or filtration, removes principally the mechanical impurities, and affects the substances in solution but little. It is not cheaper than subsoil irrigation. 5. The methods of purification by means of the electric current are still in the experimental stage.

Letters to the Editor.

LEGISLATIVE RESTRICTION OF THE RIGHT TO PRACTISE.

103 State Street, Chicago, *February 12, 1901.*

To the Editor of the New York Medical Journal:

Sir: While attending the meeting of the Medical Society of the State of New York, I was much interested in the hearing before the Senate committee upon the so-called Bell bill, upon which you comment in your last issue. In the State of Illinois we have recently gone through a rather trying period in amending our medical practice act so as to secure a State examination. Illinois was one of the first States to have a medical practice act, but it placed the power of regulating things in the hands of the State board of health and authorized them to accept diplomas from medical colleges in "good standing" as an evidence of fitness to practise. This rule prevailed for over twenty-five years. Finally the term "good standing" became so elastic as to practically cover any diploma mill that might be started. In the effort to change the law, it became necessary to draft an entirely new statute, although it was felt by the committee in charge that the main thing was to secure the examination. Many of the profession insisted upon having a medical practice act drawn somewhat on the lines of your proposed bill, which so restricted personal liberty as to make most of the provisions unconstitutional. Any statute that goes too far in this direction nullifies itself.

The difficulty in Assembly bill No. 167 is in defining the practice of medicine, and this will always be a stumbling-block. The definition adopted in the Illinois act is very simple; it states that it shall be simply the operating on, prescribing for, or giving of a material remedy to any one afflicted, with the usual exceptions relating to the army and navy and the domestic administration of remedies. It also excepts the treatment of disease by mental or spiritual means, thus taking the Christian Scientist from among those who practise medicine.

After this legislation had been secured and the matter had been thoroughly discussed in all its bearings, the committee was convinced that it would have been better to omit all definition of the practice of medicine. There is a well-defined idea in the community as to what the words "practising medicine" mean, and it is by no means certain that it is necessary to define the practice of medicine in a medical practice act, but it can safely be left to the judges and jurors, to be applied to the circumstances as they arise in particular cases. One of our judges, in construing the medical practice act of Illinois, convicted a "divine healer" who admitted that he cured a patient by the laying on of hands. It was the latter procedure which, the judge said, brought it within the limitations of the act. Had he not resorted to physical means, but had simply used prayer or exhortation, he would have been exempt.

It is doubtful if any statute can be devised that will prevent an individual from employing a man to pray his diseases away or to sit with his back to him and instruct him to think that there is nothing the matter with him. It is the inalienable right of every American citizen, guaranteed by the Constitution, to make a fool of himself if he wishes to. The danger to the public health and to the community at large is that the so-called Christian Scientists, faith healers, and other quackish pretenders will be regarded as practitioners of medicine and receive a quasi-public recognition as such. If this can be prevented, about all that can be accomplished in the way of legislation will have been done. Therefore, a law which simply states that the practice of medicine shall not be undertaken by those who lack qualification is about as far as legislation can go.

There is a possibility that all the medical practice acts of the United States are somewhat defective in having started on a wrong principle. In attempting to restrict an occupation, there are always the difficulties of constructing a definition and of interference with individual liberty, but the principle of copyright might easily have been employed. The letters R. P., meaning registered practitioner, or M. D., or some similar title, might be employed to arbitrarily designate one who is qualified for the practice of medicine. This would operate as notice to the public that all others did not have the necessary legal qualifications, and hence were practising medicine illegally. Certain penalties could be inflicted upon those attempting to practise who were not registered, and for the unauthorized use of the designation. Such a law would be simple and easy to enforce. Any attempt to bring the ordinary usages of Christian Science within the meaning and limitations of a medical practice act is almost certain to fail.

Harold N. Moyer, M. D.

ELECTRICITY IN GOÎTRE.

25 South William Street,
Johnstown, N. Y., *November 17, 1900.*

To the Editor of the New York Medical Journal:

Sir: In looking over your valuable *Journal,* as is my weekly custom, I noticed an article by Dr. H. B. Anderson entitled Sudden Death in Goître, in the issue for November 10, 1900, on page 830, taken from the *Canada Lancet* for October. I must confess that, to me, the article appears of no little significance. There are so many factors of such signal importance and interest mentioned that a short review would not be unprofitable, since at the present day many diseases are treated by electricity with marked benefit.

If I may judge from my own experience, in no single disease are better results obtained than in the one under consideration, namely, goître. I am confident, however, that, in order to obtain the best possible results and to be positively free from any and all danger, a properly selected instrument, as well as a competent electrician, is absolutely and positively essential. I speak from that knowledge which is gained only by experience, and I have had considerable experience in the treatment of exophthalmic goître, not a single patient having thus far failed to respond in my hands kindly and satisfactorily to electrical treatment, and no untoward results having been observed. But I am digressing, perhaps, and will return to the subject.

I desire to consider the factors reported in this case. In the first place, I will say that the case, as reported by Dr. Anderson, certainly has many features resembling those found in cases in which the cause of death was known to have been by lightning or electric shock, for *post-mortem* examination of a body after a lethal shock will reveal similar conditions, and the results are the same, whether the lethal shock is received from the heavens or from the Leyden jar. The investigation made at the Polytechnic Institute by Dr. B. Ward Richardson (*Medical Times and Gazette,* May 15, 1869, and May 11,

1870; also Tidy's *Legal Medicine,* Vol. ii, 1882) shows that several kinds of sparks are obtained under different conditions, and that their discharge differs in effect, some expending their force on voluntary motion and common sensation, and these are not fatal; others on respiration and circulation, and these are fatal.

Dr. Anderson states, in regard to symptoms observed prior to the unfortunate and sad termination in death, that, on the application of the electrodes, while the patient was speaking, she was seized with spasmodic cough and choking, that the respiration became gasping and stridulous, and that the face was livid. If we consider these symptoms and make any deductions as to their probable cause, the most tenable explanation would suggest irritation of the recurrent laryngeal nerve, followed by spasmodic closure of the epiglottis, and resulting in asphyxia with accompanying loss of consciousness, interrupted respiration, suffocation, and enfeeblement and impairment (possibly with stoppage) of the heart's action.

What caused this? would be a natural question, but I do not feel justified at this distance in answering it; neither would it be wise or proper to say how much, if any, of this condition should be charged to the electrical current, for the current applied was to some extent an indefinite quantity. Dr. Anderson states that it was less than twenty milliampères; how much less he does not say, nor does he say with what kind of meter the current was measured, what current-controller was interposed, or how suddenly the full strength of the current that was used was turned on. My experience leads me to believe that few persons will tolerate even half the quantity supposed to have been used, when measured by a Weston meter, if the electrodes are applied in the region of the neck and throat in such close proximity to the large blood-vessels and important nerves. In the cases that have come under my observation I have begun with one milliampère and increased gradually to possibly five or six. Seldom, however, will a patient tolerate over two or three without exciting a cough vertigo.

In this case all the indications of asphyxia were present, such as the livid face before death; the dark, reddish color of the tissues; the color of the fluids that escaped from the incision; the dark-colored blood clots; the distended veins of the neck; the frothy, reddish-colored mucus in the trachea; the congestion of its membranes, and the facts that the lungs were normal, save for the hypostatic congestion at the base; the right side of the heart was full of dark fluid blood, and the left side contracted and empty. How far these conditions indicate the cause of death may be problematical. Yet, is it unfair to say that, when like conditions are observed in *post-mortem* examinations made on persons positively known to have received lethal doses of electricity, either by lightning or by the battery, the strength of the current reported by Dr. Anderson as having been used by him may have been an important factor in inducing the conditions observed, even though other factors and conditions may have been the real cause of death?

Another factor to be considered is the general condition of persons who have goître. We find them weak and enfeebled in some one direction, if not in all. Generally neurasthenia is marked, and tachycardia and tremor, first described by Basedow, are always present. Associated with this is a condition or feature noted by Charcot, namely, the general diminution in electrical resistance, believed to be due to the saturation of the skin with moisture, owing to the vasomotor dilatation. Owing to this covering of resistance, a small electromotive force is sufficient to give the required strength of current (Jones, *Medical Electricity,* 3d edition, 1900). The number of cells in the circuit must, therefore, be small, beginning with as few as three or four, and the galvanometer reading must be carefully attended to. Cardew (*Lancet,* July, 1891) says that a current of two or three milliampères should be applied for six minutes. Jones (*Medical Electricity,* page 267) says that for most forms of local treatment five milliampères are sufficient, and that this amount may be too much for a child or a sensitive person. When the applications are made to the head or neck, additional care must be exercised, the effect upon the brain being peculiar and unpleasant. Liebig and Rhoe, page 282, allude to weak currents ($\frac{1}{40}$ to $\frac{1}{20}$) and short sittings. Davis (*International System of Electrotherapeutics*) states that a weak galvanic current is usually applied over the cervical ganglia.

In presenting these thoughts on this case I am not actuated by a desire to question the treatment employed by Dr. Anderson, or the results, or the cause of death; I desire only to caution those who employ electricity in the treatment of disease that suitable instruments, mild currents, and proper qualifications are a *sine qua non.*

Jehiel Lefler, M. D.

Miscellany.

Information for Candidates Seeking Appointment in the Medical Corps of the United States Army.—The surgeon-general has issued the following circular, dated February 4th: The medical corps of the army, as increased from a total of one hundred and ninety-two to three hundred and twenty-one medical officers by recent Congressional action, consists of a surgeon-general with the rank of brigadier-general, eight assistant surgeon-generals with the rank of colonel, twelve deputy surgeon-generals with the rank of lieutenant-colonel, sixty surgeons with the rank of major, and two hundred and forty assistant surgeons with the rank of first lieutenant, mounted, for the first five years, and the rank of captain, mounted, thereafter, until promoted to major.

Section 1172, Revised Statutes of the United States, provides that "No person shall receive the appointment of assistant surgeon unless he shall have been examined and approved by an army medical board, consisting of three surgeons or assistant surgeons, designated by the Secretary of War; and no person shall receive the appointment of surgeon unless he shall have served at least five years as an assistant surgeon in the regular army, and shall have been examined and approved by an army medical board, consisting of not less than three surgeons, designated as aforesaid." The act to increase the efficiency of the military establishment of the United States, recently approved, further provides "that the period during which any assistant surgeon shall have served as a surgeon or assistant surgeon in the volunteer army during the war with Spain or since shall be counted as a portion of the five years' service required to entitle him to the rank of captain.

All vacancies are filled by appointment to the junior grade (first lieutenant). Promotion through the intermediate grades of rank from that of captain to that of colonel is by seniority, but there is an examination for the rank of captain and another for that of major, to

ascertain the fitness of the officer for promotion. Advancement to lieutenant-colonel and colonel takes place without further examination. The surgeon-general is selected by the President from among the members of the corps.

Pay and Emoluments.—To each rank is attached a fixed annual salary, which is received in monthly payments, and this is increased by ten per cent. for each period of five years' service until a maximum of forty per cent. is reached. An assistant surgeon with the rank of first lieutenant, mounted, receives $1,600 per annum, or $133.33 monthly. At the end of five years he is promoted to captain and receives $2,000 a year, which, with the increase of ten per cent. for five years' service, is $2,200, or 183.33 per month. After ten years' service as captain the pay would be $2,400 annually, or $200 per month. The pay attached to the rank of major is $2,500 a year, which, with ten per cent. added for each five years' service, becomes $3,000 after ten years' service, $3,250 after fifteen years, and $3,500 after twenty years. The monthly pay of lieutenant-colonel, colonel, and brigadier-general is $333.33, $375, and $458.33, respectively. Officers, in addition to their pay proper, are furnished with a liberal allowance of quarters according to rank, either in kind, or, where no suitable government building is available, by commutation. When traveling on duty an officer receives mileage for the distance traveled; the amount allowed is sufficient to cover all expenses of journey. On change of station he is entitled to transportation for professional books and papers and a reasonable amount of baggage at government expense. Mounted officers, including all officers of the medical corps, are provided with forage, stabling, and transportation for horses owned and actually kept by them, not exceeding two for all ranks below a brigadier. Groceries and other articles may be purchased from the commissary, and fuel from the quartermaster's department at about wholesale cost price. Instruments and appliances are supplied in abundance for the use of medical officers in the performance of their duties. Well-selected professional libraries are supplied to each hospital and standard modern publications on medical and surgical subjects are added from time to time; current issues of a number of representative medical journals are also furnished for use of medical officers.

Army Medical School.—In 1893 the Secretary of War authorized the establishment of an Army Medical School in the city of Washington for the purpose of instructing medical officers who have been appointed since the last preceding term of the school, and such others as may be authorized to attend. The course of instruction is for five months, and will be given annually, when practicable, at the Army Medical Museum, in Washington City, commencing in November. Five professors are selected from among the senior medical officers of the army, stationed in or near the city of Washington, also an instructor in first aid and ambulance drill.

The faculty of the Army Medical School consists of: 1. A president of the faculty, who is responsible for the discipline of the school, and who delivers a course of lectures upon the duties of medical officers in war and peace (including property responsibility, examination of recruits, certificates of disability, reports, rights and privileges, customs of service, etc.). 2. A professor of military surgery (including the care and transportation of wounded and operative surgery). 3. A professor of military hygiene (including practical instruction in the examination of air, water, food, and clothing from a sanitary point of view). 4. A professor of military medicine. 5. A professor of clinical and sanitary microscopy (including bacteriology and urinology).

Duties and Privileges.—Leave of absence on full pay is allowed at the rate of one month per year, and this, when not taken, may accumulate to a maximum of four months, which at the end of four years is then available as one continuous leave. Beyond this, an officer may still be absent with permission on half pay. Absence from duty on account of sickness involves no loss of pay. Medical officers are entitled to the privilege of retirement at any time for disability incurred in the line of duty, or after forty years' service. On attaining the age of sixty-four they are placed upon the retired list by virtue of law. Retired officers receive three fourths the amount of their pay proper at the time of retirement. When medical officers with the rank of captain approach the period of their examination for promotion to a majority they are usually assigned to duty as attending surgeons in the principal medical centres of the United States, to enable them to become familiar with the practice of the leading physicians and surgeons in this country, and to attend medical lectures, meetings of medical societies, etc. These assignments are made for one year only, in order that as many medical officers as possible may be enabled to avail themselves of the advantages thereby afforded. At the end of this tour of duty they are required to make a detailed report to the surgeon-general showing how much of their time has been occupied by their official duties and to what extent they have availed themselves of the advantages offered for professional advancement.

Examination and Appointment.—Appointments to the medical corps of the army are made by the President after the applicant has passed a successful examination before the army medical examining board and has been recommended by the surgeon-general. Due notice of the meeting of the board is published in the medical journals. Permission to appear before the board is obtained by letter to the Secretary of War, which must be in the handwriting of the applicant, giving the date and place of his birth and the place and State of which he is a permanent resident, and inclosing certificates, based on personal acquaintance, from at least two reputable persons as to his citizenship, character, and habits. The candidate must be a citizen of the United States, between twenty-two and twenty-nine years of age, in the case of a candidate applying for appointment from civil life, and between twenty-two and thirty-four years of age in the case of a candidate who has served honorably in the army of the United States, either as a commissioned medical officer of volunteers or as an acting assistant surgeon during the war with Spain or since. He must be of sound health and good character, and a graduate of some regular medical college, in evidence of which his diploma will be submitted to the board. The scope of the examination includes the morals, habits, physical and mental qualifications of a candidate, and his general aptitude for service; and the board will report unfavorably should it have a reasonable doubt of his efficiency in any of these particulars.

The physical examination comes first in order, and must be thorough. Candidates who fall below sixty-four inches in height will be rejected. Each candidate is also required to certify "that he labors under no mental or physical infirmity or disability which can interfere with the efficient discharge of any duty which may be required." Errors of refraction, when not excessive, and

not accompanied by ocular disease, and when correctible by appropriate glasses, are not causes for rejection.

The professional examinations are conducted by both written and oral questions, upon anatomy, physiology, chemistry, hygiene, pathology and bacteriology, therapeutics and materia medica, surgery, practice of medicine, obstetrics and the diseases of women and children. Examinations are also conducted at the bedside in clinical medicine and surgery, and operations and demonstrations are required to be made by the candidate upon the cadaver.

Hospital training and practical experience in the practice of medicine, surgery, and obstetrics are essential to candidates seeking admission to the medical corps of the army, who will be expected to present evidence that they have had at least one year's hospital experience, or the equivalent of this in practice.

Candidates presenting a degree in arts, sciences (other than medicine), or literature, those who hold first-class teachers' certificates or who submit evidence of graduation from a reputable high school or similar institution (approved by the board) will not usually be examined in other than the professional subjects enumerated above. Should a candidate, during his professional examination by the board, present evidence of a deficiency in his general education in elementary subjects, he may be required to undergo an oral examination in arithmetic, history, geography, literature, and physics, and such examination, if unsatisfactory, will be cause for his rejection.

Candidates claiming special knowledge of the higher mathematics, ancient or modern languages, drawing, analytical chemistry, or branches of natural science, will be examined in those subjects as accomplishments and will receive due credit therefor according to their proficiency.

To save unnecessary expense to a candidate desiring a preliminary physical examination, written authority may be given by this office for him to present himself at the nearest military post, garrison, or recruiting station for such examination. Any opinion given as to the result of such preliminary examination must, however, be considered as purely advisory and not as determining the subsequent action of an army medical board in the case.

The merits of the candidates in each of the several branches, and also their relative merit as evinced by the results obtained from the entire examination, will be reported by the board, and in accordance with this report approved candidates are appointed to existing vacancies or to such as may occur within two years thereafter. An applicant failing in one examination may be allowed a second after one year, but not a third. No concession can be made for the expenses of persons undergoing examination, but those who receive appointments will be entitled to travel allowances in obeying the first order assigning them to duty.

As a result of the large increase of the medical corps recently authorized by Congress, there are now one hundred and twenty-three vacancies; medical men desiring to enter the military service have therefore an unusual opportunity for so doing. Candidates should at once place on file in this office such papers as are required by the terms of this circular. Successful candidates who have had previous service either as commissioned medical officers or as acting assistant surgeons, will have precedence in appointment over those without previous service.

To illustrate the general character of written questions submitted to candidates under examination, a few examples from the records of an army medical examining board recently convened are hereto appended.

EXAMPLES OF WRITTEN QUESTIONS.

Anatomy.—1. Describe the origin, insertion, and action of the several muscles attached to the scapula. 2. Describe the origin, course, branches, distribution, and relations to other organs of the nerves of the arm and forearm. 3. Describe the anatomy of the palm of the hand. 4. Describe the origin, course, branches, distribution, and relation to other organs of the internal pudic artery. 5. Describe the anatomy of the ankle joint.

Physiology.—1. Tell what you know about the cerebral localization of the functions of motion and locate some of the so-called motor areas. 2. What are the functions of the thyreoid gland and the consequences of its removal? 3. What is the composition of atmospheric air and of expired air? 4. Give a list and a short description of some of the animal albuminoids. 5. What is urea? What is the normal quantity in proportion to body weight? How is it estimated?

Surgery.—1. Give in detail the preparatory and several following steps of a so-called aseptic surgical operation. 2. What is the nature and origin of pus? What is sepsis and also antisepsis? 3. Describe Chopart's amputation through the foot, with diagram. 4. Give the points of diagnostic differentiation in cases of lupous ulceration, syphilitic ulceration, and epitheliomatous ulceration. 5. Describe the different methods of procedure for the reduction of luxations of the head of the femur.

Hygiene.—1. What is the normal amount of CO_2 in the atmosphere, how much of this gas is considered admissible in inhabited apartments, and how is the amount determined? 2. What amount of cubic air space per bed would you consider a suitable allowance in a hospital ward? 3. What substances in well or river water indicate, by their presence, contamination from excreta or other organic matter of animal origin? 4. How is the hardness of water estimated and to what is it due? 5. What are the constituent alimentary substances in milk, and how does cow's milk differ from human milk? 6. What vegetable products used as food contain the largest proportion of carbohydrates and what the largest proportion of proteids? 7. What parasites dangerous to man may be present in the flesh of animals used as food? 8. How would you disinfect the excreta of patients sick with cholera or typhoid fever?

Obstetrics and Diseases of Women and Children.—1. Describe briefly the usual mechanism of a breech presentation; what dangers are to be guarded against and what difficulties to be met? 2. Under what circumstances is premature delivery demanded and how would you perform it? 3. What symptoms would lead you to suspect the presence of a uterine fibroid? State how an exact diagnosis can be made in such cases. 4. What measures, preventive or remedial, would you use in a case of puerperal convulsions? 5. What early symptoms indicate probable onset of the chief eruptive fevers in children? In which does temperature range highest, which has the shortest period of incubation, of invasion, of eruption?

Pathology and Bacteriology.—1. What are the different stages of exudative inflammation and what the products of such inflammation? 2. What are the causes of thrombosis, what the composition and varieties of thrombi, and what changes may they undergo? 3. What pathological changes are found in the spinal cord in posterior spinal sclerosis? 4. What changes occur in the

liver as a result of chronic interstitial hepatitis? 5. What bacteria are commonly found attached to the diseased valves in mycotic endocarditis? 6. What are the morphological and biological characters of the bacillus of diphtheria, and what are the evidences of its ætiological relation to this disease?

Therapeutics, Materia Medica, Toxicology.—1. By what various agents may antipyresis be produced? Give an example of each class of antipyretics and state how it acts. 2. In a case of typical acute pleurisy, state the indications for treatment in its several stages and how *you* would meet them. 3. What is salol? Give its physiological action and therapeutic uses. 4. Give the source and therapeutic uses of cocaine, the dose in each case, and its dangerous effects. 5. With what condition is poisoning from opium most likely to be confounded? How would you make a diagnosis and how treat such a case? 6. What are the poisonous effects of the lead salts? How is their presence detected? State briefly *your* plan of treatment.

Practice of Medicine.—1. Give an account of the ætiology, symptoms, physical signs, and differential diagnosis of lobular pneumonia. 2. Give an account of the ætiology, physical signs, and treatment of empyema. 3. Give an account of the ætiology, symptoms, differential diagnosis, and treatment of dilatation of the stomach. 4. What are the causes and symptoms of intestinal obstruction and what is the treatment? 5. What are the causes and results of mitral stenosis, and how would you recognize this condition? 6. Give the differential diagnosis between small-pox and measles.

Chemistry.—1. How may hydrogen be obtained? State its color and odor, and its weight as compared with an equal volume of atmospheric air under similar conditions. What is meant by "similar conditions" in the last sentence? 2. How would you obtain a jarful of carbon dioxide for experimental purposes? How would you recognize that the jar contained carbon dioxide? What is its chemical formula?—its molecular weight? 3. What is that which is known popularly under the name of "laughing gas"? What is its formula? How is it prepared? 4. What is an anhydride? Give the names and chemical formulas of two anhydrides? 5. How is sal ammoniac prepared commercially? 6. What chemical action takes place when copper turnings are heated with sulphuric acid? 7. What are the principal ores of zinc? What is the formula for zinc chloride?—for zinc sulphate? 8. What is glycerin chemically? 9. Explain the chemical action which takes place when gunpowder is exploded.

Carious Teeth as a Cause of Remote Septic Infection.—Dr. William Hunter (*Clinical Journal,* September 12, 1900), in a clinical lecture on Oral Sepsis as a Cause of Disease, with Illustrative Cases, delivered at Charing Cross Hospital, said:

"With regard to the treatment of these cases, what we want recognized on the part of all physicians, surgeons, dental surgeons, and patients, is the septic nature of this condition of caries of the mouth. The gastric trouble is not the result of any dyspeptic trouble, or of ill-health, or of insufficient mastication; but is the result of sepsis caused by the carious teeth.

"The matter, however, is important not only from the point of view of the gastric trouble, but of the infections in the body generally, caused by pathogenic organisms *locally,* acute and chronic tonsillitis, pharyngitis, otitis, follicular abscesses, glandular swellings in the neck in connection with diseased teeth; or more *remotely,* as ulcerative endocarditis, meningitis, obscure septicæmia complicated by purpuric hæmorrhages, pyæmia, osteomyelitis—in fact, the whole series of conditions caused by pus organisms. The chief problem with regard to these conditions is to find out where the pus organisms have gained entrance. They are not ubiquitous, but are definite organisms causing pus formations. We take most elaborate precautions to ensure ourselves against typhoid infection, either from drains or from water, and we take great precautions to protect ourselves from tubercle; and there is no reason why, when we are doing all this, we should allow the most accessible part of the body to remain a favorable seat, not only for the propagation, but for the actual production of them. Therefore I consider that in regard to oral sepsis there is a wide field open for preventive medicine by the practice of oral antisepsis. When I say oral antisepsis, I do not mean any general application of mild astringents or antiseptic washes. I mean (1) the direct treatment of each lesion in connection with a diseased tooth by strong antiseptic solutions: carbolic acid (1 in 20 or 1 in 40) to be applied by means of a camel's-hair brush or a piece of cotton-wool directly over the diseased root. This application should be applied to each diseased tooth as long as the patient delays having the tooth removed. A teaspoonful of 1 in 20 carbolic acid in half a tumbler of water forms an agreeable mouth wash. (2) Still better, it can be done by removing all diseased stumps and roots, in particular those lying underneath any tooth plate. (3) There is a necessity for recognition on the part of the dental surgeon that the conditions he deals with are in all cases septic; he must not be simply content to give his patient a tooth plate and say 'Wear that.' The patient will have to be educated, and shown that these plates are the cause of septic trouble unless they are actually boiled. (4) There must be an entire avoidance of any dental apparatus which cannot be removed, and therefore which cannot be kept aseptic. This is a field of preventive medicine which I think you will find can be worked in with the most extraordinary success by the doctor, the surgeon, the dental surgeon, and the patient.

"There is another matter of very great practical importance. Who is to do all this? The physician sees the mouth condition, and sends the patient to the dentist. The chances are at least ten to one that the patient will not go there, because the dentist is associated primarily in his mind with the extraction of teeth. The surgeon looks upon sepsis in the mouth as coming within the domain of the physician, unless there be an actual disease of the jaw. The dental surgeon will treat the diseased tooth dentally, but he will not have his patients come back in order to be treated locally. So the poor patient is in the position of being driven about from one to another. I have been impressed by the neglect of the patient in this way, and I have tried, as I have narrated, the effect of sending patients in an extreme condition like case 3, that I have described, to the dentist. He came back without having anything done. Therefore the question is for each one to recognize that it is not an affair of the other. If you see a follicular tonsillitis or a quinsy you do not immediately pass the patient on to a throat specialist; you treat it yourself. This condition of oral sepsis is one which can be treated successfully by all, even by the patient himself, provided its septic nature and its importance as a disease factor be fully grasped.

"The effects I have described are very common. That

they are not even more common is solely due to the remarkably resistive powers possessed by the mucosa of the mouth. How rapidly wounds in the mouth heal is well known. Now, an important point in the cases of which I am speaking is, that pus derived from soft tissue is not so virulent as that which is derived from bone (tooth). It is only now and again, when the bone condition is very bad and the resistive power of the mucous membrane of the mouth is very much lowered, that you get the bad conditions which I told you of in the early part of the lecture.

"The great resisting power of the mouth is, however, no reason why such conditions of oral sepsis should be overlooked. How would you regard a physician or surgeon who allowed a patient to go about for many months, not to say years, with several small follicular abscesses in his tonsils? You would think it very neglectful; and if that patient came to you with a sallow look, and you saw pus on the tonsils, you would say at once, 'Here is the cause of the condition'; and rightly so. But it is the rule to neglect similar cases in connection with the teeth. It will show you how much it is overlooked when I tell you that notwithstanding all the literature pointing out the troubles due to septic organisms in the tonsils, oral sepsis does not seem to have received notice as a cause. Even in connection with stomatitis, mention is made of the irritation caused by a pointed tooth, or the stem of a pipe used by the patient, but nowhere is the reader told to look out for septic inflammation around the tooth. In connection with gastritis, mention will be found of the want of teeth, and the consequent imperfect mastication, as causes of indigestion; but nowhere, not even in the latest treatises on diseases of the stomach, will mention be found of necrosed teeth as a source of infection. Most strange of all, even when the condition of the stomach is one of suppurating gastritis, the rôle of every conceivable factor (errors in food and drink, etc.) receives fullest consideration; but not once is mention made of oral sepsis, even as a possible factor, although in one of the most striking cases related, the condition described as preceding the gastritis was that of septic ulceration all around the mouth, with necrosis of the jaw, and splinters of bone lying about."

Self-castration.—Dr. Daniel Stroch reports in the *Journal of the American Medical Association* for January 26th the case of a young white man, who was brought to the hospital about midnight on September 26, 1900. A couple of hours previously he had castrated himself, removing the entire scrotum. His appearance indicated that he had lost considerable blood, and the severed vessels were still bleeding. The scrotum was found to have been amputated close to the urethra, and the spermatic cords were retracted into the external abdominal rings. The vessels of the cords were ligated and the cutaneous flaps of the wound were sutured in the median line. A week subsequently the wound had healed by first intention; and it was expected that when cicatrization and contraction were complete there would remain only a median raphé, in close contact with the penis.

The man, in describing his operation, said he first tied a cord around the scrotum, above where he intended to cut, believing this was necessary to save him from a dangerous loss of blood. He then seized the scrotum and testicles in his left hand, and with a razor cut from above downward, with a sawing motion, severing successively all the structures. He said the "tendons" were more difficult to cut than the skin; that there was not much bleeding at first, but it became more severe in a few minutes. When asked if he was not tempted to abandon the procedure when he felt the pain of the cut, he replied that the pain was not very great, and he thought the flow of blood tended to prevent much suffering. He observed that the cord placed around the scrotum to prevent bleeding did not remain in position after the parts were severed, and to this fact he attributed the greater flow of blood that subsequently ensued. To the remark that he might have amputated the penis in his haste, he laughingly replied that he was careful not to do that.

A native of Switzerland, twenty-seven years of age, he had resided in this country fourteen years; a florist by occupation. His father, six brothers and three sisters were living, his mother dead, the cause of her death unknown. From his description, the members of his father's family were probably of a melancholy temperament and easily excited. Concerning himself, he said that he was always despondent, that his employers did not use him rightly; that he was nervous, and his memory poor. He always had some pain in his testicles, and frequently pain in the back. He had never practised masturbation; had never had sexual intercourse, and had never experienced strong desire for it. Involuntary emissions occurred at intervals of a month or six weeks, with the result that the pain in the back and testicles became less severe for a short period. Socially, he was always a recluse, and never associated with the opposite sex.

When questioned as to the immediate motive that prompted him to mutilate himself, he replied that it was because of the pain he experienced, and he thought by this means to obtain relief. He felt that his lack of success in life and his inability to please were due to the condition of his sexual organs, and he hoped by removing the offending members to obtain relief from the various influences that made him unhappy and a constant sufferer. He further said that he had for years meditated on the desirability of removing the testicles in certain individuals, to prevent the transmission of undesirable traits to posterity. He had no knowledge of the Skopzi, and was not familiar with the practices of that sect.

On the seventh day following the removal of the testicles an involuntary seminal emission occurred, during sleep, but was unattended with a lascivious dream: it caused him to awake immediately. The stain on the linen was examined ten hours later, and presented all the characteristics of dried semen. Washed with dilute acetic acid, a slide was moistened with the resulting mixture, and the microscope revealed the presence of spermatozoids, but not in large quantities, there being, on an average, from three to five in the field of observation. Following the emission. there was considerable pain in the wound.

The testicles, wrapped in a handkerchief, were taken with the patient to the hospital. They were of normal size and consistency, and minute inspection revealed that they were free from disease.

Cerebrospinal Meningitis.—Major Harold Brown, I. M. S. (*Indian Medical Gazette,* January), in a Report on an Epidemic of Cerebrospinal Meningitis in Calcutta, says:

"To sum up the treatment, it may be said that *fulminant* cases will die, whatever treatment be adopted, while the 'atypical' ones will recover with mere rest in bed. In the acute and subacute ones, general measures must be adopted, and symptoms should be treated on common sense principles, but it must be remembered that the sooner a case is removed from the place of infection, the better will be the chance of recovery."

Original Communications.

THE AXIS-TRACTION FORCEPS, WITH SPECIAL REFERENCE TO ROTARY AXIS TRACTION IN THE TREATMENT OF POSTERIOR POSITIONS OF THE ANATOMICAL HEAD.

By SIMON MARX, M. D.,
NEW YORK.

After a very extensive experience with the Tarnier axis-traction forceps, I am in a position to call attention to the great scientific value of this instrument. This applies particularly to cases where a posterior position of the head, whether of the vertex or the face, presents; for I feel that the difficulties to be encountered in both these vicious positions are similar in a great many ways. But the occipitoposterior position is far more frequent than the mentoposterior, and yet the proper line of action is, in the eyes of many men, as much a moot point for the former as for the latter, even though the former, according to my experience, is of very common occurrence, either primary or persistent, while the latter is one of the rare complications encountered in midwifery. It is about two years since my first article appeared on this subject. At that time the attempt was made to impress upon my readers the absolute and great value of true axis traction. And yet there is still to-day as little interest shown in the use of the axis-traction forceps as formerly. Few know of its use, its application and worth; fewer still have ever applied it; and yet I doubt whether, when once its mechanism is understood, and once it is successfully employed, any other forceps would ever be tried again. It is remarkable that so valuable and truly scientific an instrument as the axis-traction forceps has found so little favor with the profession at large, and still more remarkable that so few of our obstetric teachers employ it. There is hardly a text-book but mentions axis traction, but they go no further. Most of them teach no mechanism of application and mode of delivery, simply stating that axis-traction instruments exist, and allowing the subject to pass in as few words as possible. In my first article I made use of the following lines, which I beg leave to quote: "To my mind, there are no instruments that we are called upon to use which are more, if I might say, intelligent than these. They are strength-saving to the accoucheur, safe for the mother, and eminently more safe for the child. Whilst they have much, very much, in their favor, yet there are certain objections to their use which, in a great measure, cannot be overcome, and these objections do not all hold good, since they apply with equal force to the ordinary obstetric forceps."

With many the greater expense of the instrument would deter them from procuring it. And the necessity of having more than one forceps would, again, be an objection. Since beginning its employment, now more than eight years ago, I have never found the need of using any other than the Tarnier forceps in a very large private, consulting, and hospital practice. In fact, it is the only obstetric forceps I have used in this time. The greater expense is certainly fully compensated for by the amount of muscular energy saved and the diminished risk to mother and child.

A possible objection to the forceps is its length, making proper sterilization a difficult task. This can be readily overcome by using a baby's bath-tub for this purpose.

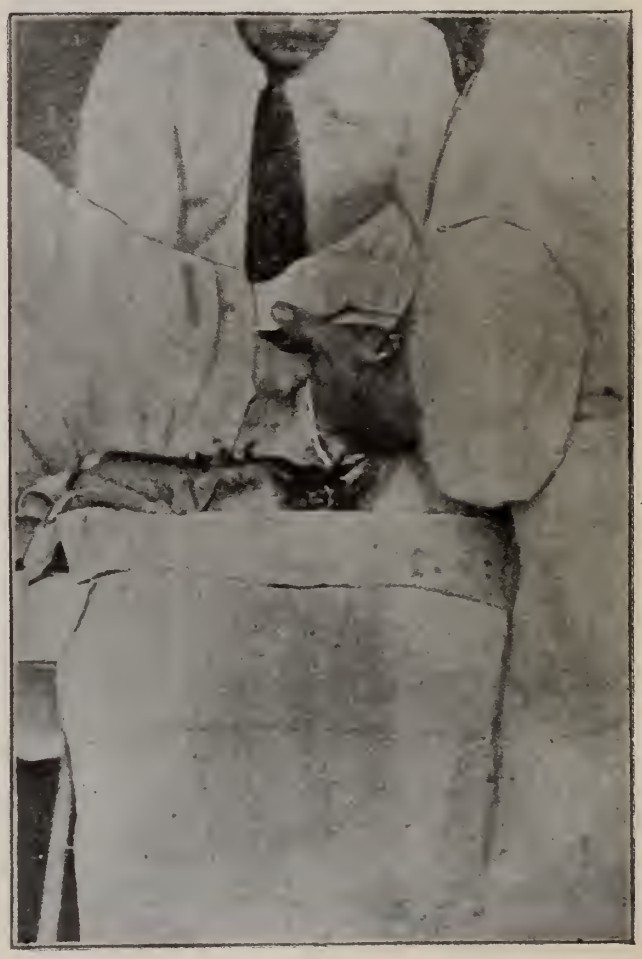

Fig. 1.

There is no greater difficulty in the application of the blades themselves. But the necessity of the attachment of the traction rods would make the entire procedure seemingly a perplexing one: but does this not apply to the general statement that the more scientific an instrument and the more complex its mechanism, the greater the difficulty of its application? This is readily overcome and soon mastered by increasing experience.

Unless one is skilled in its use, or the lines for its application are not closely followed, the danger of slipping is vastly increased, being far greater than with the ordinary forceps. I have seen, in the hands of an otherwise very skilful accoucheur, who for the first time applied a

Tarnier, a complete rectovaginal laceration occur from an improper mechanism and consequent slipping of the instrument. When this accident occurs, the danger to the maternal and fœtal structures is far more profound than ordinarily. And yet in all hands, expert or inex-

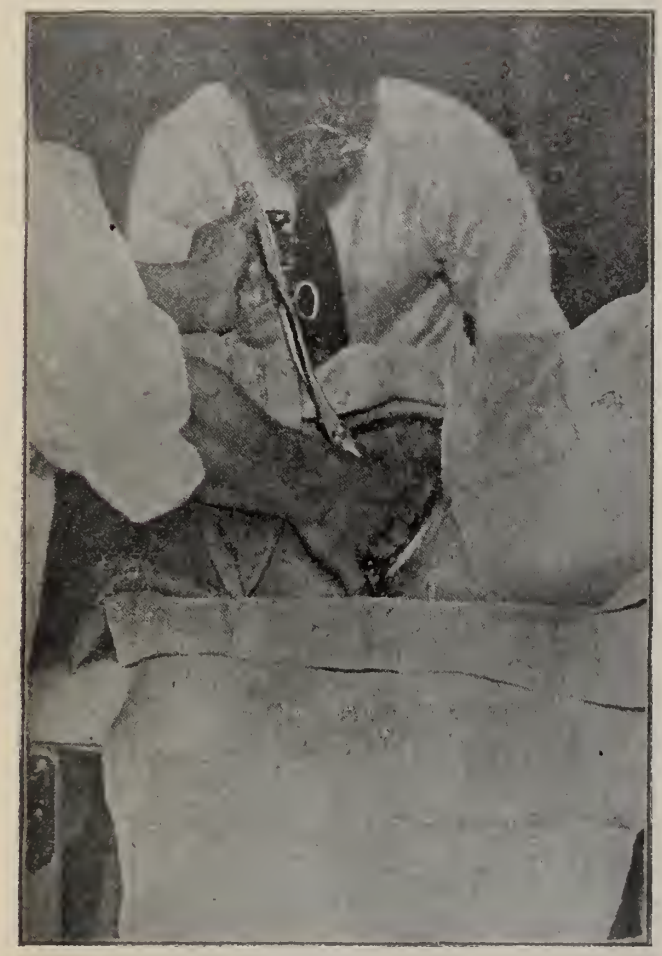

FIG. 2.

pert, slipping of the instrument occurs once in a while. No matter what forceps is used, an unsafe or uncertain seizure should at once suggest that a persistent use of no matter what forceps is fraught with considerable danger, not alone as to lesions, but also as to probable failure in extraction; hence one or the other of the alternate operations is called for. If the instructions given below are closely followed, the danger from this direction will be reduced to a minimum.

The last danger is one, not of life, but of disfigurement; but this can be overcome by entirely discarding the fixation screw. This screw, it was formerly believed, kept the forceps blades in place, and, giving them a firmer purchase, prevented the possibility of slipping. This has been proved incorrect in practice, for it is now a well-known fact that the blades are kept in place by the impact of the fœtal head and the pelvic wall. With the fixation screw in action, it has been my painful experience to note, on many occasions, pressure necrosis at the points of application of the blades on the fœtal skull. In one case a permanent and ugly scar was the result. Accordingly, from my experience, the screw is an obsolete fixture and is of no value whatsoever. Since it is of no use and can only harbor dirt, as well as materially confuse the accoucheur and increase the difficulty of application, it should not be present in the newer models. As to the advantages of the modern axis-traction forceps, such as Tarnier's or the Jewett, they are overwhelming. This I pointed out in a paper which I read and published in March, 1894.* My very much increased experience since that time has not caused me to modify the views I then held. I must therefore be pardoned if I quote literally from this work. These remarks are limited to those instruments minus the perineal curve (new model). With the ordinary forceps in action we must, of necessity, influence moulding, rotation, and descent of the head, through our purchase upon the handles, by traction and pressure on the head. This is not so when the Tarnier instrument is used. Here the handles of the forceps are left alone. They

FIG. 3.

are simply used to act as an index as to the position of the head and as a guide to the direction in which we are supposed to make traction. Our extraction force is directly applied to the cross-bar of the traction rods,

* *Medical Record.* Study of Occipitoposterior Positions.

which is used to drag the head uninfluenced through the pelvic canal. Rotation can then occur in due time, as it does in the great majority of cases (occipitoposterior cases). Therefore, the great advantage in using axis traction is the free mobility of the forceps when applied to the head. With the ordinary forceps, the mechanism, as compared with the shape of the pelvis, seldom comes into operation; in fact, the mechanism is often interfered with unconsciously, so as to materially disturb the descent and evolution of the head, possibly checking or influencing what would otherwise be a normal position of the fœtal head; while, with the Tarnier forceps, the head, with the body of the instrument, obtains greater freedom of mobility.

A further great advantage applies to the child, and is of the utmost importance, immediate and remote, as to life and health. The ordinary compression force, as applied to the fœtal skull by the forceps, is variously estimated at about twenty-five pounds. Further, twice this compression force, or fifty pounds, represents the traction power. In a very difficult delivery, where enormous strength is exercised to deliver, this force is materially increased to a power one shudders to estimate in pound weight. Every pound of increased traction means half a pound of compression force. In other words, with the ordinary forceps, the more powerful the extraction force applied, the greater the compression exercised upon the fœtal skull, no matter how carefully done; and no matter what amount of resistance is placed between the handles at any point, to lessen the compression power, too much space between the handles absolutely insures a loose or unsteady application of the blades, and consequently far greater disposition to slipping. This is entirely and absolutely overcome in the axis-traction instruments, where practically no pressure is brought to bear upon the head, since all the extraction force is applied directly to and from the cross-rods.

The last, and to my mind the greatest, advantage possessed by the instrument is its saving of muscle and strength on the part of the operator. A case that has proved to be futile of success with the ordinary forceps will yield with the axis-traction instrument in a remarkable and rapid fashion. With a minimum amount of force expended and none lost, it often seems marvellous with what ease delivery is effected in an apparently difficult case. Further, the severest trial the average physician has, is to determine in what axis he has to exercise traction in order to deliver the woman successfully. The tendency is generally to pull too far forward and upward. With the ordinary instrument there is absolutely no trustworthy guide as to traction in the proper axis. Consequently, there is not only greater danger to mother and child, but failure will almost invariably follow as to successful delivery. This is entirely overcome with the axis-traction forceps. Here, the handles of the forceps are an extremely useful guide as to the position of the head, and, consequently, an ever-guiding factor, a compass, as it were, as to the direction in which the force of the extraction is to be applied. As to the indications for its use, they do not differ in any way from those of the ordinary forceps, generally speaking, as with it the head must be engaged, or, if it is not engaged, there must be a contra-indication to the performance of a version or other conservative operation; again, the position and presentation should be normal, or relatively so, or, if abnormal, readily correctible by hand or instrument, and the maternal parts in a condition to allow of the passage of the child without endangering their integrity.

Fig. 4.

In the application of the forceps, the same rule applies as in the use of the ordinary instrument, except that, when it is in position, the traction rods are attached. With the exception of those cases in which it becomes necessary to institute what I call "rotary axis traction," the forceps is applied, as an invariable rule, to the sides of the pelvis. Great stress must be laid on the following lines, for, if the directions are not properly followed, the most severe lesions may be provoked. It should be remembered that, when the ordinary forceps is used, especially if the head is at all high, the handles look much farther backward than when the axis-traction forceps is used. If one is not accustomed

to the latter, one will instinctively take hold of the cross-bar, and, taking no note of the forceps handles as a sure and positive index as to the position of the head in its relation to the pelvis, will pull directly backward and away from them, thus doing what one has been accustomed to do in what would be the proper line of procedure in using the ordinary forceps. Instantly, because of improper leverage and action, the handles will fly upward and away from the traction rods, and the operator will find the empty forceps in his hands and outside of the vagina, with probably a completely split rectovaginal sæptum. The following rule must always

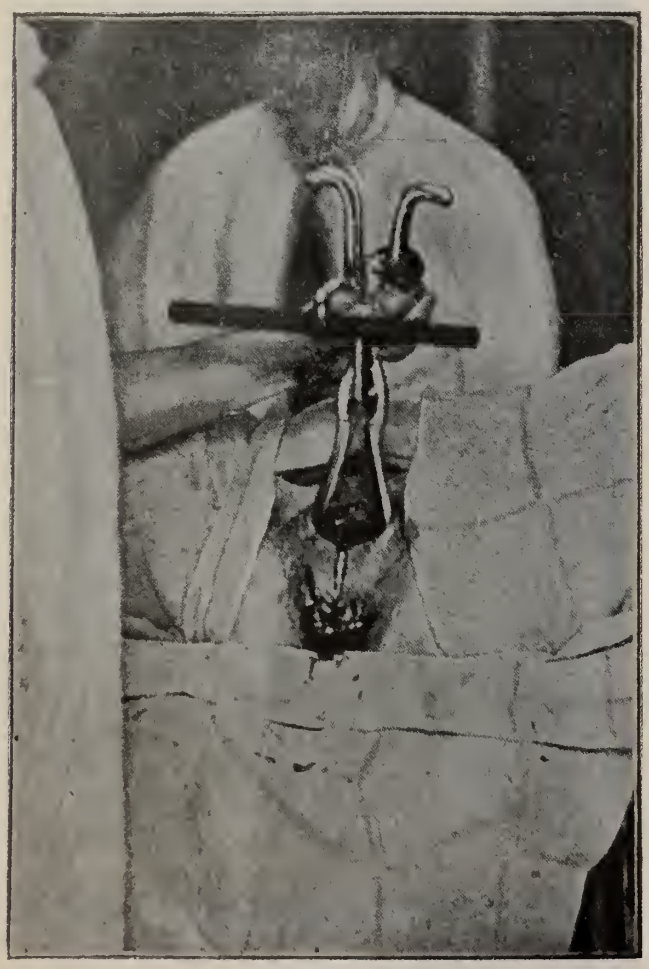

FIG. 5.

be borne in mind, and, if it is adhered to, no such accident can ever possibly happen: The handles of the forceps must always be our guide as to the direction of traction, no matter what their position. This is the secret of success and puts the whole thing in a nutshell. No matter how high the head is situated in its relation to the pelvis, it must never be taken into consideration, and certainly it must never influence us as to the direction of our traction energy. A maxim worth remembering is to follow closely the handles of the forceps, no matter where they point. The button on the traction handle or the point of junction of traction rods must always be nearly in contact with the traction handle, just barely touching, and this relation must be maintained until the child is practically extracted. To allow the two parts, *i. e.,* forceps handles and traction button, to come in contact will at once influence the utility of the handle-tips as indices, for by this contact the tendency would then be to push the handles too rapidly forward, and so to give us a false conception of true and ideal axis traction. Thus its effect would be spoiled and our energy rendered futile. Grasping the traction cross-bar with both hands, one on each side of the central bar, traction is then made and continued, the traction handles being carried farther forward and upward, always following closely the direction of the handle-tips, until the head begins to crown. At this stage either the forceps is removed, or, if delivery is to be completed with the instrument *in situ,* the operator, standing to one side of the patient, grasps both traction rods and forceps handles in one hand while with the other he manages the perinæum.

Having now finished with the simpler technique of ordinary axis traction, I beg leave to call attention to a method that I have been using for a number of years with almost uniform success. I have given it the name of *rotary axis traction,* because by this manœuvre we fulfil a compound indication, viz., axis traction and, at the same time, artificial rotation. These measures are particularly applicable in cases of posterior position of the head—occipitoposterior or mentoposterior positions. It is admitted by all accoucheurs that in the largest number of these malpositions spontaneous rotation occurs. It must further be remembered that this rotation, in the largest number of cases, occurs at the pelvic floor. Yet, in spite of all known legitimate measures to correct these vicious positions, it occasionally happens that the proper rotation does not occur. The measures to be instituted would include manual rectification and restitution, forcible flexion or extension of the head, postural treatment (in my hands the most efficacious), and forced instrumental rotation (risky and dangerous). Here, then, we are in the presence of a very disagreeable, if not positively dangerous, complication. The indications are given as above. We interfere only when we note a disposition to complete posterior rotation. When, instead of the small fontanelle swinging around toward the front, as in normal cases, it rotates into the hollow of the sacrum, we interfere at once, since, when once impaction occurs, nothing short of direct traction with the forceps or other alternative operations is indicated. This carries with it so much danger to the maternal structures as well as to the child that it has become, to me at least, a kind of nightmare. The most extensive lesions I have ever seen have occurred in just these neglected, or at best unrecognized, cases of occipitoposterior position. This is just what I wish to avoid, and it has been my good fortune to see this complication—that is, cases of impacted occiput or chin-posterior cases—but very seldom. In many, by the

use of the axis-traction instrument, I have often succeeded in rotating the head anteriorly by simply allowing the head, while traction is being made, to be influenced by the factors supplied by Nature (the resistance offered by the perineal structures and furthered by the turning points afforded by the ischial spines, especially when they are prominent) to provoke such rotation. And herein lies the utility of the instrument, as stated above. It allows the head to pass uninfluenced through the pelvic canal, except for the natural influence which promotes rotation; hence the great advantage in the free mobility of the forceps when applied to the head. This rotation begins to occur when the head descends to the pelvic floor, and is instantly evinced by the behavior of the blades. They begin to rotate with the head, the movement increasing with every traction effort, until the forceps has entirely rotated. They place themselves inversely, as Pajot would have us apply them in persistent posterior cases. They are then removed and applied as in ordinary cases. Where, however, for some reason or other, no such tendency to rotation occurs, the normal mechanism is probably at fault, and at this time the rotary axis traction becomes of supreme value. We assist Nature and stimulate rotation by rotary axis traction. The forceps is applied *lege artis*. It may be applied according to the pelvic walls; but an oblique application, *i. e.*, to the sides of the child's head, is far better. When in such a position, they conform to one of the oblique diameters of the pelvis, insure a more certain purchase, and very materially aid in the success of this otherwise rather simple manœuvre. With the right hand, steady traction is made (or an assistant can manipulate the traction bar), and at the same time, with the left hand, the handles of the forceps are compelled, or at least influenced, by gentle rotation to turn in the direction of the presenting part; to the left in left posterior cases, to the right in right posterior ones. This applies equally in face cases, taking the chin as the analogue of the occiput. This manipulation must be persisted in, slowly rotating all the time while making careful and intermittent traction, timing our measure so that when the head reaches the pelvic outlet complete rotation shall have occurred and the forceps blades shall be found nearly or entirely inverted. At no time should brute force be used, but the greatest gentleness should be exercised at all times. I have on a number of occasions tried forcible rotation by the ordinary forceps, and have succeeded, but at the expense of the maternal structures, with resulting deep lesions of the vagina and pelvic floor. I have tried "rotary axis traction" scores of times, and have *seldom* failed when the forceps was applied to the sides of the pelvis, and *never* when it was applied to the sides of the fœtal skull. The resultant lesions were no deeper or more frequent than in ordinary simple forceps extraction.

Fig. 6.

947 Madison Avenue.

METRORRHAGIA DUE TO INFLAMMATORY PROCESSES WITHIN THE PELVIS.*

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In the discussion of the ætiology of metrorrhagia due to inflammatory processes within the pelvis, three factors must be considered:

1. The endometrium.
2. The muscular wall of the uterus.
3. The blood-vessels of the uterus.

A. The Endometrium.—The general rule holds that, given a metrorrhagia, expect to find an endometritis as its immediate cause. Exceptions will be spoken of later.

While it is generally recognized that endometritis may be either *acute* or *chronic,* and its origin either *bacterial* or *non-bacterial,* frequent bacteriological examinations of the uterine cavity, the seat of a chronic endometritis, have proved it sterile and the endometritis non-bacterial in origin, in a very large number, if not in the majority, of cases. It is acute endometritis, then, whose ætiology we assign to pathogenic bacteria, introduced at various times and in various ways; at full-term parturition, or the puerperium; at abortion or operation, by dirty fingers, dirty instruments, retained secundines, etc.

While it is admitted that during an acute endometritis there may be at different times a mucopurulent discharge streaked with blood, an acute endometritis is of such short duration and the metrorrhagia, if present, is so slight in amount, that we may practically dismiss acute endometritis as a common cause of metrorrhagia.

With chronic endometritis, however, metrorrhagia is commonly associated.

Given a uterus with a normal muscle wall and normal uterine vessels, a smooth endometrium usually means normal menstruation and no metrorrhagia. A rough, hypertrophied endometrium means menorrhagia or metrorrhagia, or both.

For the usual ætiology, then, of metrorrhagia we must look to a chronic endometritis and its causes. Although chronic endometritis may be the result of an acute endometritis of bacterial origin, certainly in a large number of cases it arises as a result of a chronic congestion, in the same way that chronic inflammation follows chronic congestion in any other mucous membrane.

Situated as the uterus is, between two viscera, one of which at least, the rectum, is often in the condition of distention, and prone as the uterus is to displacement from relaxation of its supports and increased weight, chronic congestion of the uterus in general, and of the endometrium in particular, is easy to understand, as a result of obstructed venous return.

When we consider the situation of the uterus, in juxtaposition to the Falloppian tubes, ovaries, peritonæum, and cellular tissue, often the seat of inflammation, chronic congestion of the endometrium, as a result of increased flow of blood to the part, is also easily understood.

Chronic congestion of the uterus, the result of disease of distant organs, is to be discussed by other speakers.

In the opinion of the writer, then, the usual order of source and sequence is: chronic congestion of the endometrium; chronic inflammation of the endometrium; menorrhagia and metrorrhagia.

B. The Muscular Wall of the Uterus.—No one who observes carefully, during parturition, the action of the uterus in controlling hæmorrhage can fail to realize that on the contraction of the irregularly arranged fibres of the muscular wall depends the amount of blood flowing through and from the uterus. If this contraction is normal and unimpeded, the circulation of the uterus and the loss of blood from the uterus is normal. If the contraction of the muscular wall is in any way interfered with, the amount of blood flowing through and from the uterus is abnormally increased.

This same relation of muscular contraction and blood-flow holds, in the opinion of the writer, in the non-pregnant uterus, and anything interfering with the normal contraction of the uterine muscle, other things being equal, favors an excess of blood through the uterus, menorrhagia and metrorrhagia.

The two conditions most commonly interfering with normal contractions of the uterine muscle in the non-pregnant state are:

1. Tumors of the uterine wall, the discussion of which does not belong in the division of the subject assigned to the writer.

2. Chronic interstitial inflammation of the uterine wall, in which there is atrophy of the muscular tissue and an increase of new connective tissue.

Although both of these conditions most often produce metrorrhagia through the medium of a chronic endometritis, occasionally one meets with cases in which the endometrium seems but slightly involved, and the bleeding seems to be caused by a lack of sufficient elasticity in the uterine muscle, due to interference with the normal muscular contraction.

C. The Blood-vessels of the Uterus.—In the same way that interference with the normal muscular contraction of the uterine wall favors an excess of blood in and from the uterus, so interference with the normal contraction of the arteries themselves favors the same result. Occasionally, especially in the latter part of menstrual life, and often associated with the two conditions just discussed, viz., tumors of the uterine wall and chronic interstitial inflammation of it, one finds the vessels of the uterus in a condition of arteriosclerosis, with insufficient elasticity either to maintain the normal

*Read at a meeting of the Medical Association of the Greater City of New York, February 11, 1901.

balance of uterine circulation or to check the flow beginning at a menstrual period. Here, again, although this inflammation of the arterial wall usually produces metrorrhagia through the medium of a chronic endometritis, occasionally cases are met with in which the endometritis is slight, or does not respond to the use of the curette, and the hæmorrhage seems due to the lack of contractile power in the arterial wall.

The question of the treatment of metrorrhagia depends very largely on its ætiology. As the most usual immediate cause is a chronic hypertrophic endometritis, curettage, followed by endeavors to relieve the chronic congestion, is usually the best treatment.

When due to an acute endometritis, cleanliness, drainage, and rest usually give the best results.

The treatment of metrorrhagia due to interference with the muscular contraction of either the uterine wall or the uterine vessels, depends upon the presence or absence of an hypertrophied endometrium. The presence of the latter indicates curettage, perhaps several times repeated.

Metrorrhagia, with an absence of hypertrophied endometrium, or persistent after repeated curettage, may justify hysterectomy.

62 West Fiftieth Street.

THE PATHOLOGY OF INTRA-UTERINE DEATH.

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(Continued from page 324.)

Causes Attributable to the Mother.—Having considered the general and specific conditions on the part of the father which may contribute to the death and expulsion of the fœtus, we will now proceed to investigate reasons which may be referable to the mother. We shall find them to be much more numerous and complicated. It is reasonable that this should be so. If the father supplies the ovum with spermatozoids of sufficient inherent vitality, his responsibility, so far as the future of the fœtus is concerned, comes to an end. Its subsequent career depends absolutely on the general constitutional and local conditions of the mother. These are extremely broad, comprehensive, and in many instances so inscrutable as to be exceedingly difficult to detect. There are almost innumerable agencies which may so affect the general health of the mother as to have a detrimental influence on the growth and development of the embryo. All agencies which conduce to deterioration of the mother's health converge in this direction. Thus, unhealthy surroundings, pernicious habits, unsuitable occupations, insalubrious climate, or extremes of heat and cold, have their influence in lowering the strength and vigor of the mother. The same may be said of artificial ways of dressing, tight lacing, irregular or late hours, lack of healthy exercise in the open air, anxiety, worry, grief or mental depression of any kind. These all enfeeble and depress and have a baneful influence on the health of the mother, and consequently on the well-being of the fœtus. Many of these may not in themselves be sufficient to directly lead to intra-uterine death, but are yet of sufficient importance to so lower the resisting powers of the constitution that other and more remorseless diseases may supervene. Women who lead luxuriant and indolent lives, and those who endeavor to keep pace in the smart set of society, are more liable to miscarriage than those who are satisfied with a quiet, peaceful life, and who walk in the ways of physiological righteousness. The former are not the best candidates for maternity. Moving from a cold to a hot climate frequently has an indefinite, although an insidiously detrimental, influence upon the reproductive organs. Changes from sea level to mountainous regions cause a congestion of the pelvic organs and increased maternal circulation. Catamenial hæmorrhages are more profuse and the procreative machinery is prone to be thrown out of gear. These conditions are incompatible with normal pregnancy in many instances. Wild animals of the jungle, accustomed to roam listlessly about, bellowing out their freedom, are, when held in captivity, liable to abort. The seeds of trees or plants which grow in one climate will, when transplanted to another, bring forth monstrous leaves and seedless fruit, if they do not perish by the change. We have the parallels and analogues in women. Over-feeding and overstimulation have a harmful effect upon child-bearing. It is difficult for an obese woman to become pregnant, and, if she does, there is great liability to a miscarriage. Stockmen have long recognized the influence of a superabundance of adipose tissue in their cows, mares, or sheep, and they tell you that it is almost impossible to breed from animals that are "too fat." Obesity has a pernicious influence in producing sterility as well as in imperiling the safety of the fœtus should pregnancy take place. The pathology of this is not thoroughly determined. We incline to the opinion that overloading of the tissues with more material than they can assimilate, becomes in a way a general disturber of many of the functions of the body and tends to pervert the physiological actions of the uterus. Indirectly, this influence is detrimental, but the particular manner by which the death of the embryo is brought about in these instances is, no doubt, due to passive congestion of the endometrium. An impediment to the regular normal flow of blood in both the uterine and ovarian veins could readily be caused by the extra amount of pressure from fat, and so cause such a condition. This is eminently theoretical, but presents logical reasons for this anomaly.

Anæmia.—That anæmia will produce the death of the fœtus is well recognized. Sudden losses of large quantities of blood from the maternal circulation have been known to produce convulsions of the unborn child and to cause its death. Gradual depletion may eventu-

ally lead to syncope of the pregnant woman, and may so disarrange the uteroplacental circulation and cause such a feeble amount of nourishment to the embryo as to starve it to death. It is quite possible for a very anæmic woman to become pregnant, but the condition is usually aggravated after conception, and the fœtus generally starves.

Normally, there is relative chlorosis during pregnancy. The red blood corpuscles are materially diminished in number and the watery constituents of the blood become correspondingly increased. Long ago these changes were investigated and recognized. They can at any time be confirmed. For the first six months of pregnancy the fibrin of the blood diminishes perceptibly, but during the later months it increases again, and eventually becomes abnormal. Because of the extra amount of labor imposed upon the blood vessels, their tension is greater, they increase in size, and the pulse rate is accelerated. There is, as it were, a physiological anæmia or normal leucocytosis of pregnancy. Sometimes this condition becomes extreme and may endanger the health of the mother to such an extent as to imperil the life of the fœtus.

Interbreeding in animals, as well as in plants, has a tendency to produce mental and physical deformities, defects, and even premature death in the former, and immature leaves and seeds in the latter. Conception occurring in either extreme of the productive period of child-bearing life is not conducive to a satisfactory progress of pregnancy. In eastern countries where girls mature early, and where the custom of early marriages is prevalent, miscarriages are exceedingly frequent. This is probably owing to the uterus not being yet sufficiently developed to meet the requirements of the drain it is so early called upon to fulfil. It is equally so in the other extreme of the child-bearing period. It frequently occurs that the last-born of a woman is defective in some particular. Abortions are common, but should gestation proceed to the full term, it is a prevalent opinion that the child may be an idiot or physically defective.

There have been known to be epidemics of abortion. During famines, sieges, or similar catastrophes, women abort quite frequently. In these instances, fear, famine, and emotional causes have probably acted in conjunction in bringing about the result. Women who have been sentenced to be hanged very often abort if pregnant.

Small-pox.—This affection has a serious influence on the safety both of the mother and child. It is said to be much more serious in the confluent than in the discrete variety. Abortion takes place oftener during the suppurating stage than during any other in the progress of the disease, although it may be brought about in any period. It may be regarded as a conservative and beneficent effort upon the part of Nature to get rid of the child in these cases. The poison is frequently too overpowering to save both mother and child, and when it centres itself principally upon the fœtus, it causes its death and expulsion, and in this manner diminishes the virulence of the attack, so far as the mother is concerned. It is difficult for Nature to reconcile any serious concurrent disease with pregnancy, especially if there is considerable increase of temperature. Just how abortions are brought about in such instances has not been fully determined. Probably the morbid poison circulating in the blood of the mother transfers poisonous gases to the fœtus in the placenta, and in this way has the most potent influence in causing the death of the child. All diseases accompanied by an unusual degree of pyrexia have a dangerous effect upon the fœtus, and it is altogether probable that the increase of temperature has a direct and powerful influence in such disasters. That the mother can convey the disease to the child is abundantly established by finding small-pox pustules covering its skin. Uterine hæmorrhage is stated to be a frequent accompaniment of small-pox, and many authors attribute the expulsion of the child to hæmorrhagic endometritis. Brouardel maintains that the death of the fœtus in a woman suffering from small-pox is entirely due to the alterations of the maternal blood, consequent on the increase of carbonic acid, which asphyxiates the child, and this in turn brings about uterine contraction and its ultimate expulsion.

Typhoid Fever.—Many of the older writers maintain that typhoid fever renders pregnant women immune against typhoid fever, but more recent investigators have sufficiently disproved this theory. When a woman in such a condition, especially if pregnancy is far advanced, contracts this disease, it is almost universally fatal to both the mother and child. In typhus, on the other hand, the danger is not nearly so great to the mother, and the child generally goes to the full term and is born alive. Relapsing fever, from some unexplained reason, is unusually fatal to the fœtus. Smith and Jackson give the history of thirty-six pregnant women who were attacked with relapsing fever, and all aborted except one. Should pregnancy be far advanced, almost universally the child is stillborn. Weber, of Berlin, investigated sixty-three cases of typhoid fever in pregnant women. Twenty-three of these patients aborted and forty went to the full time. Charpentier collected 322 cases of pregnant women having typhoid. Of this number, 182 aborted and 140 children were born alive. This gives a fœtal mortality of fifty-six per cent. Both Charpentier and Spiegelberg claim that the death of the fœtus is not so much due to the form that the fever may assume as it is to the period of pregnancy. The danger, according to these authors, is greater in the early stages than it is when the fœtus reaches the later months of pregnancy.

Scarlatina.—This disease does not seem to be so inimical to pregnancy as might be expected. It is even inferred by many that scarlet fever is to a certain extent incompatible with pregnancy. This, however, is not so, for there have been known epidemics of scarlatina so virulent as to assume an alarming form and to cause

many women to miscarry. It is a particularly perilous complication during the puerperal state.

Erysipelas and *Measles* are not so dangerous to the life of the fœtus as typhoid fever or scarlatina. They do, however, sometimes bring about the death of the embryo. During the progress of measles it is in the midst of the eruptive stages, and when the fever is at its height, that abortion is the most liable to occur.

Pneumonia.—Abortion is singularly prone to follow severe forms of pneumonia. The safety of the child depends considerably upon the date of pregnancy. When in the last months of gestation pneumonia attacks a woman, it is quite possible for a viable child to be born, provided the child is rapidly expelled. In the earlier stages, when miscarriage is brought about, the placenta is usually retained, which fact gravely aggravates the seriousness of the disease. There may be several conditions, acting singly or in conjunction, to account for the death of the fœtus in pneumonia. There are general constitutional derangements with their various sympathetic reflex disturbances; the severity and violence of the cough; the rapid rise of temperature and the suddenness of the attack; disarrangement of the maternal circulation and accumulation of carbonic acid in the blood. Each and all of these are inimical to the well-being and safety of the embryo. Rican, in investigating this subject, collected forty-three cases of pneumonia having pregnancy as a complication, and found that the fœtus was killed and prematurely expelled in twenty-six.

The manner in which these various acute diseases, somewhat hurriedly enumerated, cause the death and expulsion of the fœtus are no doubt numerous, and in many instances complicated. A study of these symptoms is singularly interesting and instructive. There are certain of them of much greater importance than others. In taking a general survey of the subject, it will be found that they are all associated with elevation of temperature, and we affirm that, when pregnancy accompanies any of these diseases, the safety of the fœtus depends largely upon the degree of temperature that is attained. There are no doubt subsidiary influences contributing toward this end, but the fundamental disturber of life, so far as the embryo is concerned, is the unusual degree of body heat. According to Hohl's investigations, he found that the temperature of the mother invariably had an influence on the child and affected in a peculiar manner the temperature of the fœtus. When the mother's temperature increased, that of the child was correspondingly elevated. When it diminished, again, the pulse rate of the child was similarly affected. Huter carried out a series of observations on the same line with a like result. Friedler had an opportunity of watching two cases of typhus fever in pregnant women. The pulse of the fœtus in each case showed the fœtal circulation to be increased in parallel ratio with that of the mother, even to the morning remissions and evening elevations. During an epidemic of typhus in Russia, Kaminsky saw no less than eighty-seven cases accompanied with pregnancy. Of this number, fifty-five were during the first half of pregnancy, and thirty-two were in the last half. So long as the temperature was but slightly elevated, no perceptible effect on the fœtus was noticed, except a corresponding rate of the heart beat. When, however, the thermometer indicated a temperature in the mother of 104° F. or over, there was a distinct disturbance to the fœtus besides the increased heart beat. Increased movements in the uterus were noticed; sometimes these were quite tumultuous. They continued well marked until the temperature reached the neighborhood of 108° F., when they ceased entirely and the child died, as was discovered afterward. It was not however, always immediately expelled from the uterus, but was retained for a certain time. When the pregnancy was in the latter months, there were only two cases where uterine hæmorrhage was present. When pregnancy was not far advanced, hæmorrhage was fairly frequent. The danger line was reached at a temperature of 104° F., and increased with its advance. The greater the degree of maternal heat above 104° F., the more surely came the death of the fœtus. When Runge was made familiar with these observations of Kaminsky, he determined to make investigations on lower animals as to the effects of high temperatures on the gestation of animals that were pregnant. For this purpose he experimented upon rabbits. A number of these pregnant animals were placed in a box specially constructed so as to admit of good ventilation and of its maintenance in keeping with usual atmospheric conditions. In ten minutes he increased the temperature in the box to 122° F. The temperature of the rabbits increased one degree every minute for forty-five minutes, or until a temperature of 109° F. was reached, when they died, if they were not removed from the heat. The interesting and practical point is that the fœtuses invariably died when a temperature was reached which was not yet sufficiently high to kill the mother. In another series of experiments, the same author took the maternal temperature every ten minutes until it recorded 39° C. to 42° C., when he killed the animals. When the uterus was opened, it was discovered that the temperature of the fœtus was always a little higher than the maternal temperature. Every time the temperature reached 106° F., the fœtus was found to be dead, and it was always alive when the temperature did not reach beyond 104° F. In the margin between 104° F. and 106° F., the fœtus was sometimes found dead, but as many times it was alive. On examination as to the lesion found after death, the right ventricle was found distended with blood and widely dilated. The left ventricle was contracted and quite firm. From these experiments the author draws the following deductions:

1. A fœtus has always a higher temperature than that of the mother.

2. In zymotic diseases of the mother, the fœtus dies

when the temperature goes above 104° F., and before the same temperature becomes fatal to the mother.

3. The danger to the fœtus does not cease after the temperature has risen above 104° F., although the mother's temperature may in a short time become normal. In order to ascertain the accuracy of these inferences and to know for a certainty whether the animal heat of a fœtus is proportionately higher than that of its mother, when normal conditions prevail, as well as when the temperature is elevated from some disease, a number of investigations were undertaken on our own behalf. As the temperature of a rabbit is normally from a degree and a half to two degrees higher than human heat, it was thought best to select an animal whose temperature corresponded to that of man. For this reason cats were used. The best clinical thermometers were selected, after being thoroughly tested as to their accuracy. It will be remembered that chloroform has a tendency to lower the ordinary temperature of these animals, if given suddenly and in large quantities. Before putting the cats under the anæsthetic and submitting them to the experiments, their temperatures were all taken, to see what difference, if any, there was between them. This was done by placing a thermometer in the rectum for the period of five minutes in each case. They ran uniformly at 99.4° F. in each case. After the anæsthetic was given, the temperature was again taken, and it was found that it had fallen between 0.1° F. to 0.2° F. The abdomen was then opened and the uterus exposed. An incision was made into it sufficiently large as to bring a fœtus into view. A thermometer was placed in the cavity of the womb, another in the body of a fœtus, and still another in the vagina. They were held in their respective places for five minutes and then removed. They showed the following registration:

Vaginal	98.4° F.
Uterine	98.8° F.
Fœtal	99.3° F.

The remaining cats were similarly operated on and gave practically the same results. Hysterectomy was performed on all of them, and four of the number recovered. On three occasions we have had an opportunity of ascertaining the temperature of a fœtus *in utero* in breech presentations. When the os was sufficiently dilated, and in the interval of the pains, a thermometer was inserted into the fœtal anus for a period of five minutes. The vaginal temperature of the mother was taken at the same time. In each instance the temperature of the fœtus ranged a little higher than that of the mother. The average was six tenths of a degree. When taken collectively, these various experiments on different animals are singularly instructive. They demonstrate that the fœtal heat is higher than that of the mother, and that when the temperature of the latter is increased by disease the fœtal temperature rises synchronously with it. During gestation, it is quite probable that, from the increased activity of function of th uterus, there is a greater amount of bodily heat in thi organ than in other parts of the body. It is quite wel known to physiologists that when increased metabolisn is going on in the liver, the heat of this organ is greate than the normal temperature of the body would indicate Especially is this the case shortly after meals.

We have dwelt at considerable length on increase bodily heat as a factor in bringing about the death o the fœtus because of its importance.

Just how a temperature of 104° F. or over kills th fœtus is a disputed point, and conflicting views hav been maintained upon the subject. There is no doub that the *cardio-accelerator* centre becomes much affected for in these cases the heart beat is greatly increased, in dicating that its control centre has become much dis turbed. For a time it is much agitated, and afterwar paralyzed. It is extremely probable that the solutio may be found in the amount of imperfectly aerated bloo which is charged with a greatly increased quantity o carbonic acid during these diseases. We know that thi acid has a remarkable way of stimulating the medull and other nerve centres. When the proper balance be tween the amount of oxygen inhaled and of carbonic aci displaced is properly maintained and correlated, no detri mental effect is produced, either to the mother or th fœtus; but when the maternal circulation accumulate in the uterine sinuses, laden with carbonic acid, uterin contraction is induced, and in the meantime the fœtu may perish from asphyxiation. When a fœtus is ex pelled from a mother who is suffering from a disease as sociated with high temperature, it almost always has cyanosed or livid appearance. This is caused by th capillary vessels becoming overcharged with carboni acid as a result of a deficiency of oxygen. If a post mortem examination is made, it will be found that th blood vessels in the interior of the body will be highl engorged and congested, as well as those on the cu taneous surface.

Eclampsia.—This disease is particularly fatal to th fœtus, and frequently to the mother as well. Whethe or not it arises from the accumulation of urea, albumir or some other deleterious substance circulating in th blood of pregnant women, its poisonous influence dur ing the later months of pregnancy is one of the mos formidable conditions with which the obstetrician has t contend.

Its exact ætiology still remains in doubt, and its pre cise pathology is yet being considered. When Leve demonstrated to the profession, in the year 1843, tha women suffering from the convulsions of eclampsia usu ally had their urine heavily loaded with albumin, it wa thought that the pathology of the disease was at las understood. This opinion was not, however, long enter tained, for it was found that many pregnant women wh had an abundance of albumin in the urine showed n evidence of convulsions. Later, Frerichs maintaine

that they were not due to albumin or urea, but to carbonate of ammonium, a decomposition product of urea. It is very probable that the toxæmia resulting from the retention of urea circulating in the blood will not clearly account for the onset of such convulsions. Puerperal eclampsia and the convulsions of uræmia are markedly dissimilar in one important particular. In eclampsia, the temperature invariably rises from the beginning of the attacks to the end. During the interval the high temperature is maintained, and rises still higher with the succeeding attacks, and may even reach 109° F. In uræmic convulsions, in either man or woman, the temperature becomes subnormal. It is to be remembered that there is an undue excitability of the nervous system during pregnancy. Some yet unknown toxine which the system is unable to eliminate so stimulates the nervous centres as to throw them into a paroxysm of confusion. Not only in the kidneys are to be found changes in connection with eclampsia, but the blood vessels of the lungs, liver, and brain are shown to be highly thrombosed. However caused, it is seldom that an attack occurs without first showing certain premonitory symptoms. The patient will usually be somewhat drowsy and complain of headache. This headache may be limited to one side. Impaired vision, spots before the eyes, and intellectual dullness are frequent precursory symptoms. These last but for a short time, when the patient is seized with general tonic spasms. This is quickly followed by violent clonic convulsions which whirl the unfortunate victim into a precipice of danger that contrasts in awfulness and suddenness with the peace and serenity of her previous condition. The great nervous centres reel, rock, and splutter, form centres of delirium, the eyes roll up under their lids, the features are unrecognizable and the mouth is twisted into horrible grimaces. Should the onset of convulsions be delayed until the end of pregnancy and delivery speedily follow their supervention, it is quite probable that the child may survive. If there is any delay between the attacks and delivery, the child almost uniformly perishes. In those cases in which eclampsia comes on before the completion of pregnancy, the fœtus is seriously impressed by the first, and nearly always perishes after the second or third attack. The cause of death to the fœtus is attributable to the condition interfering with the hæmostasis of the blood, and indirectly producing asphyxiation. When the mother dies during the last stages of labor, it is not advisable to endeavor to save the child by Cæsarean section, for it will be found to be dead.

Phthisis.—For some unexplained reason, there is a fertility among this class of pregnant women which may be considered abnormal. The tendency to abortion in phthisical women, although admitted not to be particularly striking, is nevertheless greater than in healthy women. The degree of vitality and the measure of endurance of a fœtus, or a living child for that matter, bears a close relationship to the degree of strength or exhaustion of the mother at the time of conception, and to the condition of her health during pregnancy. For a time the profession entertained the opinion that pregnancy arrested the progress of this disease, but the hypothesis was not well founded. It is quite probable that during the early weeks and months of pregnancy the progress of this disease appears to be held in abeyance. This is no doubt due to the increased nutritive impulse which is given to the system generally; but when the fœtus assumes a large size, there are naturally greater demands made upon the nutritive resources of the mother, and, as a consequence, her vital energies are put to such dire straits that the disease then advances much more rapidly. It is asserted that when gestation takes place in a woman already well advanced in phthisis, and a child is born, a future pregnancy but rarely goes to the full term.

Heart disease is a much more serious condition in pregnancy than phthisis. The disease is much aggravated during pregnancy and there is a great liability to shorten gestation. During the earlier period very little disturbance is appreciable, and it is not until midway in gestation that signs of distress appear. It is quite reasonable that this should be so. In valvular disease, the leaking valve allows a certain amount of blood to regurgitate, and as a consequence the heart is laboring under a great disadvantage. Compensatory enlargement follows, and a sort of unstable equilibrium becomes established. When pregnancy is advanced, a corresponding increase of power and force is demanded of it to meet the necessities of the incessant nourishment to the fœtus. Compensation is, by this new demand, again unbalanced, and the condition becomes much aggravated. From the general backward pressure of blood, the liver, kidneys, and lungs assume a condition of passive congestion. When this reaches a certain limit, the whole nervous system participates, with the result that transudation takes place, followed closely by albuminuria, enlargement of the liver, and general dropsy. There will be congestion of the pelvic circulation; defect of aeration of the maternal blood, which may so affect the uterine circulation as to cause the death of the fœtus.

Syphilis.—When speaking of the causes of intra-uterine death produced by conditions referable to the father, we had occasion to mention syphilis as one of the most frequent and pernicious. We will now proceed to consider its adverse influence so far as the mother is concerned. A controversy has arisen as to whether a healthy woman who marries a man tainted with syphilis can be contaminated through the father or the fœtus. Fournier maintained that such a man, if afflicted with the third stage of the disease, could not contaminate his wife. Neither would the fœtus of such a pair taint the mother until after its death in the uterus. His reasonings are probably not well founded, for reasons which we will consider shortly. If the mother is syphilitic before conception takes place, the offspring almost invariably

becomes affected by the poison. Anatomically and physiologically, there is a constant and intimate relationship between the mother and child during the whole period of gestation. The mother supplies it with nourishment and oxygen to develop its various structures. True it is, that though there is no direct vascular communication between the membrane intervening between the vessels of the mother and the small loop-like projections of the fœtus, the membrane is so thin that the necessary ingredients for the nourishment of the fœtus pass through readily and constantly, probably by osmosis. The white blood corpuscles are supposed to be the agents conveying the infection. It is known thoroughly well that these cells possess the power of penetrating such a thick wall as that of the vessels in which they normally dwell. They will then, with greater ease and comfort, be capable of penetrating through the utero-placental circulation. It would seem that this was so. The white blood corpuscles can without doubt convey material substances from the mother to the fœtus. This has been demonstrated by experiments upon lower animals. Pregnant animals have been injected with such substances as cinnabar or indigo, and, when killed shortly afterward, the white corpuscles in the fœtuses contained the particles injected into the blood vessels of the mother. We have already seen that when a pregnant woman contracts small-pox she can convey the disease to the fœtus, and that the fœtus is frequently found to have the pustules on the skin. If it is possible for the blood of the mother to convey to the fœtus substances like cinnabar or the germs of small-pox or scarlet fever, we may conclude without any hesitation that the morbific virus of syphilis can be similarly transmitted. The necessary elements for the growth and development of the embryo transude: why not the stealthy, insidious germ of syphilis? The uterine sinuses may be considered the trysting place for the fœtus to exchange its excreta for nutritive elements. For practical purposes, it is immaterial whether or not there is an immediate or indirect vascular communication between the mother and her child. It is fairly well established that either parent may infect the fœtus independently. When the virus in either the father or the mother has exhausted itself and has become attenuated, it is quite possible for a viable child to be borne. There will, however, very likely be evidences of perversions of growth or other defects noticeable. It is well established that the mother may beget a syphilitic child long after she has ceased to show any evidence of the disease herself. Whether transmitted by the father or the mother, syphilis remains one of the most frequent and fatal diseases, so far as the fœtus is concerned. Where the infection is active, its impression upon the ovum causes it to blight early in the course of uterogestation. When the virus is not so concentrated, the fœtus may go on developing for a time, but ultimately hæmorrhagic effusions may take place between the fœtal envelopes, and so cause a detachment. Hæmorrhagic, waxy, and other changes take place in the placenta, and so interfere with the nutrition of the fœtus as to cause it to perish and be cast off. In these unfortunate women, abortions follow each other in frequent repetition, and apparently with undeviating persistency. Even where there are no external or other evidences of the malady, a succession of abortions or dead children can be traced to a latent form of this disease. When they are placed under a systematic line of antisyphilitic treatment for a sufficiently long time, the tendency to abortions disappears and pregnancy goes on to the full term. The unfortunate feature of this mischievous and insidious disease is its persistent and extended lethal influence. It is exceedingly difficult to determine when its poisonous effect will expend itself. Occasionally it happens that after all signs of the disease disappear from one or both parents, they still continue to produce abortions, dead children or living children showing by their emaciation that the venereal taint is not yet fully eradicated. The public generally know but little of this insidious and noxious disease, and of the ill effects it may produce upon numberless unborn children and women absolutely innocent of any trace of immorality. If they did, the evil consequences that too frequently follow in the wake of this loathsome disease might not be so frequently propagated.

(To be continued.)

THE ELECTROCHEMICAL ACTION OF THE X-RAYS IN TUBERCULOSIS.

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Since 1896 I have reported a few cases of lupus cured with the x-rays (1). It has long been known that the rays of light (2) were the most powerful bactericide known, and the work done by the investigators and experimenters with the x-rays shows that their effect upon some bacteria is of a marked electrochemical character; so that we may have in the near future another field of investigation, in regard to tuberculosis pulmonalis, which still remains the disease most to be dreaded.

What is the ætiology of lupus vulgaris? It is supposed to be due to the presence of the tubercle bacillus in the skin. The local treatment aims to destroy or remove the affected areas. To this end various measures are recommended, the x-ray treatment being the latest and perhaps the most successful. In my cases, at least, it has given satisfaction when all other methods had failed.

Knowing this, and thinking of the destruction of the bacilli in the living structure, with the proper immuniz-

ing of the organism against the effects of the bacilli, I have been independently experimenting for the last four years, pursuing my own way in the direction of solving the problem of possible cure of the diseased condition by removing the exciting cause of consumption.

Is there a cure possible? Naegeli divides his 217 cases of non-fatal tuberculosis into 74 cases of active disease, 111 healed cases, and 32 which he regards as uncertain (3). One hundred and eleven cases out of 217 were healed, and this information about the curability of tuberculosis comes directly from the *post-mortem* room, the only tribunal for definite and possible determination.

With the cases of lupus, it seems to be fully demonstrated that the *Bacillus tuberculosis* can be destroyed locally with the x-ray, or that necrosis of healthy tissues caused by exposure to the rays renders the parts unsuitable for the growth of the bacilli. If this can be done externally upon the skin, why not bring the rays into direct contact with those parts of the diseased lungs which the fluoroscope or a skiagraph marks as tuberculous? We know that the infecting agent of tuberculosis is the tubercle bacillus (4), that this disease cannot exist without it, and that when it is present it is invariably given off when the disease has progressed far enough, in the form of broken-down tissue, in the sputum. A consumptive expectorates at times as many as 7,000,000,000 bacilli in twenty-four hours (5). From this fact the nature of the first step of our experimentation was not difficult. With the help of the microscope, the presence of the bacilli in the sputum was determined; a certain quantity of the sputum was placed in a fish-bladder filled up with veal bouillon containing two per cent. of peptone and two per cent. of glycerin, and closed, and the whole properly boxed and marked. Each box was then alternately exposed to the x-ray, giving one case treated with all the opportunities for constant growth of the bacilli that a private laboratory allowed.

Before exposure to the x-ray, I made stroke cultures on glycerin agar from each box named, and kept the same in the brood-oven for ten days at the temperature of 37° C. These preparations, agitated once a day, showed under the microscope a thick, curled-up centre around which threads were wound, with the bacilli in profusion. These pure cultures, with others of anthrax bacillus, streptococci, staphylococci, and the bacilli of cholera, typhus, and diphtheria, were also alternately exposed to the x-ray, and the results of these two experiments showed *that certain x-rays were similar in their actinic properties to the rays of light at the violet end of the spectrum, and that various bacteria reacted under such radiation differently, according to the quality of the plasma and the degree of the liquid they contained.* With mildly alkaline culture media, the propagation of *Bacillus tuberculosis* is secured and the growth of the germs accelerated by the influence of an x-ray tube, but *on acid media the Bacillus tuberculosis is rendered inert:*

UNDER X-RAY RADIATION.

	Media.	
	Acid.	*Alkaline.*
Bacillus anthracis	Negative.	Negative.
Bacillus tuberculosis, in sputum, destroyed	48 minutes.	Negative.
Bacillus tuberculosis, in flask, destroyed	50 minutes.	Growth accelerated.
Spirillum cholerœ, in flask, destroyed	51 minutes.	55 minutes.
Bacillus diphtheriæ, in flask, destroyed	46 "	48 "
Bacillus typhi abdominalis	45 "	49 "
Streptococcus	Negative.	Negative.
Staphylococcus	Negative.	Negative.
Micrococcus pyogenes albus	Negative.	40 minutes.
Micrococcus gonorrhœa	35 minutes.	49 minutes.

The third step taken was to inoculate ten guinea-pigs and ten rabbits from the foregoing cultures. Beginning with the tenth day, they were all exposed to the x-ray daily. Eight of these animals whose secretions were rendered alkaline, six guinea-pigs and two rabbits, died of tuberculosis; the others inoculated from the box with acid media, having been in the first stage of tuberculosis—so to say—and exposed to intense irradiation daily for ten seconds, were, under observation, living and seemingly in good condition, for two years.

The bodies of the six guinea-pigs and two rabbits were dissected. In all these cases we found cheesy transformation, lungs undergoing destruction, with cavities; in the walls of some of the bronchioles, semi-solid granulation, tuberculous. The apices and the opposite upper lobe gave marked traces of the process of repair, showing plenty of more or less structureless connective tissue without cheesy material. In the majority of the cases we had obliteration of the pleural cavity. In two cases, depositions in the brain, one in the liver and the intestines. In forty per cent. of the animals treated with the x-ray and killed after the lapse of two years, the *post-mortem* examination showed that actual cure of the tuberculous process has occurred in the real sense of the word when acid condition was produced. Giant cells were not found, but there were chalky masses enclosed in dense tissue, connective tissue, and adhesions, without the *Bacillus tuberculosis.*

It is not necessary to demonstrate any further that the rays penetrated deeply into the tissues of all the bodies. Every skiagraph of any part of the body is a sufficient proof of it, and the experiments, as we were able to show, gave us the opportunity to observe also the electrochemic action of the x-rays almost to their point of penetration.

The discovery of the *Bacillus tuberculosis* was the first great step in medicine. The recognition of the fact that tuberculosis is a contagious disease was the second. The next important step forward, since the discovery of the ray by Professor Röntgen, is surely the very important application of the x-ray in connection with the

early diagnosis of tuberculosis. Keeping in mind that a very large proportion of those affected with tuberculosis may recover their health under proper treatment, or their life may be prolonged (6) if the diagnosis is made in time, we shall find in the application of the x-ray a great help to us (7). Abrams says (8): "The results of treatment in special sanatoria for pulmonary tuberculosis are marvellous. From twenty-five to forty-two per cent. of cases are cured." The diagnosis with the x-ray is not difficult. But the next step is yet to come. It is to be hoped that this step may mean the recognition of the method of cure with the yet unknown ray, when it comes to be known to all of us.

Satisfied with the results of my experiments described above, I have in the last two years, with the patients' consent, applied the x-ray in every case of earlier stage of tuberculosis which I have had, or which has been sent to me for diagnosis. Nearly all these cases, giving, on x-ray examination, a slight haziness, indicating the beginning of tuberculous infiltration in the apices, I have treated accordingly, attacking the seat of the disease, and not forgetting the three most important factors—pure air, suitable temperature, and good hygienic surroundings. From twenty selected patients in one year, one died with tuberculous intestinal complication, another committed suicide after two sittings, four proved complete failures, and the rest are doing comparatively well.

The exposure varied with each case from ten to fifteen minutes at each sitting. The rays have to be observed with the fluoroscope at each exposure, the tube tested to see that it is working at its best, and the apparatus will also be under the full control of the expert, who, with the help of the x-ray, will not only determine what portions of the tissues are diseased, but locate the area over which the disease extends, and ascertain what changes have taken place since the first exposure. The treatment ceases with the induction of a favorable condition of the patient, and when the lungs give us upon the plate of the fluoroscope an image of shadows of new-formed adhesions—which are opaque to the x-rays—in a transparent field of healthy tissues. Remember that healthy tissue allows the x-ray to pass freely, and thus we may record the changes, situation, and the size of isolated foci also.

The patient is seated in a chair without a back, and the Crookes's tube held from fifteen to eighteen inches from the body, directly in line with the diseased spot, as shown on the screen of the fluoroscope in the front, which must be applied firmly, and to the bare chest if necessary. At the next sitting the procedure is repeated, the Crookes's tube being in front. The proper distance between the light and the screen is about thirty inches, but this depends altogether upon the character of each given case, and may be gradually extended or diminished. It is very difficult to find just the length of exposure to make in these cases. If the exposure is not made long enough and at regular intervals, the desired result is not obtained, and if it is too long, it may set up an inflammatory action which may cause hæmorrhage from the irritated lung tissue and weakened vessels, and accelerate the growth of the bacilli instead of destroying them. In other words, the diseased tissue of the lungs is of such a low vitality that the influence of the x-rays may cause its absorption, or even destruction, before having any marked effect upon the healthy tissue.

While the removal of the bacilli, or, rather, of the cause, is essential to permanent cure, it is well—I am speaking of earlier stages only—in order to retain the patient, to institute some measure to support the nutritional changes in the healthy part of the lung tissue with increased metabolic change, stimulating more rapid and complete oxidation of the blood; and nothing has answered so well in my cases as static electricity, which may be used alternately with the x-ray. Such static electrization tones up the patient for the next x-ray exposure, and, with all the other hygienic and therapeutic measures necessary, according to the symptoms, will give Nature an opportunity to deposit healthy lung tissue, so that repair may take place. The great function of the x-rays—and, in my cases, the results so far obtained are very encouraging—is to destroy the bacilli directly in the lungs, while the franklinization improves and restores nutrition, not only of a part, but of the whole (9). By such a process of treatment the healthy tissue is kept immunized on one hand, and, on the other, the further proliferation of the bacilli is stopped. The majority of our patients improved, the bacilli disappeared from their sputum, the night-sweats ceased, and now the patients do not cough; they say that they feel better and are restored to usefulness. But *I should not like to state that the cases were cured by the x-ray exposure only,* for it may have been spontaneous cure in all of them. They are, however, certainly now well, and are feeling in good condition; and also just as certainly they had tuberculosis pulmonalis when the treatment began.

As to the danger accompanying the use of the x-rays, I have to state, and can prove it from my experimental work, that there is absolutely none, when proper care is taken. During the actual daily applications of these rays to my patients for diagnostic and therapeutic purposes, I have not had one case of dermatitis or necrobiosis (10) of my own, and, if certain precautions are taken, proper apparatus is used, and exposures are not unnecessarily prolonged, the danger of too intense action of the rays will be avoided. At the first trace of slight burning sensation or itching, or of brownish coloration of the skin, the treatment must be stopped at once. It must be certainly employed systematically to secure some results, because the x-ray may act, not as a stimulant as desired, but as an irritant, not only giving all the inflammatory phenomena at the focus of irritation, but spreading, perhaps, over a large continuous surface, with changes directly dependent upon the disturb-

ances of the circulation. It is clearly apparent that, if the x-ray in sufficient strength and proper form is made to reach the tubercle bacillus in the living tissues, its destruction may follow, and it remains for us to demonstrate these facts, not only theoretically, but clinically. The employment of the x-ray in cases of phthisis pulmonalis is worthy of extended trial. This is a practical question, which, with a practical test, will show us whether we have finally found the weapon against this baneful scourge and can put an end to the spread of the terrible and deadly contagion. Let us have a number of establishments where this work can flourish, sanatoria, public and private, which would do a world of good by curing the curable tuberculous cases and taking care of the hopeless ones, thus diminishing the countless centres of infection.

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THE PALLIATIVE OPERATIVE TREATMENT OF CARCINOMA OF THE POSTERIOR WALL OF THE STOMACH.*

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To the surgeon who has been a close observer of, and participant to some extent in, the advances that have been made in abdominal surgery during the past two decades there has come much to gratify and encourage the efforts put forth for the relief of patients suffering from malignant growths of the stomach. All of this work has demonstrated the fact that operations for resection of portions of the stomach, and even its entire removal for malignant growths, have in many instances proved a success as regards the saving of life, or, to say the least, in the prolongation of and making a patient's existence more comfortable.

For a time operations were confined, more particularly, to the pyloric end of the stomach, and were limited; but gradually surgeons have grown more and more dexterous, and, while cases are rare which permit of entire removal of the stomach, yet there are many in which after a careful examination a resection can be done, and an anastomosis, when the surgeon is called too late to grant relief permanently. The case may be one in which there is little hope of complete removal of the growth, yet the patient is suffering greatly, is desirous of some relief, if possible, and in many instances voluntarily encourages the surgeon to make an exploratory incision to learn positively just what can be done for his comfort. It is to this class of cases I wish, more particularly, to direct the few moments assigned to this paper. Up to within a very few years, as surgeons we were sometimes obliged to say to our patients, after an exploratory incision, that conditions were found such as prevented a removal of the growth, and that we were forced to retire from the field of operation without granting any relief. Gradually, however, these cases have been brought under the control of the surgeon to the extent that some form of intestinal anastomosis can be done, so as to give our patients decided relief for a time well worth the effort, and the patient and friends have, later on, entered heartily into the endorsement of such a line of treatment, because of the good results.

By degrees pathological changes, of whatever nature, have been brought by the surgeon to some form of operation, and in many instances the most brilliant work of modern surgery has accomplished that which a few years ago was considered quite impossible. Beyond a doubt, early operation on the stomach, for the relief of malignant growths, brings the best recoveries.

Yet, notwithstanding the many operations that have resulted in perfect recovery, and in many instances the prolongation of life, still some few cases are so obscure in the development of the history that the tumor, in the form of malignancy, is allowed to grow quietly, evading every effort of diagnosis made possible by the attending physician. When, too late, the surgeon is called, he then realizes that, while there can be but little hope for a radical operation, yet something can be done for the comfort of the patient, and the manner and method of doing this little have earnestly engaged the attention of the operating surgeon, making it a subject worthy of record and of some discussion. The present situation is one that impresses us with another illustration of the fact that in many ways it is necessary for the physician and the surgeon to work hand in hand.

Take, for instance, the great advances that have been made within a few years by the physician in the examination of the secretions of the stomach, either in the form of vomit, removed as a test meal, or otherwise. How great have been the rapid strides in a more careful

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diagnosis brought about by the chemical, bacteriological, or other examinations, as to the presence or absence of free hydrochloric acid, or many manifest signs of malignancy, such as loss of appetite, emaciation, reduction of the hæmoglobin in the blood, progressive to sixty-five per cent. or under, and a moderate leucocytosis that may be present, and when recognized early by the attending physician he should, without delay, call upon his consulting surgeon.

As was once the history in appendicitis and other obscure abdominal conditions, the two members of our profession must unite their efforts, and do early and promptly what is to be done for the relief of this particular patient.

This is what I wish to emphasize thoroughly, that when once a suspicion or a positive belief is expressed by the family physician of malignant growth of the stomach, the surgeon should be made acquainted with the condition of the patient, and the possibilities of relief by surgical intervention must be considered.

It is probably quite true that only a small percentage of these cases, where there is a suspected malignancy, are allowed to go on to any great degree, in surgical centres, without the surgeon being consulted, yet it is in some forms of growths about the posterior wall of the stomach that we see the most serious complications presenting. It is in this class of cases, I believe, that the operating surgeon—at least my own experience has been in that direction—finds the most serious complications of involvement of the glands and adhesions, making it impossible to remove the diseased mass, and yet we are permitted to do much that will relieve the patient, particularly when the disease has advanced toward the pyloric end of the stomach, causing a stenosis that brings with it all the symptoms of distress, first called dyspepsia; then, as vomiting occurs, the possibility of some malignant growth dawns upon the physician and patient.

I am satisfied that these patients can be made comfortable, in some instances for many months, possibly but a few weeks, and yet are so decidedly relieved from suffering that the operation of gastro-intestinal anastomosis should be encouraged. So convinced am I of the good to follow an exploratory incision, in the most serious cases, that, though "lactic acid may be present, the Oppler-Boas bacillus, and the epigastric tumor," yet I would not deny the patient the slight chance it may offer for his greater comfort to follow. It is here, in this operative intervention, that we note the marked advances that have been made within a comparatively short time in the method of doing the operation.

Let me illustrate:

CASE I.—Mr. F., fifty years old, had suffered for over five years from symptoms of stomach disturbance, and had had many diagnoses given him. For a period of two months he was under my observation at the Albany Hospital, suffering much from severe pain and vomiting frequently. By various tests and examinations—the clinical history being taken into consideration—it was evident he was suffering from some growth in the posterior wall of the stomach and encroaching upon the pyloric end. I advised an exploration, to which he readily consented. I found a growth measuring nearly four inches at its longest diameter and two inches in width, fastening the lesser curvature of the stomach to the connective tissue posteriorly, and somewhat above the common bile-duct, yet well underneath the diaphragm. The extent of the growth and its many attachments made it impossible for me to remove any portion or in its entirety. "The lymphatics and lymph nodes, so well defined by Cunes and Most as associated with carcinoma of the stomach," were here well shown.

I made a direct anastomosis of the extreme upper end of the jejunum with the anterior wall of the stomach by means of the Murphy button, the button passing after the twentieth day. After the operation the patient was nourished by rectal enemata entirely for a period of thirty-six hours, then small quantities of matzoon were given every two hours, and at the end of the third day he was given milk, broths, and liquids quite freely.

The result in this case was most gratifying; the patient could taste and enjoy his food, and was better in every respect. He gained in flesh, but about every three weeks he would have attacks of nausea and vomited quite a good deal of greenish-looking fluid, having all the appearance of bilious material. He would then be better for a while, but during these attacks the pain was quite severe and required hypodermics. The patient continued in this condition for a period of over eight months, not emaciating and taking food very well. He then moved to another State and I lost track of him.

I had studied this case carefully as to the cause of the vomiting at times, and believed it to be mechanical from some defect in the manner of anastomosis, when my second case presented.

CASE II.—Mr. C. N. G., fifty-two years old, married; habits good and regular in every respect; grocer by occupation; normal weight, 240 pounds. Past history: Patient always well until three years ago. Family history, negative. He stated that a little more than three years previously he began to have attacks of vomiting, at intervals of from two weeks to a month, usually coming on at night. Pain very severe and well localized in the centre of the epigastrium, being very noticeable at this point. As it grew more severe he usually vomited a large amount of mucus and undigested food. During the past two years these attacks have gradually grown more and more frequent, and for the past four months have occurred almost every night. Once or twice he has vomited some clotted blood. He has lost fifty pounds in weight. The epigastrium was very tender on pressure. Physical examination did not reveal any evidence of disease elsewhere about his system, and examination of the blood showed only a moderate amount of leucocytosis. Tests for hydrochloric acid indicated a moderate amount. On deep pressure over the epigastrium, a thickening could be felt, but not a distinct, well-formed tumor. I advised an exploratory incision, to which he readily agreed, saying most emphatically that he could not live long in this condition, and, if possible, he would like relief, preferring death to his present existence.

The operation was done January 30, 1900, at the Albany Hospital. The usual incision was made, and

the condition found very much like that described in the first case, but I did a somewhat different operation. Finding it impossible to do a resection of the stomach, or to remove the mass, which was so firmly attached posteriorly, I made an opening through the mesentery, so as to reach the posterior wall of the stomach, well toward the left, then brought up the upper portion of the jejunum, about twelve or fifteen inches from the duodenum, made an opening into the intestine, passed the medium-sized Murphy button down, one portion toward the duodenum, another portion toward the ileum, and, after bringing the button together (this suggestion was made at the time by my assistant, Dr. Macdonald), attached the jejunum by silk sutures to the posterior wall of the stomach.

After the operation the patient was treated very much in the same manner as in Case I, a hypodermic of morphine being given him to control pain. There was very little vomiting, and at the end of the fourth day he expressed himself as feeling better than he had in a year. He could swallow fluids without their giving him any distress, nor did he have any return of his pain at night. The nurse was instructed to watch his stools somewhat carefully, but along about the twentieth day a pupil nurse was on duty for part of the day, and one or two stools were lost without being carefully examined. Although the examination of the stools was kept up for some two months afterward, yet he was never known to have passed the button.

This patient did not have any return of his vomiting, he could take some little food and any amount of liquid nourishment, and at the end of four months had gained twenty pounds in flesh, having good movements of the bowels, and in every way was very comfortable.

I believe that the direct tract made here between the duodenum and the jejunum permitted the bile and pancreatic secretions to pass directly into the intestinal tract without regurgitating, or backing up, as it were, into the stomach, and saved this patient from the attacks our first patient had, even after the anastomosis. This patient is yet living and in very good health; he is able to attend to his business, and, although during the past four months he has vomited two or three times, which he attributed to the kind of food he had taken, yet in every way he has been very comfortable, and certainly his life has been prolonged and made bearable. On January 30, 1901, this patient is looking and feeling well in every way.

Case III.—Mrs. H. L., forty-one years old, married, mother of five children. Family history, negative. Never had any serious illness; menstruated normally; but for the past four months has been unable to eat solid food and retain it. Has occasionally had attacks of vomiting, not of large quantities, but accompanied with considerable pain, with more or less pain during the past two years, in the intervals between her attacks. For the last three or four months she has rapidly grown worse; lost very much in weight, had pretty continuous pain, been unable to take even liquid food into the stomach, and had very severe pain in the left shoulder at times.

At this time the patient weighed about one hundred pounds. On direct physical examination, she presented no evidence of disease elsewhere, except in the region of the epigastrium, where pain on pressure was very pronounced, and an immovable tumor could be located. I advised her husband and herself to have an exploratory incision in her case, an opinion in which her family physician, Dr. Trego, readily concurred, and let us see what we could do for her relief.

An operation was done at the Albany Hospital on May 23, 1900, in almost precisely the same manner as in Case II. The growth was found to implicate more of the pyloric end of the stomach, also the posterior wall quite markedly, and reaching back toward the head of the pancreas and pressing on the common bile-duct. At first I thought possibly I might have a case of gallstones to deal with, but it was unmistakably a carcinoma of the posterior wall of the stomach. Her treatment was precisely the same as in the other cases. She passed the button on the seventeenth day, and has been perfectly free from suffering since the operation. She has gained twenty-five pounds in flesh, can take almost any amount of nourishment, and does not know but the diseased mass was entirely removed; is happy in her make-up, and is certainly being made very comfortable for one whose disease is so serious.

Case IV.—Mr. S. W., fifty-three years old, a German, married. His father died of tuberculosis; six sisters and two brothers are alive and well. He had pneumonia twenty years ago, from which he made a good recovery, and remained well until his present trouble began, about four months ago. For a time he had diarrhœa, followed by very marked constipation. At this time gas began to form in his stomach and intestinal tract, and gave him a great deal of trouble. He got into the habit of making eructations of gas as the stomach became distended, and this afforded him relief. No pain; usually sleeps well; appetite not good. Was unable to take solid food and only cared for broths. He had lost thirty pounds in four months. Complains of a dull, heavy feeling in the region of the stomach. States that he was examined by Dr. E. T. Rulison some three months ago, and his stomach washed out. In a communication from Dr. Rulison, he stated he had examined the contents of the stomach and found a decided absence of hydrochloric acid, but there was lactic acid present, and the test meal was undigested. The doctor advised an early exploration, but this the patient declined.

Mr. W. was sent to me by Dr. Louis Faust for operation. On direct physical examination, the patient appeared emaciated, skin and membranes pale, heart and lungs normal; slight tenderness over the stomach on deep pressure, but no tumor could be made out. Urine normal on examination.

January 8, 1901.—Blood examined by Dr. Coopernail, of the house staff: Hæmoglobin, 65 per cent.; leucocytes, 11,440; red cells, 4,200,000. The patient was ready and anxious for an operation, stating he could not get on and nourish himself unless he received aid in some way.

9th.—A. C. E. mixture and ether administered. The usual incision was made and the tumor found to be of the size of an orange, involving a portion of the pyloric end of the stomach and the posterior wall, also the glands adjacent thereto. It was difficult to lift the growth forward free to any extent, and upon very thorough examination it was found impossible to make even a resection of the stomach. A gastro-intestinal anastomosis was done between the upper portion of the jejunum

and the left posterior wall of the stomach, the Murphy button being used for the lower anastomosis. The wound was closed by layer sutures; standard dressing. The patient suffered severely from shock. He was given strychnine and nitroglycerin hypodermically, also an infusion of nearly a quart of normal salt solution while on the table. While the operation did not consume more than the average time, yet he was kept upon the table for an hour and ten minutes. He had then revived sufficiently to be taken to the recovery room, and hypodermics of strychnine and nitroglycerin were continued every four hours. He rallied well during the night, becoming thoroughly conscious, and the kidneys secreted in a normal manner. In every way his treatment was about the same as in the previous cases.

This patient became very cheerful and hopeful after the operation, and on the evening of the third day the house physician telephoned me that Mr. W. complained of being hungry, and if he did not get something to eat he would get out of bed and help himself. He was given milk and broths quite early during the third night after the operation. Since then he has continued to take liquids, then semi-liquid food, and now he can enjoy eating almost anything. His bowels were moved on the fifth day by slight laxatives and the use of rectal enemata. He was looking much better, and was able on the fourteenth day to sit up out of bed, the wound being entirely healed.

Although I did not incise this growth, yet I am satisfied from the feel and appearance of it that beyond a doubt it was carcinoma of the posterior wall of the stomach, gradually invading the pylorus, the latter not yet stenosed, which unquestionably accounted for the absence of vomiting.

I believe these cases are of such importance that we may gather some practical points.

1. I would say that, in all cases of continued gastric disturbances that do not yield to medical treatment, a careful examination and experiment should be made as to the possibility of malignancy being present.

2. That, whether a positive diagnosis of malignancy is made or not, the patient continuing to emaciate, suffering more and more, I believe an exploration should be done, and if there is no malignant growth a gastro-intestinal anastomosis should be made, along the lines suggested by Dr. Weir in his excellent paper, and which I have done with the happiest results.

3. That malignant growths in the posterior wall of the stomach are certainly more difficult of diagnosis, and sometimes escape the notice of the most careful diagnostician.

4. That when we have made an exploratory incision, and the growth is found to be in the posterior wall of the stomach, malignant in character, with no possibility of removal by resection or otherwise, although quite deep, yet I believe we should not refuse our patient the benefit of a gastro-intestinal anastomosis.

5. In all of these cases the blood should be carefully examined, as part of the history of the patient, in order to learn of such conditions as may have a bearing upon the nature of the growth.

28 Eagle Street.

CANCER OF THE UTERUS.*

By ANDREW F. CURRIER, M. D.,
NEW YORK.

Like cancer elsewhere, this disease is well defined in Waldeyer's concise terms as "an atypical epithelial new growth."

All attempts to prove cancer to be a germ disease have thus far failed, but it is by no means certain that a germ will not ultimately be found as its primary cause.

Like tuberculosis, it attacks certain families in certain locations, and a cancerous family history is not without importance in determining the diagnosis and the outlook in a given case.

Traumatism is an important factor in the determination of the disease, though the unavoidable lesions of the os uteri in connection with parturition have probably played a more important part in its ætiological history than they really merit. The errors and imprudences which often follow parturition may have much to do with the bad condition of the tissue of the uterus which predisposes to cancer.

The poor are apt to suffer from this disease more often than the rich, for they must work harder, have fewer comforts and luxuries, and can pay less regard to their physical well-being and nutrition. So far as we can obtain definite information, this is a disease of civilized rather than savage life, though it is not unknown to the latter.

Climatic conditions may have a certain influence; the crowded cities are more favorable to its appearance than the country.

In order of frequency, the disease attacks the breast, the stomach, and the uterus.

No particular line of conduct or treatment, other than that which is associated with a well-regulated life, can be looked upon as prophylactic for this disease, and this will by no means bring immunity in all cases. For women who have a bad or suspicious family history it is wise to submit to a rigid surgical inspection at intervals of from three to six months, a radical surgical operation being urged on the slightest appearance of definite malignant disease.

Women with a tendency to this, as well as any other serious constitutional disease, should also be discouraged, by every possible argument, from becoming impregnated.

The disease may begin upon the flat epithelium of the surface of the mucous membrane or the cylindrical epithelium of the glands. It may attack the vagina, either lip of the os uteri, the endometrium of the cervix, or the endometrium of the corpus uteri. The softer the tissues invaded the more rapid its extension; in other words, its progress is along the lines of lesser resistance. The more rapid the development of the disease the greater the vascularity of the tissues and the consequent tendency to necrosis and hæmorrhage. The dis-

*Abstract of paper read before the Pan-American Medical Congress at Havana.

ease elements may be transmitted by the lymphatic current to other tissues and organs, and the absorption of infected material and frequent losses of blood will be followed by marked wasting of the vital forces. The density and great resisting power of the lymphatic gland structure explain the rather infrequent metastatic phenomena, this being especially true with the aged, in whom the glandular system is inactive. The disease is sometimes seen between the thirtieth and fortieth years, more frequently between the fortieth and fiftieth, most frequently between the fiftieth and sixtieth, and quite rarely after the sixtieth year.

The influence of the change of life upon this disease has been much misunderstood. It is probable that it has little, if any, influence in its production. The first noticeable symptom is hæmorrhage, which sometimes occurs in connection with the monthly periods and sometimes in the intervals.

Too often such a note of warning remains long unheeded. If the os uteri or the epithelium of the vagina is first attacked, a superficial ulceration, which resists the substances that usually produce healing, will be observed on careful inspection. This is followed by spreading, infiltration, and breaking-down, with hæmorrhage and discharge of decomposed and very offensive material. The longer the interval between the hæmorrhages, the severer and more copious are they likely to be. A hæmorrhage following sexual intercourse may be the first decided intimation that a serious condition exists. In addition to hæmorrhage from the uterus, it may also proceed from the vagina, rectum, and bladder, when these organs have been invaded.

Pain is an important symptom, but is seldom present in the early history of the disease, and it may be absent until the end. It may be felt not only in the uterus, but in the ovaries, broad ligaments, bladder, rectum, intestines, and kidneys. The skin of the external genitals may become excoriated and sensitive.

Cachexia, or sallowness of the skin, is a frequent, but not a necessary, complication. There may be a similar appearance with almost any wasting disease. Emaciation usually occurs if the disease is of long duration.

Disease involving the cervix is much more frequent and much more rapid in its progress than that which first attacks the body of the uterus. The structures to which this disease most frequently extends, in addition to the pelvic viscera, are the peritonæum, retroperitonæal glands, including those of the mesentery and omentum, the ureters, and the kidneys.

The corrosion of the vagina, bladder, and rectum, converting all into one cloaca, forms a distressing feature in the late history of the disease. The rectum may be nearly or quite occluded by cancerous ingrowths.

If the disease is observed or suspected in an early stage, examination with the microscope of a portion of the tissue or of scrapings from the endometrium may reveal the situation. Repeated examinations at short intervals should be made if the condition is one which admits of doubt.

In the advanced stages of the disease the clinical diagnosis can hardly be mistaken. The disease is local at its inception, and often remains so for a long time.

When once the existence of cancer has been determined the radical removal of the organ must be effected as soon as possible, provided its removal is still possible, and the situation in each case must decide whether the avenue should be the vagina or an abdominal opening.

The ligation of the great vessels of the pelvis has not thus far led to results which seem to warrant the procedure, except in particular cases.

The free use of the actual cautery upon tissues which may be deeply infiltrated is often effective. The potential caustics, chloride of zinc, nitric acid, etc., are often useful, but should be employed with the greatest caution, as they cause great pain, may excite intense inflammation, and may injure tissues which should not be injured. None of the substances which have been recommended for injection into cancerous tissues seems to have been of very great or permanent value, unless used at a very early period. Palliative operations, scraping, cauterizing, packing, douching, if used intelligently, may bring great, if only temporary, relief. Diet and hygiene should also play a prominent part in the treatment of the disease.

By these and kindred measures the severer aspects of a terrible affliction may often be reduced to a minimum of intensity.

130 East Thirty-sixth Street.

HÆMORRHAGE FROM A CIRCUMTONSILLAR ABSCESS.*

By WALTER F. CHAPPELL, M. D., M. R. C. S., Eng.,
NEW YORK.

Primary or secondary hæmorrhage from a tonsillar abscess occurs so rarely that the following case seems worthy of our attention:

T. O'B., aged twenty-seven years, a porter by occupation, had had two attacks of quinsy in the past two years, each resulting in an abscess, which had to be opened. The present attack began about December 1, 1899, with great pain on the right side of the throat, extending down the neck. The left side was also swollen and slightly painful. He remained under his family physician's care for five weeks, during which time four incisions were made, with little relief.

He came under my care at the Manhattan Eye, Ear, and Throat Hospital on January 15th, presenting the well-known appearance of patients with quinsy. An examination showed intense swelling of the tissues, internally and externally, and an abscess pointing in the middle of the posterior pillar of the soft palate. A small

*Read before the American Laryngological Association at its Twenty-second Annual Congress.

longitudinal incision was made at this point and about half an ounce of foul pus escaped.

He remained in the hospital, some pus continued to discharge from the opening, the swelling diminished, and his condition improved daily. Early on the morning of January 21st, four days after the abscess was incised, he complained of a sudden severe pain in the throat, followed in a few minutes by a hæmorrhage of about six ounces, which ceased on the application of tannic acid. Four hours later a second hæmorrhage occurred of about eight ounces, which was also stopped by an astringent gargle. An examination of the urine was made at this time, which showed the presence of albumin in large quantities, also epithelial and pus cells, and granular casts with pus corpuscles adherent. The local condition of the throat again improved, without further bleeding until January 26th, when the third hæmorrhage occurred. This partially ceased after about eight ounces of blood had been lost, but more or less oozing continued during the morning. I saw the patient in the afternoon, and found the tonsillar and cervical tissues much distended and painful; some blood still oozed from the opening in the posterior pillar and the abscess cavity was filled with blood clots. A large incision was made through the anterior surface of the soft palate and carried backward until the abscess cavity was reached. After thorough washing out of the blood clots with hydrogen peroxide, the ascending pharyngeal artery was seen at the outer and back wall of the cavity. No ulcerations could be discovered in the walls of the artery, but, naturally, little effort was made in that direction. The cavity was packed with iodoform gauze and the patient returned to bed. The packing was changed daily for ten days, when the wound had healed and no further hæmorrhage occurred.

On the 28th of January a very interesting attack of rheumatism occurred, accompanied by severe pains in the muscles of the calves, and also the abdomen, and some slight joint symptoms. No cardiac implication could be discovered. I might also add that the kidney affection continues at the present time, and there seems to be no doubt that the tonsillar abscess was responsible for the nephritis, as well as the rheumatism.

An examination of the literature of this subject gives reports on ten cases, with two recoveries. The first case occurred in the practice of Dr. Samuel Walker, in 1825. The patient had a double tonsillar abscess. The left one opened spontaneously. On the right side a tumor pointed in front of the thyreoid cartilage, and, on being opened, it was found to communicate with a right tonsillar abscess. Two days later the patient died from a great hæmorrhage, the blood gushing from the mouth and nose.

The second case was reported by Dr. Thomas Watson in 1828. Two days after the tonsillar abscess was opened, twelve or fourteen ounces of blood suddenly gushed from the throat and nose, and the hæmorrhage recurred in the evening of the same day, and also on the following morning. The patient then improved for two weeks, when, after he had eaten some meat, the bleeding returned, and while preparations were being made to tie the carotid he died suddenly from suffocation. An autopsy revealed the trachea and bronchi full of blood clots and a large erosion of the lingual artery.

The third case, reported by Dr. Luke in 1829, was a tonsillar abscess, which broke spontaneously and was followed at once by a discharge of about six ounces of blood. Three days later the patient bled again, and in two days had another recurrence, during which it was said he lost pints of blood. The following day he had a fourth attack, when the carotid was tied with success.

The fourth case was reported by Dr. Reeves. The quinsy had opened spontaneously, and hæmorrhage took place the same day, and recurred six or eight times before a physician was consulted. Ligature of the carotid was recommended and declined, the patient dying from several further hæmorrhages.

Dun's case was that of a child, three and a half years of age, suffering from a circumtonsillar abscess, which opened spontaneously. Twenty-four hours later bleeding began from the posterior pillar of the soft palate. Later a blood tumor appeared in the neck. The carotid was tied with success.

Norton's case was that of a child, four years of age, which terminated fatally. An autopsy showed ulceration of the internal carotid.

In Clayton's case, the tonsillar abscess opened spontaneously, and this was followed in some hours by a hæmorrhage which resulted fatally. The internal carotid was found severely ulcerated at the autopsy.

In Grisolle's case the abscess had opened spontaneously and resulted fatally from hæmorrhage. The internal carotid was implicated in a large ulcerating surface.

In Müller's case the abscess had opened spontaneously and several hæmorrhages had occurred, which eventually resulted fatally, and ulceration of the carotid was found at the autopsy.

Brewer's case was seemingly in a healthy man who had an ordinary sore throat. He had several hæmorrhages, which seemed to come from the rupture of a small abscess on the posterior surface of the soft palate.

Remarks.—The spontaneous rupture of the tonsillar abscess in all these hæmorrhage cases is very suggestive, and one cannot but feel that an early incision would have prevented the extensive ulcerations which implicated one of the large vessels. There seems no reason for the great mortality which these reports have shown. Immediate ligation of the carotid, on the occurrence of the first hæmorrhage, should be practised, or, as proved successful in my case, a free incision through the anterior wall of the soft palate and firm packing of the abscess cavity with antiseptic gauze.

The Stylus, a monthly medical journal heretofore edited by Dr. William Porter, of St. Louis, has been purchased by and consolidated with the *Interstate Medical Journal*. Dr. Porter will be associated with Dr. W. B. Outten, Dr. R. B. H. Gradwohl, and Dr. O. F. Ball in the editorial management of the consolidated journals.

Therapeutical Notes.

Enemata of Artificial Serum in the Collapse of Infants.—Rumpelmayer (*Thèse de Paris; Klinisch-therapeutische Wochenschrift,* January 6th) gives the following formula:

℞ Sodium chloride. . . . . 1 part;
Sodium sulphate. . . . . 2 parts;
Distilled water. . . . . .200 "

M. From one to three drachms to be injected once or twice a day, and caused to be retained by digital pressure on the anus. If an evacuation occurs, the enema is to be repeated.

Naphthalan in the Treatment of Hæmorrhoids.—Rauch (*Deutsche medicinische Wochenschrift,* 1900, No. 39; *Centralblatt für Chirurgie,* January 12th) has seen the use of twenty-per-cent. suppositories of naphthalan followed in ten cases by prompt diminution of the size of the piles, as a result of enduring contraction of the blood-vessels, mitigation of the pain, and the healing of excoriations and rhagades.

A Hæmostatic Pill.—Huchard (cited in the *Klinisch-therapeutische Wochenschrift* for January 6th) recommends the following formula:

℞ Quinine sulphate. . . . . .90 grains;
Extract of ergot. . . . . .30 "
Powdered digitalis, } each. . . . 6 "
Extract of hyoscyamus, }

M. Divide into forty pills.

S. Six to ten pills daily for two or three days.

For Typhoid Fever.—Dr. William Ewart (*Lancet,* December 8, 1900; *Merck's Archives,* January) highly recommends the following:

℞ Solution of bichloride of mercury (B. P.).20 minims;
Tincture of perchloride of iron, from 15 to 20 minims;
Syrup of orange or lemon. . . . . 1 drachm;
Water. . . . . 1 ounce.
M.

This dose is to be administered every six hours throughout the attack, and for ten days after defervescence to guard against a relapse.

The liquor hydrargyri perchloridi of the British *Pharmacopœia* contains one grain of the salt in two ounces of water. Twenty minims, therefore, equals $\frac{1}{48}$th of a grain of the drug.

For Dysentery.—Hospital Assistant Zahur Pir, C. M. S. (*Indian Lancet,* January 21st), recommends highly the following treatment for dysentery, as having proved of the greatest value when a good deal of trouble through griping pains and frequent stools with mucus and blood were present:

℞ Turpentine. . . . . 10 minims;
Tincture of opium. . . . . 10 "
Powdered acacia. . . . . 1 drachm;
White sugar. . . . . 1 "
Peppermint water. . . . . 1 ounce.

To be taken three times daily for three days only, after cleansing the intestines with a dose of castor oil. At the expiration of this time:

℞ Powdered ipecacuanha. . . . . 10 grains.

To be taken thrice daily, half an hour after the following draught:

℞ Tincture of opium. . . . . 10 minims;
Compound tincture of cardamoms (B. P.). . . . . ½ an ounce;
Water. . . . . 1 ounce.
M.

Apply a sinapism over the pit of the stomach in order to prevent vomiting, which often attends the administration of ipecacuanha in large doses.

For Painful Menstruation.—The *Canadian Practitioner and Review* for February gives the following:

℞ Acetanilid. . . . . 3 grains;
Citrate of caffeine. . . . . ½ a grain;
Bicarbonate of sodium. . . . . 3 grains.

M. To be taken at one dose, and repeated in one hour if necessary.

Methylene-blue in Hysteria.—Aposti (*Rivista critica di clinica medica,* November 24, 1900; *British Medical Journal,* February 16th) has administered pills of methylene-blue (the dose is not stated) in several cases of hysteria, and states that the morbid symptoms ceased as soon as the blue began to show in the urine. Suggestion is credited with some of the effect. Marimo has had identical results, and considers the antiseptic effect upon self-intoxication from the digestive system as a partial cause of the good effect.

Local Applications for Whooping Cough.—Dr. Guida (*Journal de médecine interne,* January 15th) advises carbolic applications to the pharynx to be made during the access. He uses:

℞ Crystallized carbolic acid. . . . . 15 grains;
Glycerin. . . . . .180 minims;
Solution of cocaine hydrochloride, 2 per cent. . . . . 75 "

Hydrochloride of Apocodeine in Constipation.—M. Raviart and M. Bertin (*Echo médicale du nord; Journal des praticiens,* January 26th) have found apocodeine, when pure and free from apomorphine, to be a sedative and hypnotic possessing no noxious action on the organism, and increasing the peristaltic action and glandular secretion of the digestive tract. They laud, in habitual constipation, hypodermatic injections into the muscular tissues of thirty minims of the following solution:

℞ Hydrochloride of apocodeine. . 7½ grains;
Sterilized water. . . . . .750 minims.

M. The injection may be repeated on several successive days.

For Cystitis.—M. Bazx (*Journal des praticiens,* January 26th) recommends the employment of sodium benzoate in conjunction with turpentine and tar, as follows:

℞ Benzoate of sodium, }
Pure gum turpentine, } of each. . 1½ grains;
Norway tar, }

M. For one pill. From six to eight may be taken daily. At meals tar may also be given, and buchu tea, or tea of uva ursi.

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THE MUNICIPAL HOSPITALS OF NEW YORK.

WHEN, some months ago, a premature and incomplete account had reached us of the changes in the management of Bellevue and the other municipal hospitals of New York proposed by the charter revision commission, we were doubtful as to the utility of what was then understood to be the chief purport of the changes, and we expressed the doubt in our issue for November 24th. There had then come to our knowledge nothing calculated to correct the natural impression that, in substituting for the present commission a board of trustees to be appointed by the mayor, the revision contemplated such a board as that which exists in Philadelphia, all of whose members are appointed at once or individual members as vacancies arise, and all to hold office for a definite term of years, only the members appointed to fill vacancies holding over. This system would work a useless and even injurious division of responsibility, and would not take the institutions "out of politics."

It subsequently appeared, however, that the commission's recommendation was for a board constituted on the general plan of the boards governing the municipal hospitals of Boston and Cincinnati, the only American cities that we know of in which the public hospitals are what they ought to be. The *personnel* of these boards does not change suddenly, but interstitially, so to speak, one or more members retiring from office at a stated time, so that the methods of hospital management that have been settled upon as the result of experience are not rudely overturned by a new board, and the board in perpetuity—for it often happens that a retiring member is at once reappointed—has a responsibility quite as definite and a policy quite as continuous and undisturbed as one man could have, and even more, for the one man must eventually die or resign or become superannuated, and then an untried successor, ignorant of the traditions of the office, would necessarily be called upon to manage affairs of which he knew little or nothing. A board that is practically self-perpetuating is, therefore, more individual in a long term of years than a single person. Moreover, the board of seven trustees proposed by the charter revision commission would in all probability be appointed by the mayor from nominees presented by the New York Association for Improving the Condition of the Poor, the Particular Council of New York of the Society of St. Vincent de Paul in New York, and the United Hebrew Charities of the City of New York. At least, it is provided that the mayor shall call upon these organizations for twice as many nominations as there are trustees to be appointed. He is not bound to appoint any one of the nominees, for it is unconstitutional to limit his appointing power; it is inconceivable, however, that he should ignore the nominations of such important and trustworthy bodies in appointing men to offices wholly destitute of emolument.

The trustee system has worked well for many years in Boston and in Cincinnati. The Boston City Hospital ranks with the best hospitals of the world, public or private. A gold medal was awarded to it for its exhibit at the recent Paris Exposition, where it was rated with the Massachusetts General Hospital, of Boston; the Presbyterian Hospital and the Mount Sinai Hospital, of New York; and the Johns Hopkins Hospital, of Baltimore. The Cincinnati City Hospital has been managed with economy and efficiency, and has thus far been practically undisturbed by the politicians. According to all we have been able to learn, the municipal hospitals of other large American cities, certainly those of Philadelphia (where a quick-transformation board travesties the permanent-board idea), Chicago, St. Louis, and San Francisco, as well as our own, are more or less dominated by petty politics, and it is a matter of common knowledge that they are not creditable to our civilization. There seems now to be a chance to redeem Bellevue and the other municipal hospitals of New York by the enactment of the charter revision commission's recommendations, and we hope to see the redemption accomplished.

THE PLAGUE IN SAN FRANCISCO.

WE have never feared that the few cases of bubonic plague which have occurred in San Francisco would give rise to an epidemic, for we have felt confident that Dr.

Kinyoun, of the Marine-Hospital Service, the Federal quarantine officer there, was the best man that could have been chosen to detect the existence of the disease in case it occurred and to check its spread. Dr. Kinyoun's course for both these purposes has been such as to win for him the admiration of all well-informed persons, and we believe that it will be upheld in spite of the nonsensical and disgraceful denial by the governor of the State that there has been any plague in California, and in spite of the State Senate's bold demand that Dr. Kinyoun be removed from his post. The governor, in a recent message to the legislature, intimates that certain physicians having cultures of plague bacilli in their possession have, "innocently or otherwise"—that is, ignorantly or criminally—inoculated the dead body of some Chinaman with them, and that the finding of the germs in such dead body has resulted in spreading a false alarm calculated to strengthen Dr. Kinyoun's hands and to induce the city of San Francisco to appropriate more money for its board of health. A more preposterous insinuation, a greater insult to an accomplished, experienced, and high-minded sanitarian was never put forth in an official document. The facts of the case are ably stated in the February number of the *Occidental Medical Times*, which has the support of the Sacramento *Evening Bee*.

We do not believe that the people of California are so blind to their own real interests and to their good name as to approve of the State government's course in this matter. Nevertheless, that government must be dealt with by the Marine-Hospital Service. We have no doubt as to the result. An investigation is being carried on by Dr. Simon Flexner, Dr. F. A. Novy, and Dr. Lewellys F. Barker, all men of renown in science and of unimpeachable integrity, and the people may confidently depend on their report to bring the government of California to its senses. Meantime, San Francisco is suffering from a natural distrust which has led to quarantine declarations outside of the State, but, as the *Occidental Medical Times* well says, "if the governor would quarantine infected houses, acknowledge the truth, Colorado, Louisiana, Texas, British Columbia, Mexico, the Hawaiian Islands, etc., would not do in their own behalf what is plainly the duty of the governor of the State of California." No good has ever yet come of denying the existence of infectious diseases which really existed, and we are confident that the people of California will not long tolerate such an ostrich-like policy as the governor and the legislature of their State are now displaying.

THE REPORT OF THE BRITISH MEDICAL ASSOCIATION'S ANÆSTHETICS COMMITTEE.

A COMMITTEE appointed by the British Medical Association in 1891 to investigate anew the subject of anæsthetics presented its report last summer. The report, as now printed, makes a quarto pamphlet of 134 pages. For a copy of it we are indebted to the association's general secretary, Mr. Francis Fowke. The committee delegated its work to an analysis subcommittee consisting of Mr. Hutchinson, Dr. Childs, Dr. Dudley Buxton, Mr. G. Eastes, Dr. Hewitt, and Mr. Rowell. Principally from the hospitals of Great Britain, but to some extent from private practice, the subcommittee obtained a large number of data concerning cases of anæsthetization, which, in their analysis, they classified into "uncomplicated cases," in which, so far as the effects of the anæsthetic were concerned, nothing unusual occurred; "complicated cases," in which there were unusual symptoms or sequelæ referable wholly or in part to the anæsthetic; "cases with minor complications," showing some noteworthy departure from the usual phenomena, but not giving rise to actual anxiety or danger; "cases of anxiety," with symptoms due wholly or in part to the anæsthetic and requiring the adoption of remedial measures, but not involving immediate danger; "cases of danger," with effects due partially or entirely to the anæsthetic and threatening the patient's life; and "cases of death" due wholly or in part to the anæsthetic. The anæsthetic substances employed, including mixtures and sequences of substances, were forty-five in number. In all, there were 25,896 cases analyzed, including 13,393 in which chloroform was used, and 4,595 of ether anæsthesia. This disproportion shows the extent to which chloroform is still employed in the United Kingdom, in spite of repeated demonstrations of its comparatively dangerous nature, demonstrations that are emphasized in the report now under consideration.

The data relate only to general anæsthetics. They have been analyzed from various points of view, and the report, which is largely tabular, shows abundant evidence of arduous and painstaking work on the part of the subcommittee. At present we can deal with it only in so far as it relates to fatal cases, and, even at that, we must limit ourselves to the deaths from chloroform and those from ether. There were eighteen deaths under chloroform anæsthesia, of which three are considered to have been due entirely to the anæsthetic, and four to the anæsthetic principally and to the patient's condition secondarily, while in the eleven others either there was

doubt as to the relative shares taken by the three elements, the anæsthetic, the patient's condition, and the operation, or death was distinctly due to one or both of the two other causes rather than to the anæsthetic. Of the deaths under ether anæsthesia, which appear to have been three in number, not one was held to be due entirely to the anæsthetic. Grouping the fatal and the dangerous cases together, the subcommittee find that with chloroform there is a danger rate of 0.582 per cent., and with ether one of 0.065 per cent. Taken as a whole, the report bears out the opinion, which is growing to be a more and more widely disseminated conviction, that, of the two general anæsthetics most commonly employed, chloroform is far the more dangerous.

A DOCTOR AS A MAJOR-GENERAL.

THE *Philadelphia Medical Journal* for February 23d comments on the deserved promotion, of which we of the medical fraternity may well be proud, of Dr. Leonard Wood, formerly an assistant surgeon in the United States army, to the substantive rank of major-general. But the *Philadelphia Medical Journal* proceeds to relate that his appointment is regarded in army circles as "practically an appointment from civil life to high rank in the regular army"; and further states that "because the appointment is in the line and not in the medical staff" "it is unprecedented, so far as we can recall, in this country or in any other; in fact, in any other country than this such a promotion would, we suppose, be practically impossible." If this is meant to refer to the leap in rank from that of captain—Dr. Wood's army medical rank—to that of major-general, it may be correct, though, even in this event, it must be remembered that General Wood had passed through the intermediate grades in the volunteer forces engaged in active service; but the transfer from one branch of the service to another—and specifically from the medical branch—has, as we have mentioned on more than one occasion, occurred in both England and France. In the Crimea more than one medical officer was transferred to "combatant" rank, and even rose to command a regiment. So late as in the eighties a veterinary officer in an English hussar regiment was transferred to his corresponding rank of captain in the line during the progress of a campaign in Egypt; while General J. Frédéric Canonge, who in 1899 commanded the Fifteenth French Army Corps, was, as we stated in our issue for February 18th of that year, another medical man exercising high "combatant" command.

So the case of General Leonard Wood, M. D., though conferring additional lustre on the ranks of physicians who have attained high "combatant" rank, is by no means unique.

THE AMERICAN HUMANE ASSOCIATION'S ANTI-VIVISECTION PAMPHLET.

DR. W. W. KEEN, of Philadelphia, has been good enough to furnish us with a copy of certain recent correspondence between himself and the president of the American Humane Association, Mr. James M. Brown, concerning Dr. Keen's statement, made at a Senate committee hearing, held about a year ago, on Senator Gallinger's antivivisection bill, to the effect that many of the reports of alleged instances of cruel experimentation on human beings referred to in the association's pamphlet were so vague and indefinite that he had been unable to look them up, and some of them garbled and inaccurate. All this Mr. Brown denies, and he challenges Dr. Keen to show grounds for his criticism. In his reply, dated January 21, 1901, Dr. Keen demonstrates with regard to case after case the utter inadequacy of the reference to authority, and in a number of cases such garbling of the original reports as clearly shows intentional misrepresentation. We hope the correspondence will be as freely circulated as the pamphlet was. It will, of course, have no effect on the antivivisectionists themselves, but to the mind of any mature, intelligent, and fair-minded human being it must show the straits to which the American Humane Association is reduced for alleged facts with which to bolster up its accusations.

HEAT AS A TEST OF THE PRESENCE OF PUS.

IF certain observations of Lewin's (*Semaine médicale,* 1901, No. 3; *Wiener medicinische Blätter,* January 31st) are corroborated, we shall have a simple means often available for the detection of the presence of pus. In cases of inflammation of the knee joint he has observed alleviation of the pain consequent upon warm applications; if pus was present, however, the pain was aggravated. His observation has been to the same purport also in cases of inflammation of the vermiform appendix.

THE FORMATION OF GAS IN THE LIVER.

A MORBID phenomenon not before recorded seems to have been observed by Kerchensteiner, of Munich (*Deutsches Archiv für klinische Medicin,* lxix, 1; *Wiener medicinische Blätter,* January 31st), namely, the formation of gas in the liver during life (in the death struggle), due, he thinks, to colon bacteria finding their way into the organ and multiplying at the periphery of the acini so as to interfere with the capillary circulation and then giving off gaseous products.

SYPHILIS AGGRAVATED BY SMALL-POX.

THE profound impression often made on the system by small-pox, even in its modified form, was well illustrated at a recent meeting of the French Society of Dermatology and Syphilography (*Annales de dermatologie*

t de syphiligraphie, January) by M. Du Castel, who showed a young girl who had had syphilis of medium ntensity for a year and a half when she was attacked with mild varioloid. Nothing special occurred during he attack, but with her convalescence the syphilis took on a grave form; she became covered with a crustaceous eruption and with ulcerations, particularly on the lower imbs.

FRACTURE OF THE LARYNX AS A CAUSE OF SUDDEN DEATH.

L. Stephens (*Guy's Hospital Reports,* liv, 1900; *Centralblatt für Chirurgie,* February 9th) reports the case of a man who received a blow on the larynx and fell down dead. At the *post-mortem* examination no other njury or abnormity was found anywhere in the body han a fracture of the right greater cornu of the hyoid bone and one of the left wing of the thyreoid cartilage. He asks why the man died, and if sudden death can result from a fracture of the larynx. R. von Hippel, who bstracts the report for the *Centralblatt,* says that the atter question must be answered in the affirmative, and dds that death may take place from suffocation. We nay suggest that the mode of infliction of the injury, whether by constriction or by a blow, may have a bearing pon the result and upon the mechanism of its occurence. In the case of a blow, it is conceivable, it seems o us, that rapidly fatal shock may follow the concussion f the great nerves of the neck that may be a concomitant result of the violence.

ANOTHER MEDICAL V. C.

According to the *British Medical Journal* for February 16th, yet another Victoria Cross for conspicuous bravery on the field of battle has been awarded o an army medical officer. Lieutenant W. H. S. Nickson, of the Royal Army Medical Corps, is the recipient n this occasion. The unusually large proportion of hese rewards "for valor" which have been awarded to members of the medical branch of the British service must be a source of gratification to the medical profeson all the world over; and there is no room for doubt hat, even in countries where no such certifying hall mark exists, there is as great a proportion of sterling metle" in the medical members of the army as in reat Britain.

TETANY ATTRIBUTED TO GASTRIC DILATATION.

Grusinow, of Moscow (*Klinitscheski Journal,* 1900, o. 2; *Berliner klinische Wochenscrift,* November 2th), relates the history of a case of tetany apparently ue to enormous dilatation of the stomach, which reached uite to the pubic symphysis. Improvement followed vage of the stomach and the use of appropriate diet, nd a cure was effected by gastro-enterostomy. Gastrecasis may, we presume, be counted as among the rarer uses of tetany.

News Items.

Society Meetings for the Coming Week:

Monday, *March 4th:* New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association; Providence, Rhode Island, Medical Association (annual); Hartford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society.

Tuesday, *March 5th:* New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Herkimer (annual, Herkimer), N. Y.; Essex, Massachusetts, South District Medical Society (annual, Salem); Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Maine, County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

Wednesday, *March 6th:* New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond (New Brighton), N. Y.; Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

Thursday, *March 7th:* New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

Friday, *March 8th:* Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

Saturday, *March 9th:* Obstetrical Society of Boston (private).

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending February 23, 1901:

Diseases.	Week end'g Feb. 16.		Week end'g Feb. 23.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	20	11	28	5
Scarlet Fever	404	24	437	24
Cerebro-spinal meningitis	0	0	0	0
Measles	159	7	198	5
Diphtheria and croup	296	50	257	37
Small-pox	25	6	46	9
Tuberculosis	280	189	250	179

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from February 9 to February 23, 1901:

Ashford, Bailey K., First Lieutenant and Assistant Surgeon, will accompany a detachment of recruits from Fort Slocum, N. Y., to San Francisco.

Bache, Dallas, Colonel and Assistant Surgeon-General, is granted leave of absence for three months, on account of sickness.

Boyer, Arthur L., Acting Assistant Surgeon, is granted leave of absence for one month. During his absence Acting Assistant Surgeon Harry D. Belt will, in addition to his present duties, attend the sick at Fort Terry and Fort Michie, N. Y.

Chamberlain, Weston P., First Lieutenant and Assistant Surgeon. Upon his return to Fort Adams, after leave of absence, Acting Assistant Surgeon Adrian D. Williams will proceed to Fort Greble for temporary duty.

KENDALL, WILLIAM P., Major and Surgeon, will proceed to Fort Slocum, N. Y., to relieve CHARLES M. GANDY, Captain and Assistant Surgeon, who will proceed to San Francisco for transportation to Manila.

PENROSE, GEORGE H., Major and Surgeon, will report to the commanding general, Department of California, for temporary duty.

REED, WALTER, Major and Surgeon, is detailed as a member of the board of medical officers appointed to meet in Washington for the examination of candidates for admission to the Medical Corps of the Army.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending February 23, 1901:

HOLCOMBE, R. C., Assistant Surgeon. Detached from the *Glacier* and ordered to duty with a detachment of marines in Pollok, Philippine Islands.

ROSS, J. W., Surgeon, retired. Ordered to report to the chief sanitary officer of the city of Havana for duty. Special order of the Department of Cuba, February 15th.

Marine-Hospital Service Health Reports:

The following cases of small-pox, cholera, and plague were reported to the surgeon-general during the week ending February 23, 1901:

Smallpox—United States.			
Los Angeles, California	Feb. 2-9	1 case.	
San Francisco, California	Feb. 2-9	7 cases.	
Jacksonville, Florida	Feb. 9-16	5 cases.	
Chicago, Illinois	Feb. 9-16	14 cases.	
Wichita, Kansas	Feb. 9-16	9 cases.	
New Orleans, Louisiana	Feb. 9-16	4 cases.	4 deaths.
Manistee, Michigan	Feb. 9-16	3 cases.	
St. Paul, Minnesota	Jan. 26-Feb. 9	8 cases.	
Manchester, New Hampshire	Feb. 9-16	1 case.	
New York City, New York	Feb. 9-16	25 cases.	6 deaths.
Ashtabula, Ohio	Feb. 9-16	3 cases.	
Cleveland, Ohio	Feb. 9-16	48 cases.	
Youngstown, Ohio	Feb. 9-16	1 case.	
Allegheny City, Pennsylvania	Feb. 9-16	3 cases.	
Erie, Pennsylvania	Feb. 9-16	1 case.	
Greenville, South Carolina	Feb. 9-16	1 case.	
Memphis, Tennessee	Feb. 9-16	19 cases.	1 death.
Nashville, Tennessee	Feb. 9-16	9 cases.	
Green Bay, Wisconsin	Feb. 10-17	1 case.	
Milwaukee, Wisconsin	Feb. 8-16	1 case.	
Smallpox—Foreign.			
Antwerp, Belgium	Jan. 19-26		1 death.
Bradford, Great Britain	Jan. 6-13	15 cases.	2 deaths.
Naples, Italy	Jan. 20-30	26 cases.	2 deaths.
		Officially reported.	
City of Mexico, Mexico	Jan. 27-Feb. 3		1 death.
St. Petersburg, Russia	Jan. 19-26	8 cases.	1 death.
Odessa, Russia	Jan. 19-26	13 cases.	8 deaths.
Glasgow, Scotland	Jan. 25-Feb. 8		34 deaths.
Singapore, Straits Settlements.	Dec. 22-29		1 death.
Yellow Fever.			
Havana, Cuba	Feb. 2-9	3 cases.	1 death.
Plague.			
Hong Kong, China	Jan. 5-12		2 deaths.
Tainan, Formosa, Japan	Jan. 1-16	28 cases.	22 deaths.
Cholera.			
Singapore, Straits Settlements.	Dec. 22-29		16 deaths.

A Doctor Fined for Issuing a False Death Certificate.—A Brooklyn physician has been fined $100 for filing a false certificate of death in a case of small-pox.

Changes of Address.—Dr. J. F. Chmelicek-Luhan, to No. 318 East Seventh-ninth Street, New York; Dr. J. E. Dearden, to No. 1368 Lexington Avenue, New York.

A Medical Union in Jamaica, L. I., is about to be formed, with a view to protecting physicians against imposition by persons who systematically refuse to pay their bills.

Dr. Paul M. Mecray, surgeon at the Cooper Hospital, Philadelphia, has been appointed surgeon and physician to the Pennsylvania Railroad Company, to succeed Dr. Dowling Benjamin.

A Site for the Oakland Medical College has been selected at Thirty-first and Grove streets, Oakland, Cal., measuring 80x115 feet. Architects are at work preparing plans for the erection of a substantial modern structure.

County Medical Society Committee on the Social Evil.—At the meeting of the New York County Medical Society, held on February 26th, the president was authorized to appoint a committee of seven to investigate the social evil in this city.

New York City's New President of the Board of Health.—The appointment by Mayor Van Wyck of Colonel M. C. Murphy to the head of the police force of Greater New York made vacant the office of president of the health board, and to that position former Police Commissioner Sexton was appointed.

Dr. Daniel Lewis Appointed State Health Commissioner.—Dr. Daniel Lewis, of New York city, who has served on the New York State board of health since 1895, having been its president for three terms, has been appointed State health commissioner by Governor Odell under the recently enacted law which substituted a single-headed commission for the State board of health. His salary will be $3,500 annually.

Sand Filtration for Washington Water Supply.—The Senate Committee of the District of Columbia has recommended the adoption of a system of filtration through sand, supplemented by a series of sedimentation basins in which, during periods of excessive turbidity of the water, the use of coagulants can be carried on. It is estimated that this latter step will be necessary about one eighth of the time.

Medical Legislation in Colorado.—The Colorado Medical Liberty League, the Colorado Antivaccination Society, and the Spiritual Truth Society have instituted an active campaign against the passage of any bill regulating the practice of medicine in the State by law. Such bills have been introduced into both the Senate and the House, but it seems probable, from the tone of the newspaper reports, that the efforts to prevent the passage of any medical legislation will prove effectual.

A Medical Practice Law for California.—A bill regulating the practice of medicine in California has been passed by the legislature, after being so amended as to be no longer obnoxious to the Christian Scientists and osteopaths. The act provides for the creation of a board of medical examiners to be appointed by the medical societies of the allopathic, homœopathic, and eclectic schools. The provisions regarding the qualifications of practitioners are more strict than heretofore, power is given to revoke licenses for unprofessional conduct, and advertising improbable or excessive claims to curative powers is ground for the charge of unprofessionalism.

First Aid to the Injured.—The annual meeting of the Society for Instruction in First Aid to the Injured was held recently in New York city. The annual report, which was read by President Charles H. Marshall, showed that over 13,000 persons had been instructed by the society since its beginning. Word was received from Fire Chief Croker that he hoped his men would have the usual instruction this year. President William H. Bald-

in, Jr., of the Long Island Railroad, wrote that the in-ruction given to the employees of the road last year as very beneficial.

Free Clinical Lectures on Syphilis.—A series of nine inical lectures on syphilis by the members of the visit-ng and consulting staffs of the New York Skin and ancer Hospital, will be given at the hospital on Wednes-ay afternoons at 4:15 o'clock, beginning on March 6th. he lectures are free to members of the medical profes-on on presentation of their professional cards. The cturers include Dr. A. Jacobi, Dr. L. Duncan Bulkley, r. D. Bryson Delavan, Dr. David Webster, Dr. Edward . Janeway, Dr. Edward D. Fisher, and Dr. Willy eyer.

An Assistant Surgeon of the Russian Navy Charged ith Desertion.—Leo Alexandroff, an assistant surgeon the Russian cruiser *Variag*, who was arrested as a de-rter, was set free on July 23, 1900, by a decision of the nited States Court of Appeals. Alexandroff came to is country with a crew intended for the *Variag* while e vessel was building at Cramps' shipyards. Shortly ter his arrival he took out his first naturalization apers, and was later arrested as a deserter. The sur-on claimed that, as the *Variag* was not in commission, could not desert from a ship that did not exist. It is robable the case will be taken to the United States upreme Court.

Plague Quarantine in Louisiana.—Declaration of e existence of bubonic plague at Cape Town has caused e officers of the Louisiana State board of health to re-w their stringent measures of quarantine, due directly the fact that New Orleans is the shipping port of orses and mules bought by the British government for e army in South Africa. The Louisiana State board health will require special quarantine observances. hips will be detained five days, and, to prevent the nding of rats, vessels are required to provide their awsers with metal discs, and funnels opening toward e ship, the funnels to be twenty inches in diameter, th sharp serrated edges. At sunset vessels must with-raw one hundred feet to an anchorage.

The Brooklyn Water Supply.—The committee on ublic health of the Kings County Medical Association bmitted a report to the association upon the Brooklyn, Y., water supply, which, after rehearsing the facts certained regarding the water supply, concluded with e following resolutions, which were adopted by the sociation:

Resolved, That this society recognizes that certain urces of the water supply of the Borough of Brooklyn e a menace to the public health;

Resolved, That this society urges upon the depart-ent of health, and the department of water supply, e necessity of the sanitary patrol of the whole water-ed, as provided for by the charter of the city;

Resolved, That it is the sense of this society that the rly construction of a sand filtration plant for the ration of all our supply is necessary for the protection the public health.

Mark Twain Defends Osteopaths.—Mark Twain ap-ared before the committee on public health of the As-nbly of the State of New York on February 28th in alf of a measure introduced by Mr. Seymour de-ned to license osteopaths. Mr. Clemens did not pro-s to know anything more about osteopathy than that he had been treated by an osteopath in Europe and been benefited by the treatment. His interest, he said, was in the preservation of personal liberty. He said that as we had full liberty of choice in selecting spiritual ad-visers, we should have the same liberty as regards ad-vice regarding the care of our bodies. A large delega-tion from the New York County Medical Society ap-peared in opposition to the bill. Speeches in opposition to the measure were made by Dr. Elliot Harris, Dr. Floyd Crandall, Dr. Frank Van Fleet, Dr. Charles N. Dowd, Dr. Henry D. Didama, regent of the Medical University of Syracuse, and Jacob Bolin, the president of the New York Society of Masseurs.

A Meeting of the Legislative Committee of the American Medical Association was held in Washington recently. Among the matters discussed was the army reorganization bill, which the committee denounced as unfair in its dealings with the medical men of the army. Objection was also made to the codification of the postal laws, or rather to that section which affects weekly pub-lications, the medical journals being included. This law, it was declared, will increase the expenses of the journal many thousands of dollars a year. The meeting was largely attended and the results very satisfactory to all concerned. Decided action was taken in oppos-ition to the army reorganization and to section 18 of the codification of the postal laws. It was also determined to urge the passage of the Senate bill now pending in the House relative to the Marine-Hospital Service, and the precautions to be taken in regard to the spread of diseases along the coast. The chairman, Dr. H. L. E. Johnson, was given authority so as to facilitate action on matters affecting the profession.

The Richmond Academy of Medicine and Surgery.—At the last regular meeting, on Monday evening, February 25th, the subject for discussion was a paper by Dr. W. A. Deas entitled Cyclic Albuminuria.

The St. Louis Medical Society of Missouri.—At the last meeting, on Saturday, February 23d, Dr. John Young Brown read a paper entitled Surgical Manage-ment of General Peritonitis Resulting from Perforating Appendicitis.

The New York State Medical Society organized a Chautauqua county branch in Buffalo recently. The following officers were chosen: President, Dr. Thomas D. Strong, of Westfield; first vice-president, Dr. William M. Bemus, of Jamestown; second vice-president, Dr. O. C. Shaw, of Cassadaga; secretary and treasurer, Dr. H. A. Eastman, of Jamestown.

The New York Academy of Medicine.—At the next stated meeting, on Thursday, March 7th, the order for the evening is as follows: Alcohol and Alcoholism, by Professor R. T. Chittenden, of New Haven; and a dis-cussion on Alcohol as a Food—Its Direct Action on the Nerve Cell, its Effects on Americans, and the Aspect of the Law and the Inebriate, by Dr. A. A. Smith, Dr. M. Allen Starr, Dr. H. M. Biggs, Dr. Walter B. James, Dr. James Ewing, Dr. James Collins, and others.

Small-pox.—New cases of small-pox have been re-ported from several localities in various parts of the United States, but the disease does not appear to be spreading as rapidly as it was some two weeks ago. Isolated cases are reported from several localities in Wisconsin, hitherto not visited by the disease. In

Washington three public schools were temporarily closed on account of the discovery of a case of small-pox in a house inhabited by children attending these schools.——In response to a parliamentary inquiry in the legislature of Ontario, the government stated that in all there had been 118 cases of small-pox in thirty-five districts. In the recent Toronto Junction, Port Arthur, and Sudbury outbreaks there had been forty-four cases, and on each occasion the disease had not been first diagnosed as small-pox, and many people had thus been subjected to infection. The department had required isolation and vaccination in the infected districts, and as a consequence there had been a general vaccination of the school population. In many of the mining, lumber, and railway camps thousands of men had been vaccinated.——In New York city and Brooklyn several new cases have been reported, and the health officials have expressed the fear that owing to the laxness in regard to vaccination the disease will continue to spread.

Vacancies in the House Staff of Mount Sinai Hospital, New York city, will be filled by a competitive examination to be held at the hospital on March 28th and 29th. The appointments are open to graduates in medicine or to those who will graduate before July 1, 1901. Written application should be made to J. Rudisch, M. D., Mount Sinai Hospital, New York city.

Hospital Staff Changes.—Dr. James T. Burdick, of Brooklyn, has been appointed head surgeon at the hospital of the State Soldiers' and Sailors' Home at Bath, N. Y., by the trustees of that institution. The present head surgeon is Dr. Oran W. Smith. The trustees declared that Dr. Smith had resigned. When seen by a newspaper reporter, Dr. Smith said two months ago he handed his resignation to Commandant Davidson, but about two weeks ago withdrew it. He is a veteran, and an appointee of the civil service, and cannot be removed except upon charges. No charges have been made against him.——Dr. Frank H. Glazebrook and Dr. Henry P. Merrill have resigned their positions as house physicians in the Orange Memorial Hospital. The resignations are said to have been due to a disagreement with the superintendent.——Dr. J. Halpenny, one of the resident medical assistants of the general hospital at Winnipeg, Manitoba, has been appointed assistant medical superintendent.

Hospital Buildings and Endowments.—A bill has been introduced into the Michigan legislature to provide Detroit with a free hospital, to cost that city $100,000.——A site for Mary's Help Hospital, to be established in San Francisco, has been purchased. The hospital will cost $250,000, which sum was the bequest of the late Mrs. Kate Johnston, and in the institution women and children will be treated free of all cost.——The sum of $75,000 has been appropriated for an addition to the county hospital at Milwaukee.——The foundation of the big annex to the Home for Incurables at New Orleans has been laid, and the corner-stone will soon be set in place.——Plans for a new hospital for Oakland, Cal., are being considered.——With the condition that the institution is not to be used for contagious or infectious diseases, James E. Martine, of Cedar Brook, N. J., has offered a site for the new Muhlenberg Hospital at Plainsfield, N. J.——Plans have been drawn up for the enlargement of the Chicago Lying-in Hospital and Dispensary.——A bill has been introduced into the Wisconsin legislature to establish a State hospital in some suitable location for the treatment of incipient pulmonary tuberculosis. The bill makes an appropriation of $100,000 for the hospital, which is to be called the Wisconsin State Sanatorium, and is placed under the supervision of the State board of control. A site embracing not more than 1,000 acres is to be secured.——Much trouble is being met with in finding a suitable location for the proposed new Civic Hospital at Montreal. The suggestion that meets with most favor is that it be located on St. Helen's Island. The board of aldermen have declined to vote an appropriation for the hospital.——The sum of $1,000 has been donated to the general hospital endowment fund of Montreal by Mrs. J. B. Boulter.——It is proposed by the Boston board of health to establish a home for incurable consumptives, and the sum of $400,000 is to be asked for with which to establish it.

Births, Marriages, and Deaths.

Married.

Bonner—Berliner.—In Brooklyn, on Thursday, February 21st, Dr. Adolph Bonner, of New York, and Miss Rachel Berliner.

Laferme—Hammond.—In Baltimore, on Saturday, February 23d, Mr. Charles Laferme and Dr. Katherine L. Hammond, of Chicago.

Orbison—Gile.—In Overbrook, Pennsylvania, on Monday, February 25th, Dr. Thomas J. Orbison, of Philadelphia, and Miss Virginia Gile.

Pope—Wrightman.—In San Francisco, on Tuesday, December 25th, Dr. Saxton Temple Pope, United States Army and Miss Emma Wrightman.

Died.

Batchelder.—In Danvers, Massachusetts, on Friday February 15th, Dr. Henry F. Batchelder, in the forty-second year of his age.

Black.—In Moberly, Missouri, on Tuesday, February 19th, Dr. W. E. Black, in the fifty-ninth year of his age.

Camp.—In Great Barrington, Massachusetts, on Sunday February 24th, Dr. Samuel Camp, in the seventy-third year of his age.

Fagin.—In Santa Cruz, California, on Friday, February 22d, Dr. Pierce B. Fagin, in the eighty-third year of his age.

Given.—In Clifton, Pennsylvania, on Saturday, February 23d, Dr. S. A. Mercer Given, in the forty-first year of his age.

Glezen.—In Evansville, Indiana, on Wednesday, February 13th, Dr. Samuel Glezen, aged eighty-two years.

Hodges.—In Chicago, on Monday, February 18th, Dr. Frederick J. Hodges, of Ashland, Wisconsin, in the thirty-seventh year of his age.

Hodgman.—In New York, on Tuesday, February 26th, Dr. Abbott Hodgman, in the sixty-ninth year of his age.

Linsley.—In Burlington, Vermont, on Sunday, February 17th, Dr. J. H. Linsley, in the forty-third year of his age.

Marsh.—In West Point, Mississippi, on Friday, February 15th, Dr. Walworth Marsh, in the twenty-ninth year of his age.

Nichell.—In Buffalo, on Friday, February 15th, Dr. Henry Nichell, in the eighty-first year of his age.

O'Reilly.—In St. Louis, on Sunday, February 24th, Dr. Thomas O'Reilly, in the seventy-fifth year of his age.

Pleen.—In Minneapolis, Minnesota, on Thursday, February 21st, Dr. William Pleen.

Potter.—In Lafargeville, N. Y., on Monday, February 18th, Dr. H. B. Potter, in the sixty-second year of his age.

Seaman.—In Brooklyn, on Sunday, February 17th, Dr. Richard S. Seaman, in the seventy-sixth year of his age.

Sistrunk.—In Society Hill, Alabama, on Monday, February 11th, Dr. John Sistrunk, aged sixty-eight years.

Smith.—In Colorado Springs, on Wednesday, February 20th, Dr. M. G. Smith, in the eighty-fifth year of his age.

Tedford.—In Moberly, Missouri, on Wednesday, February 13th, Dr. J. Tedford, aged seventy-five years.

Thomas.—In Corry, Pennsylvania, on Tuesday, February 19th, Dr. John M. Thomas, formerly of the United States Army, in the seventy-fifth year of his age.

Pith of Current Literature.

Boston Medical and Surgical Journal, February 21, 1901.

U. S. Army Pathological Laboratories in the Philippine Islands. A Description of the Work of the Army Pathological Laboratories and General Remarks on the Investigation of the Diseases of the Philippines. By Dr. Joseph J. Curry.—The author says a word as to the advantages of laboratories on hospital ships. In smooth water and at anchor, it is possible to do practically the same work as in a laboratory on land, and, in addition to the value of a laboratory for the purpose of establishing diagnoses in cases on shipboard, the hospital ship, moving as it does to the various ports in the islands, can render the service of a portable laboratory to the cities and towns the ship reaches. The author considers the subject of the obscure fevers of the Philippine Islands to be a promising one. Some space is devoted to the difficulties that hamper bacteriological investigation in the tropics, and the author asserts that the bacterial flora of the tropics is apparently as rich and varied as its botanical flora.

Dysenteric Diseases of the Philippine Islands, with Special Reference to the Amœba Coli as a Causative Agent in Tropical Dysentery. By Dr. Joseph J. Curry.—The author believes that the *Amœba coli* plays a very important part in the ætiology of tropical dysentery, and he asserts that the finding of the amœba in healthy intestines is no more weighty an argument against it as an ætiological factor than the finding of the Klebs-Löffler bacillus in healthy throats is against that organism being the causative agent of diphtheria. There are, however, two distinct types of dysentery in the Philippines, one amœbic dysentery, and the other an acute dysentery, in a number of cases of which the *Bacillus dysenteriæ* of Shiga occurs. There are, in addition, cases of subacute and chronic dysentery, in which neither the *Amœba coli* nor the *Bacillus dysenteriæ* is found.

Uterine Fibroids. By Dr. Homer Gage.—The author agrees with the statement of Kelly that no more important advances can be made by the gynæcologist in the immediate future than by extending the indications for myomectomy and narrowing the field of hysteromyomectomy. Myomectomy is contra-indicated in extreme anæmia, when it is desirable to avoid a protracted operation, in the presence of extensive pelvic inflammation, and when the uterus is larger than a six months' pregnancy. With these few plain limitations, myomectomy within the proper age limit must always be the operation of election. The author believes that a steady improvement in technique will still further widen the field for its practice, and will give us, at least in a very large number of cases, a safe, non-mutilating method of dealing with uterine fibroids.

Dysbasia Intermittens Angeiosclerotica (Intermittent Lameness of Vascular Origin). By Dr. James J. Putnam.—Among the diseases which count as very rare, this deserves a prominent place. According to the author, the characteristic intermittence during rest and recurrence during exertion is probably due to the fact that, when the muscles are in use, either an unusual supply of blood is needed or a vascular cramp is induced.

Rupture of the Right Iliac Artery. By Dr. F. C. Shattuck.

Lead Encephalopathy. By Dr. F. C. Shattuck.

Osteo-arthritis. By Dr. F. C. Shattuck.

Friedreich's Ataxia. By Dr. James J. Putnam.

Splenectomy. By Dr. J. C. Warren.

Loose Semilunar Cartilages. By Dr. J. C. Warren.

Plastic Operation for Rodent Ulcer. By Dr. J. C. Warren.—The author presents a case illustrating how this form of cancer may remain localized for great lengths of time; calling attention to the necessity of performing a major operation in many of these cases, and holds out hope for a permanent cure, even in cases which physicians are prone to regard as too far advanced for further treatment.

Philadelphia Medical Journal, February 23, 1901.

The Value of Sputum Examinations to the General Practitioner. By Dr. M. Howard Fussell.—In cities such as Philadelphia and New York, where the board of health attends to the matter free of charge, there is not the slightest excuse for the very busiest man to neglect the precaution of early sputum examinations. Outside of such centres, doctors should familiarize themselves with the necessary procedures; such advice, according to the author, is practical. A working knowledge of the microscope and the ability to recognize various organisms when seen under the microscope, are indispensable, and Austin Flint's statement that "the time will soon come when, in order to corroborate the diagnosis, microscopical examinations of the sputa will be considered as much a matter of course as examinations of urine for evidence of renal disease," should be ever present to all of us.

Resection of the Rectum per Vaginam. By Dr. John B. Murphy.—According to the author, the advantages offered by the vaginal route are: (1) The sacrum and posterior bony wall of the pelvis are not disturbed; (2) the field of operation is as extensive and the anatomical parts as accessible as in the transsacral operations; (3) the peritoneal cavity is opened in both the vaginal and sacral operations, and in neither is it a source of great danger; (4) the diseased tissue is more accessible for inspection, and the extent to which the operation may be carried in an upward direction is as great as, if not greater than, by the sacral route; (5) the peritonæum may be drained freely through the vagina; (6) a perfect end-to-end approximation, either by suture or by the use of the button, may be secured. The preferable method of uniting the two ends is by interrupted suture of silk, because, as there is no peritonæum on the sphincteric segment, failure of union with the button is to be feared; (7) the sphincter is retained and the perineal body is restored. There is diminished action of the levator ani muscle; (8) when the operation is complete, the parts are practically in their normal positions.

Amputation of Both Feet under Spinal Anæsthesia with Cocaine. By Dr. Augustus C. Behle.—The author especially commends this method of inducing anæsthesia to the country practitioner. He asserts that with this procedure the skilled anæsthetist may be dispensed with. In the present instance, fifteen minims of a sterile two-per-cent. solution of cocaine produced an anæsthesia lasting about two hours. No shock followed the operation, and none of the sequelæ, such as nausea, vomiting, and headache, which some surgeons have reported after the use of this method, were observed. The

rise of temperature after the operation was very slight. Recovery was rapid, and the patient was discharged on the fifteenth day after the operation.

Sarcoma of the Ribs. By Dr. C. C. Worden.—The author reports a case and gives a summary of the literature of all the seventy-three cases thus far reported; sixty-five were susceptible of operation. The total mortality was forty-eight per cent. The mortality of the cases susceptible of operation was forty-six per cent. Traumatism is ætiologically concerned in twenty-two per cent. The patients in sixty-four per cent. of the cases were males; the youngest was ten years old, the oldest sixty-six.

Congenital Umbilical Hernia; Report of a Case, and Table of Cases Hitherto Reported. By Dr. Homer E. Safford.—A rational treatment of congenital umbilical hernia is, according to the author, based upon two things: aseptic practice in surgery, and a better understanding of embryological development. Intervention should take place as early as possible after birth: waiting endangers the membranes from gangrene and peritonitis; and radical operation is always the most rational if we have the means and assistance at hand.

Medical Record, February 23, 1901.

The Necessity for a More Careful Investigation as to the Cause of Outbreaks of Infectious Diseases. By Dr. Alvah H. Doty.—The conclusion at which the author has arrived, after a number of years' experience, is that the clothing of well persons and the cargoes of ships are rarely the means of transmitting disease, and, though no reasonable precautions to prevent possible danger from this source should be omitted, the author calls attention to the urgent necessity of looking elsewhere for the cause of an outbreak of infectious disease the origin of which is unknown. This cause he believes to be mild ambulant or convalescent cases which pass unrecognized. The author points out that an acceptance of this view certainly does not mean that we should relax our efforts to protect the public health, but tends to bring about a more careful and thorough investigation as to the means of transmission of infection, which, he believes, is imperatively called for.

A Method of Fixation for Loose Kidneys. By Dr. Robert T. Morris.—In the author's opinion, loose kidneys are so common that every general practitioner presumably has a number of patients who are suffering from this cause, and the reason that more cases are not discovered in *post-mortem* examinations is that the kidney promptly assumes its normal position, usually while the patient is in the recumbent posture, and rigor mortis fixes it quite securely in place. Cases for operation, according to the author, are the ones which continue to produce important symptoms after the diagnosis has been well made and abdominal support and general medical treatment have been well tried. The method of examination described by Israel is the one favored by the author. In the operation proposed a flap of capsule, including the larger part of the mesial surface of the kidney, is incised with a scalpel, and the flap of capsule is then stripped up from the parenchyma, but remains attached to the convex border of the kidney. The flap of the capsule is then drawn through a slit in the psoas muscle or in the quadratus muscle, and is there sutured into place. This brings bare parenchyma also into contact with the psoas or quadratus fascia, where it forms a firm connective tissue attachment.

Convulsions with Scarlet Fever, and the Report of a Very Severe Case, with Perfect Recovery, and Important Deductions from the Treatment. By Dr. Herman E. Hayd.—Every case of scarlet fever is a law unto itself; convulsions may occur, and do occur, when least expected, and every case should be closely watched for many weeks. The urine should be frequently tested as to its specific gravity and for albumin, and the urea calculation should be often made. Only the most digestible food should be given, and, if possible, such foods as produce little gastric and intestinal putrefaction. If milk cannot be digested or will not be taken, only water should be given by the mouth and the patient should be nourished by nutrient enemata. Hypodermoclysis is a very valuable and safe method of introducing water into the system, and as much as two or three pints can be used; with proper precautions no danger will result or severe abscess formation follow. Enteroclysis, if much fever is present, should be employed once or twice during twenty-four hours, and a number of quarts, or even gallons, of water may be used at a time. Strychnine and digitalin are our most valuable heart stimulants, and brandy is our best food and diffusible stimulant.

Journal of the American Medical Association, February 23, 1901.

The Bacterial Toxines. By Dr. Victor C. Vaughan and Dr. Thomas B. Cooley.—The colon bacillus in virulent form contains within the cell a toxine which is fatal to guinea-pigs of from two hundred to three hundred grammes weight, in quantities of less than one milligramme. The aqueous extract of the cells of the colon bacillus grown on agar is inert. The entire germ is highly resistant to heat and to dilute acids and alkalies. The cell wall of the colon bacillus is digested by the prolonged action of artificial gastric juice, which does not alter the toxine. The toxine, as thus obtained, is insoluble or but slightly soluble in dilute acid, but is slightly soluble in water, and more readily in dilute alkalies. This toxine responds to the ordinary proteid reactions. The toxine, after being freed from the cell membrane, is not destroyed by being boiled.

The True Rôle of Drugs in the Management of Consumptives. By Dr. Solomon Solis-Cohen.—Bearing in mind the limitations of drugs as well as their powers, and carefully selecting them for definite purposes, they may be made to fulfil a useful, but secondary, part in the treatment of patients having pulmonary tuberculosis.

The Importance of an Early Diagnosis of Tuberculosis. By Dr. A. Mansfield Holmes.—The author believes that the fact should be more generally recognized that, if the vital forces become impaired from any cause whatever, the resistance to the tuberculous infection is diminished and the danger of infection increased. An early diagnosis is of supreme importance, and, if we hope to secure good results, we must resort to means of examination which will enable us to detect the disease before it has become firmly established. Expectoration is frequently present for a considerable time before bacilli can be found, and the diagnostician who waits for the appearance of bacilli in the sputum fails to diagnosticate the disease in its incipiency, and loses the most valuable period for treatment. After carefully considering the previous history, the general appearance of the patient, and the symptoms, we should resort to early and

repeated physical examinations of the chest; a bacteriological examination of the sputum, if the disease has advanced to this stage; a microscopical examination of the blood; and, if doubt remains, we should finally resort to the tuberculin test. With the exercise of greater care on the part of both physicians and patients in recognizing the early symptoms of tuberculosis, and a more rational use of means to prevent infection, we may expect fewer cases of tuberculosis and a greater percentage of cures.

Three Cases Illustrating Cerebral Complications of Otitis Media Suppurativa. By Dr. Charles W. Richardson.—The difficulties attending work along the line of otitic cerebral surgery are pointed out. The localization of the lesion is not always clear; lesions may exist other than those made clear through the grouping of symptoms, and the pathological changes exposed may have progressed so far as to preclude the possibility of successful issues, all of which are independent, in the light of our present knowledge and skill in diagnosis and surgical intervention. The author earnestly advises that we report not only our successes but, more especially, our failures, as through them not only we, but likewise others, may profit. The author reports in detail two cases of fatal sinus thrombosis and one of cerebral abscess.

Suppurative Tympano-mastoiditis in Children. By Dr. Herman Knapp.—The author lays great stress upon the importance of an early diagnosis.

Some Observations in Mastoid Operations. By Dr. A. W. Calhoun.—The author calls attention to the infrequency of mastoid disease as compared with the large number of cases of suppurative otitis media; to the mild type of the disease; to the comparative exemption of the negro race; and to the presence of serious mastoid disease without marked outward symptoms and without apparent middle-ear involvement. Not every case requires radical operation.

Differential Diagnosis between Chicken-pox and Small-pox. By Dr. Herman Spalding.

Misstatements on Antivivisection. Correspondence with American Humane Association. By Dr. W. W. Keen.—This article gives a letter from the president of the American Humane Association to Dr. Keen, and Dr. Keen's reply thereto is printed, in which he demonstrates that in the association's pamphlets entitled Human Vivisection there are vague and indefinite references and garbled and inaccurate statements.

Anastomosis of the Ureter with the Intestine. A Historical and Experimental Research. By Dr. Reuben Peterson.

Medical News, February 23, 1901.

The Value and Accuracy of the Röntgen Method of Diagnosis in Cases of Fracture. By Dr. Charles Lester Leonard.—Anatomical and surgical knowledge is as essential to the accurate employment of this method of physical diagnosis as it is to other methods. It must, however, be combined with the necessary technique in handling the apparatus, and with the clinical experience which fits the observer to make a correct diagnosis. Conducted by a properly equipped and competent observer, the author asserts that these examinations are invaluable in the diagnosis and treatment of fractures. Every medical society and medical community owes it to itself and to its patients to see to that some one of its number possesses the knowledge requisite to the correct employment of this method for the benefit of the community at large. The author advocates that whenever a skiagraph is introduced in court as evidence, the defendant should demand the privilege of having a similar examination made, and should employ expert testimony to fully explain its meaning to the jury.

Pharyngeal Adenoids and Hypertrophied Tonsils. By Dr. J. H. Woodward.—The author points out, as the symptoms common to all cases of adenoids, (*a*) hyperplasia of the lymphoid tissue in the vault of the pharynx; (*b*) chronic congestion of the submucous blood-vessels of the inferior turbinated body; (*c*) a more or less profuse mucopurulent discharge. The author calls attention to the facts that a certain development of lymphoid tissue in the nasopharynx is normal, and necessary to the patient's well-being, and that the so-called Luschka's tonsil is not a pathological structure, and that it becomes a pathological structure only when it has undergone hypertrophy or hyperplasia. Its function is to secrete mucus for the lubrication of the nasopharynx.

A Report of Some Cases of Abdominal Surgery, with Remarks on the Diagnosis of Carcinoma of the Cæcum and the Surgical Treatment of Carcinoma of the Liver and the Gall-bladder. By Dr. Charles Greene Cumston.—Of the difficulties with which the surgeon has to contend in operating on the liver, the author places first and foremost hæmorrhage from the hepatic parenchyma. The question of a proper incision in order to freely expose the tumor is also an important one for consideration; but he believes that, in the vast majority of cases, one carried along the border of the right rectus muscle will be quite sufficient for extirpation of the gall-bladder alone. He does not approve of the incisions recommended by Micheli and Lannelongue, on account of the complicated condition to which they give rise.

The Sustaining Treatment of Typhoid Fever, with Special Reference to the Use of Hypnotics. By Dr. A. H. Buckmaster.—The author sums up the sustaining treatment of typhoid fever by stating that no physician has done his duty who (1) does not know at the end of twenty-four hours that the patient has had enough food, water, and fresh air; (2) has allowed the patient to wear himself out by continued high temperature and lack of sleep—the amount of sleep within twenty-four hours should be recorded; (3) has not examined the urine frequently, and has not posted himself daily as to the condition of the urine, the movements of the bowels, and the condition of the skin.

Compound Dislocation of the Knee. By Dr. Walter Lathrop.—This case is interesting on account of its comparative rarity.

Nasal Obstruction; Mouth Breathing; Catarrh; Dilators. By Dr. Norburne B. Jenkins.—Many non-discharging obstructions may be treated with constant pressure. In the author's opinion this is best effected by the use of folded writing-paper dilators, in size about one half inch by two or three inches. For mouth-breathing during the night, the author recommends the use of a bridle, as a reminder to the patient, rather than as a means of locking the jaws. He points out, however, that in many mouth-breathers the muscles which hold the jaws closed may become atonic and may need the assistance of the bridle in overcoming the habit. To hygienic measures, without other treatment, many stubborn cases of hypertrophic rhinitis, middle-ear catarrh, amygdalitis, "bad colds," and arrested development may yield.

Lancet, February 9, 1901.

Gastric Hæmorrhage and its Surgical Treatment. By A. W. Mayo Robson, F. R. C. S.—The author's article is based upon a series of five cases of gastric hæmorrhage treated surgically, and he urges the following conclusions: 1. All cases of acute uncomplicated gastric ulcer should be submitted to thorough medical treatment. 2. Where the ulceration proves intractable to medical treatment, or where relapses occur, gastro-enterostomy should be performed so as to secure physiological rest and relieve the hyperacidity of the gastric juice. 3. Perforation demands immediate surgical treatment. 4. The complications of disabling adhesions around the stomach and pylorus, pyloric contraction, hourglass contraction, etc., should be treated surgically. 5. In recurring or so-called chronic hæmatemesis from gastric ulcer, surgical treatment is decidedly called for. 6. In acute hæmatemesis, further accuracy in diagnosis as to the size of the bleeding vessels is urgently needed; the co-operation of the physician and surgeon is advisable in all such cases; but seeing that capillary hæmorrhage is capable of relief by medical means alone, medical should always precede surgical treatment. Of the author's five cases, four were successful; in the fifth case the cause of death was peritonitis, the result of leakage when the Murphy button used began to separate.

Considerations Touching the Pathology and Relations of Diabetes. By Dr. W. H. Dickinson (*continued*).—Some of the mystery which surrounds diabetes will be dissipated when an agreement is reached as to the bearing of the liver upon sugar. The author reviews the opposing theories of Bernard and Pary, but does not take sides. The treatment of diabetes gains little from pathology. We must presume that the disorder depends upon a lesion which is unknown in its fundamental part, though converging evidence assigns it to the nervous system. The essential lesion is not to be cured; we can treat the symptoms, however, and glycosuria, the most characteristic symptom, is the one most amenable to treatment. By diet we can always lessen the diabetic perversion, even where we cannot abolish it. That morphine, opium, and codeine lessen the excretion of sugar is certain, yet they disturb the normal functions and lead to constipation, and their careless use invites the onset of the peculiarly fatal coma of diabetes. In their stead the author advises the use of the nerve tonics, such as strychnine. A valuable remedy is water, soft water for choice, an eliminant that may postpone the coma that it cannot cure. Treatment in the future is more likely to rest upon improved physiology than upon the empirical use of drugs.

The Surgery of Pregnancy and Labor Complicated with Tumors. By J. Bland-Sutton, F. R. C. S.—In this article, which is the first of a series of three lectures on the above-mentioned subject, the author deals with ovarian tumors as complicating pregnancy and labor. Various illustrative cases are cited, and the author urges that when a puerperal woman known to possess an ovarian tumor exhibits unfavorable symptoms, ovariotomy should be resorted to without delay.

A Plea for the More Careful Study of the Symptoms of Perforation in Typhoid Fever with a View to Early Operation. By Dr. W. Osler.—The author calls attention to the fact that early diagnosis and early operation may save from thirty to forty per cent. of cases of perforation in typhoid fever. Up to January 1, 1900, there have been eleven cases operated on from his wards, with five recoveries, or 45.4 per cent. It is often a desperate remedy for a desperate condition. The vital point is to recognize the perforation and hand the patient over to the surgeon within twelve hours of the onset, before the perforation has become widespread. The author carefully reviews the various signs and symptoms of perforation. Sudden pain, increasing in intensity and recurring in paroxysms, is the most constant symptom of perforation. With an increase of the pulse rate, distention of the abdomen, increasing pain on pressure, and a rise in the leucocytes, the diagnosis is rendered probable. In a doubtful case operation should be urged. A general anæsthetic may not be needed, cocaine with a whiff of chloroform being all that is required. One of the author's patients recovered after three operations in two weeks, two for perforations and one in which a perforation was suspected.

Observations Based on the Probable Mode of Formation of Urinary Stone, Relative to its Recurrence and Prevention. By Reginald Harrison, F. R. C. S.—Though a stone may be successfully removed by operation, this does not necessarily imply that the original cause for its production has thus coincidently ceased to exist. The class of cases where the tendency to recurrence is greatest and most difficult to deal with, subsequently to the primary operation, is that in which, before stone formed, the bladder was more or less functionally and structurally spoilt by the obstruction it had been submitted to by enlargement of the prostate (atony, cystitis, etc.). Recurrence in such cases may be combated in two ways: By local treatment of the bladder following operation, and by preventive treatment having regard to the probable mode in which urinary calculi are formed. When the condition of the urine after an operation remains abnormal, or unexpectedly becomes so, as indicated by appearance, smell, or microscopical examination, local treatment of the bladder by irrigation, etc., should be instituted, and should be continued until such states are removed. Plain soft water is the best irrigating fluid, but where there is an excess of mucus in the urine, a solution of nitrate of silver (one grain to twelve ounces) gives excellent results. As regards internal preventive medicinal treatment, the author does not believe that a stone, once formed, can be dissolved. But certain drugs are of great value in preventing ammoniacal decomposition of the urine and the excessive secretion of mucus, both of which are contributing factors to the formation of stone (alkaline salts, sandalwood, salicylate of sodium, urotropin, etc.). In conclusion, the author cites and discusses a series of cases which illustrate the various points brought out in his article.

On a Case of Myasthenia Gravis, Pseudo-paralytica; Death; Necropsy; Remarks. By Dr. L. G. Guthrie.

Ptomaine Poisoning or Perforation. By E. K. Brown, M. R. C. S.—The author reports the case of a woman, aged twenty-seven years, who was taken violently ill after eating sausages and died eighty-six hours after the onset of the illness. The points of interest about the case were: (1) The sudden occurrence of the semi-unconscious state; (2) the high temperature; (3) the absence of marked muscular weakness; and (4) the very intense inflammation in the peritonæum covering the intestine without any apparent inflammation inside, from which the toxic irritant presumably extended.

A Case of Cerebellar Hæmorrhage Presenting Well-marked Early Cervical Opisthotonos and Kernig's Sign.

By Dr. W. Thyne.—The author reports a case of cerebellar hæmorrhage occurring in a man aged twenty years, in which opisthotonos was present six hours after the onset of the illness, which had begun with vomiting. There was severe headache, the tendon reflexes were increased, and Kernig's sign was well marked. At the autopsy there was found a small hæmorrhage in the left lateral lobe of the cerebellum. There was no hæmorrhage over the base and no evidence of meningitis.

A Case of Pelvic Sarcoma with Chylous Ascites; Abdominal Section and Drainage; Patient Well Four and a Half Years after Operation. By Dr. A. W. W. Lea.

British Medical Journal, February 9, 1901.

A Case of Chronic Cancer of the Face. By F. T. Paul, F. R. C. S.—The author reports the case of a man, aged forty-three years, suffering from chronic cancer of the sweat glands of the face. At the age of nineteen years he fell and injured the skin over the lower margin of the left orbit. A small sore developed, which was excised thirteen years later. Three years later, when first seen by the author, he had a small excavated ulcer below the left eye, which was excised, the diagnosis being rodent ulcer. At the present time (eight years since the last operation) the whole left cheek is occupied by a tumor, which has destroyed the eye, and in the centre of which is a large, foul-smelling ulcer. In rodent ulcer or cancer of the sebaceous glands, while the growth is slow, yet the ulceration keeps pace with the growth, so that there is little or no tumor formation. Epithelioma, which is a carcinoma of the rete mucosum, grows in excess of ulceration similarly to the tumor here in question; but it rapidly infects the lymphatic system, and, unless removed, is quickly fatal.

On Ringworm Infection in Man and Animals. By Dr. J. L. Bunch.—Ringworm in human beings is usually due to two classes of fungus, the "microsporon" and the "trichophyton." The trichophyton class includes two forms: the ectothrix, both large- and small-spored, and the less common endothrix. The author has investigated the question of the ætiology of a large number of ringworm cases, and after careful search has been fortunate enough to meet with eight cases of ringworm in human beings, and also in animals with which they had respectively been thrown into intimate contact, to isolate and grow the fungus on culture media, both from the human being and from the animal, and to demonstrate the similarity between the cultures from the two sources. Cases of ringworm have from time to time been described as having an animal origin, but the source of contagion has hitherto only rarely been ascertained; indeed, in some of the previously reported cases the probability of the patients having contracted the disease from animals appears problematical. The author gives the details of each of his eight cases. The animals from which the patients had become infected were horses, cats, a dog, a canary, and a calf.

Remarks on Finsen's Light Treatment of Lupus and Rodent Ulcer. By M. Morris, F. R. C. S., and S. E. Dore, M. B.—The authors use exactly similar appliances to those employed by Finsen, but as sunlight is impracticable in England, they make use of electric light only. A current of about seventy-five ampères and about sixty volts is sufficient to produce a good reaction in most cases. The lenses must be clear and bright and the water clear and free from floating particles. The area treated is, as a rule, kept well within the focus of the light; the smaller the focus, the greater the effect. The tubes must be kept in a straight line with the light rays, and the latter should fall perpendicularly on the compressing glass. Elastics are used to adjust the compressors to the patient's body, in preference to hand fixation.

The time of onset of the reaction varies from five or six hours to twenty-four hours. It is usually slight for the first few days of treatment, and then becomes more marked. If anything the intensity increases with continual treatment. After a preliminary hyperæmia with slight redness, a bleb forms, bursts, and dries, to form a thick, yellow crust at the end of a week. When situated over loose tissues, there is often great swelling of the neighboring parts.

The effect produced varies directly as the intensity of the reaction. Lupus vulgaris is the disease most benefited by this treatment, although it cannot be regarded as specific. It is also of great value in rodent ulcer and lupus erythematosus. The constitutional effects of the treatment are practically *nil.* Existing headache or neuralgia may be slightly aggravated. In treatment of the eyelids or canthi, no harmful effect is produced upon the eye itself.

Certain conditions make a case unfavorable for treatment. These are: A.—Those which *hinder the penetration of the light,* and so prevent a good reaction: 1. Scarring, especially from scraping, when the cicatricial tissue is, as a rule, very dense. 2. Pigmentation, which intercepts the ultra-violet rays. 3. Great vascularity. Unless the tissues are anæmic the rays will not penetrate. 4. Great depth below the surface, with which may be included thickness and induration of the nodules, surrounding inflammation and induration, and confluence of the nodules. B.—*Difficulties of position,* as, for instance, on the skin near the eye, where adequate compression cannot be applied, or on the mucous membrane of the interior of the mouth. C.—*Extent of the disease.* As only small areas can be treated each day, very extensive cases are unfavorable. The advantages of the method may be summed up as follows: Reliability, pain lessens, excellent cosmetic results; less liability to relapse; avoidance of surgical measures. Its disadvantages are the long time required, the small area treated at a time, and the expense.

In conclusion, the authors cite a number of cases which illustrate the conditions suitable for the application of the method and its effects.

A Preliminary Communication on the Treatment of Rodent Ulcer by the X-rays. By Dr. J. H. Sequeira.—The author reports a series of twelve cases of rodent ulcer which he has treated by the x-rays. The current used was one of from three to four ampères; the coil was one producing a ten-inch spark, and the tube was placed about six inches from the ulcer, the adjacent parts of the skin being protected by a layer of lead foil. The treatment lasted ten minutes and was repeated daily. So far the author has only treated cases deemed to be unsuitable for operation. Of his twelve cases, eight are still under treatment and four are under observation, the ulcers having healed. In no case has there been a disappointing result, and all the cases still under treatment are in various stages of healing.

An Address on the Need of Bacteriological and Pathological Laboratories in Dublin. By Sir G. Duffey, M. D.

The Surgical Treatment of Migraine. By W. Whitehead, F. R. C. S.—During the last twenty-five

years the author has never failed to treat successfully the most inveterate and severe cases of migraine by the introduction of an ordinary tape seton through the skin at the back of the neck. Ordinary half-inch tape is used, a fold of skin being transfixed by a scalpel, and the tape drawn through by means of a probe. Four inches of tape are left free at each side, which are tied together. The patient is instructed to move the tape from side to side each day. The seton should be worn uninterruptedly for three months, and should the symptoms recur a second seton should be introduced.

A Note on the Results Obtained by the Antityphoid Inoculations in the Fifteenth Hussars, Meerut, India. By Dr. A. E. Wright.—From a table given by the author, it would appear that the incidence of typhoid fever in the inoculated in the above-mentioned regiment was represented by 0.55 per cent., and the mortality by 0.27 per cent.; while the incidence in the uninoculated was 6.14 per cent., and the death rate 3.35 per cent.

On the Treatment of Superficial Syphilitic Gummata. By Dr. R. MacLaren.—The author recommends that superficial syphilitic gummata, which fail to improve under medicinal treatment with mercury and the iodides, should be excised. Where possible, the part to be operated upon should be made bloodless, as the yellow tissue of the gumma can then be distinguished from its surroundings with great certainty. A fortnight is a fair allowance of time to determine whether medicinal treatment is efficacious or not. It is not necessary to take away every particle of the altered tissue.

Progrès médical, January 26 and February 2, 1901.

Mountain Sickness. By M. E. Guglielminetti (*a continued article*).—The author thinks too little attention has been paid to the rôle played by decompression in the ætiology of mountain sickness. Vasomotor and cardiac stimulants are the principal agents of treatment, including the use of an artificial serum.

Lyon médical, January 27, 1901.

Chorea Treated by Cacodylate of Sodium.—M. Lannois reports three cases of Sydenham's chorea, all of exquisite type, which were cured by the use of cacodylate of sodium. It was given subcutaneously in doses of from one third to one half a grain. Although the cases are few in number, the author thinks that this drug should be extensively used in chorea.

Treatment of Vomiting of Pregnancy.—M. F. Morin believes the vomiting of pregnancy to be due to some gastric disorder. He gives a large dose of bicarbonate of sodium, thirty to forty grains at a time, upon an empty stomach. He has had very excellent results with this method of treatment.

Wiener klinische Wochenscrift, January 31, 1901.

Ligature of Umbilical Cord.—Dr. Maximilian Stolz has observed 500 infants in whom the umbilical cord was tied about one quarter of an inch from the umbilicus with fine silk, was divided with a sterilized scissors, dusted with dermatol, and covered with sterilized gauze. No bath was given until the cord had fallen off. In from two to three days the cord had entirely dried and began to separate. In consequence of the atrophy of the blood-vessels, the umbilicus retracted deeply and became squarely covered with skin.

Four Cases of So-called "Plastic Induration" of the Corpora Cavernosa.—Dr. Otto Sachs writes an exhaustive paper on this subject, giving clinical histories, symptoms, diagnosis, treatment, and prognosis. It should be read entire by those interested.

Operation for Ileus. By Dr. Josef Preindlsberger.—A clinical paper.

Centralblatt für Chirurgie, January 26, 1901.

On Quirol. By Dr. R. Schæffer.—A polemic article.

Technics of Gastro-intestinal Surgery.—Dr. Meinhard Schmidt suggests the replacing of pyloroplastic operations by completely occluding the pylorus and making a side-to-end anastomosis between the posterior wall of the stomach and the duodenum. By this means strictures will be avoided while the functional result remains very good. He advocates, too, the use of the Murphy button instead of the tobacco-pouch suture.

February 2, 1901.

Restoration of Divided Ureters by Direct Suture.—Professor A. von Gubaroff records the perpendicular suture of a ureter divided during operation. The free edge of the inferior segment was split perpendicularly, the upper end was invaginated into it, and the two ends were sewed together lengthwise. According to van Hook's experiments, longitudinal wounds of the ureter heal without fistula formation. The sutured parts were well covered with peritonæum. The patient died of some other ailment, and the ureter was found to have healed perfectly.

Treatment of Oblique Fractures of the Tibia by Extension.—Dr. Oscar Wolff recommends Bardenheuer's method of extension for fractures of the tibia. Thirty to thirty-five pounds counter-weight are to be employed, and the extension apparatus should be applied as soon as possible after the fracture, in order that the muscles may not have an opportunity to retract. The apparatus must remain in place for from six to eight weeks. Shortening is almost always prevented.

Sperimentale, Anno LIV, Fascicolo V, 1900.

The Action of the Nucleoproteids upon the Cells and Tissues. Experimental Researches. By Dr. Gino Galeotti.—The following conclusions were the result of this experimental study: The nucleoproteids extracted from the tissues of animals (kidneys, testicles), and those extracted from various species of germs (*B. pestæ, M. ureæ, B. prodigiosus,* etc.) show analogous chemical and physiological properties. They exercise considerable influence over cellular protoplasm in general, but the results of this influence vary according to the variety of cells attacked. Some cellular elements of mesenchymous origin respond to the influence of nucleoproteids with phenomena of irritation, but the epithelial elements under this influence show signs of intoxication, lose their functions, and degenerate. This fact corresponds to the well-established law that equal stimuli of equal intensity do not produce the same effect on different varieties of protoplasm. Thus the more resistant cells respond with reactive phenomena, while the less resistant ones are paralyzed. The chemico-physiologic action which the nucleoproteids exercise in the tissues is of two kinds. In some cases they cause the coagulation of either the liquid elements of the tissue (blood, interstitial exudates) or of proteids still contained in the cell body (coagulation necrosis of the renal epithelium, or of the hepatic cells). In other cases they produce a com-

plete disintegration of the anatomical elements. It is possible that the nature of their action may be analogous or identical with that of enzymes. It is astonishing that the nucleoproteids, which form such an essential part of the protoplasm, should have such a marked toxic effect upon the cells of some tissues. This fact simply shows the antagonism which exists between cells of different species, and between certain body fluids (serum) and the organized elements of a tissue which have an origin different from that of the fluid in question. Probably the destruction of certain cells represents the outcome of the struggle which goes on in the tissues in physiologic conditions, a struggle which, ultimately, is due to the action of substances that act like ferments. Ehrlich found that the destruction of red blood cells was due to a ferment which existed in the serum itself. It is probable that the cellulicidal action of certain body fluids and of certain cells of different (embryologic) origin from that of the tissues or cells acted upon depends on the toxic-fermentative function of the nucleoproteids. This hypothesis can be utilized in future investigations concerning the chemical and physiological antagonism of cells and tissues.

Alteration in the Secretory Function of the Salivary Gland. First Article: Experimental Rabies. By Dr. E. Zardo.—The author has studied the changes which take place in the process of salivary secretion and in the salivary glands of animals which have been inoculated experimentally with rabies. His conclusions are as follows: In the normal salivary gland there are probably two processes which constitute secretion. The first of these is the formation of liquid substances which results in the development of vacuoles in the gland cells; the second is the emission of solid particles which consist of fragments of protoplasm and cell nuclei. During the first few days after inoculation, the last of these processes is suspended, but it is intensified again later. The first, however, grows steadily more intense, so that the watery constituents of the saliva assume a greater and greater proportion, until, in the advanced stage, there is a veritable dropsy of the glandular cells. To this change, which is the result of a disturbance of the metabolism of the liquids in the cytoplasm, are due the alterations which are observed in these glands in animals inoculated with rabies. These changes may be summed up as follows: Swelling of the nuclei, indicating disturbances in the osmotic equilibrium of the nucleus and the cytoplasm, so that the concentration of liquids is less in the cytoplasm; karyorrhexis, indicating that the intranuclear osmotic pressure increases to such a degree as to overcome the resistance of the nuclear membrane; the disappearance of the chromatin, which, according to Arnheim, takes place when currents of liquid pass through altered nuclei; the presence of remains of the chromatin filaments which do not disappear entirely. The common observation that there is an increased salivary secretion in experimental rabies is therefore confirmed by histologic demonstration. It remains to establish the relation of the virus of rabies to this anomaly of secretion. But, first, we must know how salivary secretion behaves in the presence of chemical stimuli; such as pilocarpine, atropine, etc., or of physical stimuli, such as electricity. The author expects to report further results of his work in this field in the near future.

Concerning Skin Grafts. Experimental Researches Concerning the Duration of Vitality in Pieces of Skin Removed from the Body. By Dr. Pietro Pezzolini.—The author sums up the results of his experiments as follows: 1. Strips of skin removed according to Krause's method, and preserved in normal salt solution for a time varying between twenty-four hours and six days, may be grafted on aseptic or well-granulating surfaces with good clinical results. 2. Mitosis takes place in pieces of skin preserved by this method for ten days, but only a few cells then take part in the process. 3. Preservation of skin grafts at a temperature of 0° C. may be said to be quite useful, for grafts six days old gave better results than strips of skin that had been preserved at the temperature of the room for the same length of time. In one specimen, mitosis and well-preserved cells were observed after eleven days' conservation at 0° C. 4. Preservation of strips dry in test tubes is not to be recommended, as the specimens so kept were found in bad condition two days after removal from the body. The mode of attachment of these grafts is the same as that of the freshly removed pieces of skin, but the preserved grafts grow less rapidly. When they once do take hold, the skin remains in good condition, and does not die and become replaced by granulations, as some authors maintain.

The Bactericidal Power of the Blood and its Alkalinity in Leucocytosis Due to Mineral Poisons. By Dr. A. Bentivegna and Dr. F. Carini.

Notes and Statistics Concerning the Treatment of Bubonic Plague in India. By Dr. A. Lustig and Dr. G. Galeotti.—This article is particularly interesting, as Lustig's serum is one of the preparations used in the struggle against bubonic plague in India. In summing up a review of the results of the prophylactic and curative administration of Lustig's serum, the authors say that this serum is the only preparation that has given satisfactory results, as proved by the experience of the health department of Bombay during the past four years. At present it is the only serum which is prepared in a special laboratory in Bombay (Parel Laboratory), and is widely used there both in hospital and private practice, while the other plague serums are practically abandoned. The sanitary authorities of Bombay are about to issue an official report which will give in detail the evidence concerning the value of Lustig's serum.

Vratch, January 6 (January 18, N. S.), 1901.

The Rôle of the Spleen in the Formation of Trypsin in the Pancreas. By Dr. A. A. Gertzen.—The author reviews the evidences obtained by experiments on animals by Schiff, Gertzen, and Pachon, showing that the secretion of trypsin is dependent upon the condition of the spleen. In an article published in *Vratch* a year ago, Popelsky gave an account of his experiments which were intended to prove the opposite. The author says that Popelsky's experiments do not affect the value of the researches of the other observers named above, as in his investigations Popelsky did not keep within the conditions of the question itself. The authors who maintain that there is a connection between the spleen and the secretion of trypsin have stated that this connection can only be observed during the act of digestion. The observations of Popelsky, however, were carried on before meals. Such experiments can only be compared to the attempts of a man to observe an eclipse an hour before the announced time, and who then declares that the astronomers were wrong. The facts upon which the assertions of the author and of Schiff and Pachon are based are as follows: The quantity of trypsin in pancreatic juice or in an infusion of the pancreas is proportionate to the swelling of the spleen, *i. e.*, the maxi-

mum amount of trypsin coincides with the maximum swelling of the spleen, while the minimum, which may equal zero, corresponds to the contracted condition of the spleen. In dogs and cats that receive food only once daily, the swelling of the spleen and the rapid rise in the amount of trypsin in the pancreatic juice begin simultaneously during the fifth hour after ingestion, reach their maximum during the seventh hour, and gradually subside. In animals deprived of the spleen there is no such rise of the amount of trypsin, but a total disappearance of this ferment from the pancreatic juice. If an infusion of splenic substance is added to a solution of protrypsin, obtained by extracting the pancreas of a starving animal, a very active ferment is at once obtained. The same result is obtained by the addition of venous blood flowing from the swollen spleen to the solution of protrypsin. If a dog deprived of its spleen is also deprived of one half the pancreas, and if an aqueous extract of the swollen spleen is injected, and after twenty minutes the second half of the pancreas is removed, the extract obtained from this portion of the gland will digest albumin, while that obtained from the first half will be inactive.

Concerning Writer's Cramp. By Dr. I. V. Zabloudowsky.—A number of morbid conditions are collectively known as writer's cramp. This is the cause of the variety of opinions existing as to the treatment of this form of professional neurosis. The prevailing opinion as regards prognosis is that writer's cramp is an incurable affection. The cause of this is the fact that persons affected with writer's cramp often go to quacks who surround their methods of treatment with a halo of mysticism. The success of any method of treatment in writer's cramp does not depend so much on the ingenuity or complexity of the apparatus employed or of the physical methods of treatment practised, as on the degree to which the tired muscles are relieved of the strain in writing. Appliances facilitating writing can only be regarded as palliative measures, and cannot be considered as means of cure. The first essentials in the treatment of writer's cramp are the teaching of a proper method of writing and the training of opposing muscles to take the place of the tired ones, as well as the elimination, so far as possible, of the pressure points in the movements of the hand. Massage may be advantageously combined with these exercises. The use of exercises in writing large letters at first, using the whole wrist in the movement, then in writing smaller letters, until the ordinary size of writing is reached, is very beneficial, as it trains the wrist movement. Cramp may be prevented by relaxing the muscles engaged in writing and moving the whole hand a short distance after every two or three words. In this way an uninterrupted line is obtained, but the muscles get enough rest between every effort. In the same manner it is advisable to interrupt the movement of the pen in tracing letters or words that require prolonged efforts. In the more severe cases of cramp, some appliance must be used which will relieve the muscles from tension. A sliding rest for the right elbow, hanging on a horizontal arm fixed above the table, is such an apparatus. If the cramp depends on central disturbances, *e. g.*, hysteria, the local treatment must be combined with general measures. Suggestion combined with massage gives good results. The use of exercises analogous to the Swedish system of gymnastics is of but limited value, as the movements mentioned are comparatively coarse. The use of typewriters, and the increased attention to methods of teaching writing, will eventually lessen the frequency of writer's cramp. (*To be continued.*)

The Diagnostic and Prophylactic Value of Koch's Tuberculin. By Dr. Th. A. Dombrovsky.—The use of tuberculin for diagnostic purposes, in view of the perfect harmlessness of the remedy, may be looked upon as a most valuable means of distinguishing the various stages of tuberculosis, and may be employed without fear of untoward manifestations in the proper cases. Before using tuberculin for this purpose, however, one must always make a thorough clinical examination, and tuberculin is only to be injected in the absence of physical signs or in the presence of indefinite signs, when tuberculosis is suspected.

Electrolysis in Cicatricial Stenosis of the Œsophagus. By Dr. N. V. Sletoff and Dr. P. I. Postnikoff.—A little over two years ago the authors published an account of their first successful case of cicatricial stenosis of the œsophagus treated with electrolysis. During the past year they have seen a second case of this kind, and now give the history of this patient. The principle of electrolytic treatment in these cases is the destruction of the new connective tissue by means of chemicals which form at the negative pole—caustic soda and caustic potash. The slough thus formed falls off and the ulcer heals without any secondary cicatrix. The chief advantage of electrolysis over other caustics is that it does not affect the surrounding tissues, but can be limited to a locality with great accuracy. For this reason it is applicable in such places as the urethra, the œsophagus, etc. Why the electrolytic products affect the scar only and not the surrounding tissues, cannot be stated with certainty, but it is known that a much stronger current is required to destroy old, already organized tissue than that which is sufficient to destroy new connective tissue. Probably the difference is caused by different conditions of conductivity and resistance. The authors measured the thermo-electric coefficient of the œsophageal electrode while it was doing the work of destroying the cicatrices, and found that the heat developed was so infinitesimal that the process could by no means be called a thermo-cauterization. No dilatation is employed, as the olive of the electrode is held on the cicatrix only by its own weight. The olive-shaped electrode is to be preferred to the linear one used by Fort. The technique is simple. The broad plate, representing the positive electrode, is placed on the abdomen or on the back of the patient. The negative pole of the battery is connected with a copper rod, the end of which is provided with a screw thread, on which the olives are screwed. The latter are of copper, silver, or nickel, ranging in size from one half to two centimetres in diameter. After the olive has been introduced and has been felt resting against the obstruction, the current is turned on, and the galvanometer, pulse, and facial expression, as well as the time of application, are observed, until the olive slips through the obstruction. The current is then closed and the sound removed. The pain is slight. The appearance of blood on the olive indicates too long a *séance* or too strong a current.

Bulletin of the Johns Hopkins Hospital, December, 1900.

Theodor Billroth, Musical and Surgical Philosopher. A Biography and a Review of his Work on Psycho-physiological Aphorisms on Music. By Dr. John C. Hemmeter.—Although no such contribution to localization as that of Broca has been made by Billroth in his psycho-physiological aphorisms on music, nevertheless his work

will prove of value, because of the general clearing of the entire subject of physical and physiological acoustics, and by rendering the work of Helmholtz more accessible and more intelligible to musical artists and connoisseurs, so that they may hereafter become conversant with the scientific aspect of their art. Above all, by pointing out the gaps and breaks in the experimental and practical logic, he has emphasized the gaps that must be filled before we may hope to reach more tangible results concerning the purely psychological aspects of music.

Report on the Examination of the Ears of Four Hundred and Forty School Children. By Dr. H. O. Reik.

Experimental Injection of Testicular Fluid to Prevent the Atrophy of the Prostate Gland in Dogs, after Removal of the Testes. By Dr. George Walker.—The injections had apparently no effect whatever, and the author concludes that the atrophy of the gland is in no way connected with the absence of any substance in the testicular secretion.

A Plea for Early Naked-eye Diagnosis and Removal of the Entire Organ with the Neighboring Area of Possible Lymphatic Infection in Cancer of the Larynx. By Dr. John N. Mackenzie.—Not until the conscientious surgeon removes not only the entire organ, but also the neighboring lymphatic area, in cancer of the larynx, will the statistics and prognosis become more favorable. It is chiefly because they have not been complete, that incision of half the larynx or of the whole organ has so signally failed in the past.

Heredity in Diabetes Mellitus, with a Report of Six Cases Occurring in a Family. By Dr. J. Hall Pleasants.

Special Articles.

THE NON-OPERATIVE TREATMENT OF PROSTATIC HYPERTROPHY, WITH SPECIAL REFERENCE TO CATHETER LIFE.

By RAMON GUITÉRAS, M. D.,

NEW YORK.

In the non-operative treatment of prostatic hypertrophy "catheter life" plays an important rôle, and it is my intention in this paper to pay special attention to that phase of the conservative treatment of hypertrophied prostate which concerns the use of the catheter.

By "catheter life" is meant the habitual use of the catheter to which men of a certain age are obliged to resort in order to rid themselves of a given amount of urine which otherwise they would be unable to void, on account of the impediment in the posterior urethra caused by the enlarged prostate. Such a life is begun in cases of prostatic hypertrophy with complete or partial chronic retention, or during attacks of acute retention; in other words, either when only a part of the urine can be voided and enough is left behind as residual urine to interfere with the health of the patient, or when no urine can be passed spontaneously. The popular interpretation of catheter life is that it is a measure to be adopted when nothing can be passed. Naturally, complete retention is the form which most demands the catheter, for if nothing were done to relieve a case of this kind, the bladder would dilate to such a degree that either it would probably rupture or the ureters and the pelves of the kidneys would dilate until sufficient pressure was brought to bear upon the kidney proper to interfere with its function and to cause death from uræmia. Nature, however, usually protects the patient from such a fate by relaxing the sphincters and allowing an overflow of the contents to take place. When the upper sphincter, or sphincter vesicæ proper, gives way, the urine reaches the posterior urethra and gives rise to a desire to urinate, and then everything possible is squeezed out in an act accompanied by painful tenesmus.

In unrelieved cases of partial retention the residual urine present gives rise to enough bladder irritation to cause considerable suffering, and generally develops an obstructive cystitis, which may be followed later by ureteritis, pyelitis, and pyelonephritis, and may end in death from uræmia or from septicæmia as surely as in cases of complete retention, though more slowly.

In order, then, to consider the subject of the conservative treatment of prostatic hypertrophy as it presents itself to the general practitioner, it is not enough to say: "Catheterize your patient as often as is necessary to relieve him of his accumulated residual urine, washing out the bladder as frequently as is indicated," but we must consider all the principal features that may present themselves—the symptoms; the complications existing at the time the patient comes to us; the complications that may follow catheterism, and the methods of avoiding them; the treatment by palliative means; the aseptic precautions and the technique connected with catheterism; and the directions to give the patient about the use of the catheter.

Symptoms.—The symptoms of prostatic hypertrophy are a feeling of fulness in the perinæum, urinary tardiness, a slow stream, sometimes dribbling, frequency of urination, burning in the neck of the bladder, tenesmus and irritability, pain in the perineal, epigastric, sacral, or lumbar region, and retention or incontinence of urine. These symptoms may all be due principally to the prostatic enlargement, or they may be due to the complications which sometimes develop in its course. The complications are urethritis, prostatitis, epididymitis, cystitis, ureteritis, pyelitis, hydronephrosis, pyonephrosis, pyelonephritis, urethral fever, suppression, acute renal congestion, and uræmia. Many of these complications may follow catheterism and prove most alarming, for it must be remembered that the use of instruments is the most frequent cause of infection in prostatics.

General Treatment.—The palliative treatment of prostatic hypertrophy is directed to the relief of the symptoms and to the prevention of complications. It consists in the administration of diluents, antispasmodics, internal urinary antiseptics, and laxatives, and in hot baths, hot local applications, rectal douches, prostatic massage, catheterism, bladder irrigation, aspira-

tion, and the regulation of the diet, clothing, and exercise of the patient.

The conditions giving rise to the symptoms enumerated in the preceding paragraph are: 1. Partial retention, with or without cystitis. 2. Partial retention with an acute attack of complete retention. 3. Complete retention. It is the symptoms of bladder irritation or of cystitis due to retention, or the retention itself, which demand treatment in these cases. As a general rule, there is frequency of urination, with, perhaps, bladder tenesmus and pains in the perineal, hypogastric, lumbar, or sacral region. These may be due to congestion of the prostate or bladder, or to cystitis. The intensity of these symptoms varies according to the intensity of the inflammation or congestion, and, to a certain extent, with the susceptibility of the patient to local irritation. It is impossible to say why some patients suffer more than others, or to predict which patient will suffer the most, for patients with normal urine and a prostate which is but slightly enlarged will sometimes suffer more than others with marked cystitis and a very large prostate.

The cystoscope has, in my mind, cleared this interesting question in many cases, as in cystoscopy in cases of marked irritability without cystitis I have often seen large varicose veins of the vesical neck and trigonum, which are probably sufficient to account for the discrepancy in the proportion of symptoms to lesions.

In prostatic hypertrophy the first step, after establishing the diagnosis, is to determine the condition of the urine and the amount of residual urine present.

Congestion.—If the urine is found to be normal, we can attribute the symptoms to congestion, and, all other causes of congestion or irritation around the neck of the bladder having been excluded (such as gonecystitis, stricture, tuberculosis, stone, or tumor), we conclude that the cause of the symptoms is the hypertrophy of the prostate and the consequent congestion of the bladder neck through an interference with the vesical circulation. A soft-rubber, velvet-eyed, elbowed catheter should then be introduced into the bladder after the patient has urinated, in order to see how much residual urine remains. If the residuum is less than two ounces, an attempt should be made to relieve the congestion and to diminish the discomfort by internal and local remedies without the use of the catheter, in the hope that this instrument need not be used for a while, and that the amount of residual urine, which is small, may be diminished.

To alleviate these symptoms, then, a diluent and an antispasmodic may be given to render the urine which comes into contact with the congested surface less irritating, and to calm the sensory nerve fibres in this region, in the hope that, temporary relief being given, the symptoms may be held in abeyance for a while. As a diluent, plain water is of service, but the saline diuretics are perhaps better, as, in addition to producing an increased flow of urine, they also neutralize it. For th purpose the potassium salts are generally prescribe either the citrate, the acetate, or the bicarbonate.

Of the antispasmodics, belladonna is the best, though many prefer hyoscyamus. Codeine is also service, as is morphine, but if it is possible to avoid the latter opiate should not be prescribed internally. preparation of value to administer internally in su cases is:

℞ Tincture of belladonna..... 7½ drops;
Potassium acetate. . . . . .15 grains;
Peppermint water, enough to make 1 drachm.

S. A teaspoonful three times daily between meal

Another prescription for the same purpose is th following:

℞ Codeine. . . . . ½ grain;
Tincture of belladonna.....10 drops;
Potassium acetate. . . . . .15 grains;
Peppermint water, enough to make 1 drachm.

S. A teaspoonful three times daily in a glass c water.

Sometimes these patients do not find the desired re lief, in which case a suppository at night will help t diminish the discomfort.

℞ Extract of belladonna, } each..... ¼ grain.
Morphine sulphate, }

Hot rectal douches of saline solution taken by mean of the recto-genital tube before going to bed are also o benefit, and the same may be said of sitz-baths.

The various bladder specifics, such as saw palmetto corn silk, and buchu, sometimes give relief, but they ar uncertain and, at present, not much used.

Moderate exercise should also be recommended, but i must be such as to increase the general circulation with out favoring local congestion. Walking is one of th best means of exercise, but this should be brisk and fol lowed by a "rub-down" and a change of clothing. Ther are forms of exercise that a man of the prostatic ag cannot take; he certainly cannot indulge in the so called athletic sports, and the bicycle and riding o horseback do him harm. Probably golf is the best exer cise for such men.

Fresh air is, of course, of great benefit, but the ma in taking it should be on his guard against exposure t wet and cold. The clothing is also important. Woo should be worn next the skin, and when the patient ha perspired he should change his clothes, instead of allow ing them to dry upon him, especially if it is cold. Th feet, above all, should be kept warm and dry. These re marks may seem unnecessary, but such hygienic meas ures are of the greatest importance, for they tend to pre vent congestion, which gives rise to attacks of acute re tention, and to improve the general tone and vigor o the system, thus fortifying it against infection. Ex posure to cold and wet may also produce attacks of acute congestion of the kidneys, and these may be followed by uræmia. Too much, therefore, cannot be said

of the importance of preventing prostatics from becoming chilled. If possible, they should go to an equable climate for the winter—for example, to Nassau, in the Bahamas. One notices that the prostatic usually fades away and dies in the fall of the year, with the onset of cold weather.

The care of the bowels should also receive attention. Some laxative should be given which will produce one good movement every morning. Cascara sagrada, given at night, is a trustworthy remedy. The dose varies with the susceptibility of the patient to this class of drugs. Saline aperient waters also, given in the morning, are of value.

Local Treatment; Catheter Life.—If no relief is obtained by the general measures above described, and if the amount of residual urine seems to be increasing, the use of the catheter to empty the bladder before going to bed at night, and bladder irrigation with a solution of boric acid, or of some preparation of it, may be tried. If there are from two to five ounces of residual urine, and the symptoms are distressing, the patient should be catheterized once a day, morning or evening. If the amount of residual urine is greater—say from five to eight ounces—it should be drawn off twice a day, night and morning, great care being taken to keep the catheter clean and to employ the technique described further on. In such cases, no cystitis being present, there will be no necessity of washing out the bladder, unless with the expectation of relieving any bladder irritability that may be present.

If the amount of residual urine is found to be from eight to twelve ounces, the patient should catheterize himself three times daily. If it is from twelve to sixteen ounces, catheterism four times a day will be required. Twelve ounces is the normal average amount voided by a man in health at the usual intervals of urination—*i. e.*, in the morning, at night, and perhaps two or three times during the day—and if the residual urine amounts to this quantity, the bladder is practically in a condition to demand catheter life. As a pint is usually sufficient to cause an imperative desire to urinate, if a patient has that quantity of residual urine, in order to pass away the amount in excess of that which is constantly being secreted by the kidneys, he would be obliged to pass urine very frequently, or else he would have an overflow-retention.

Such is really incomplete retention, but retention of sufficient importance to call for the use of the catheter, as otherwise the back-pressure might produce serious complications.

So far I have spoken of *incomplete retention.* If in any such case a pronounced excess of urine has accumulated in the bladder, either an overflow-incontinence will have resulted or else an acute attack of *complete retention.* Such a complete retention, occurring in a patient who has a greater or less amount of residual urine, may depend upon the patient's postponing the emptying of his bladder until the contents have overcome the resistance of the bladder wall; in other words, until the urine has dilated the bladder wall to such an extent that its contractile power is interfered with, as when a man is intoxicated, or while driving, or sailing, or in some other situation in which he cannot urinate when the desire comes.

As a rule, however, these attacks are due to prostatic congestion or œdema, brought about by exposure to wet and cold, thus chilling the extremities and causing a determination of blood to the prostate. In these cases the patient suffers considerably. He has pain and a cramp-like feeling in the suprapubic region, a desire to urinate, but an inability to do so, and generally a little dribbling.

When a patient is seen in this condition, the greatest care must be taken in handling the case, as it means suddenly breaking a patient into catheter life, and it is a crisis in his existence. The dribbling and incontinence may be sufficient to prevent death from hydronephrosis and consequent uræmia, but, the bladder wall being considerably dilated, the blood-vessels are being more and more pressed upon, and the muscular tissues are being distended and weakened. The patient in this condition always seeks relief. Very often the physician draws off all the urine and a congestion of the bladder takes place, and the urine accumulates again, but this time the congested bladder is more irritable and cannot contain so much urine as before. The suffering is intensified, and the patient again seeks relief. This continues; the bladder congestion increases, pain, tenesmus, dribbling of urine mixed with blood and pus (if infection has taken place) being almost constant. This is the picture that presents itself when the patient has escaped death, but, unfortunately, he has suffered greatly, and in all probability will suffer still more from the cystitis which is almost sure to follow.

In such cases the following course must be pursued by the surgeon: He should insert a sterilized catheter lubricated with sterile glycerin, or some bland lubricant, through the urethra into the bladder, and draw off a quantity of urine not exceeding sixteen ounces. He should not draw off the entire contents, as in these cases several quarts may have accumulated, and in this event there may be fatal syncope or an acute congestion of the entire urinary tract due to the rush of blood to the urinary organs after the back-pressure has been removed, and this acute congestion in a kidney affected with Bright's or with some surgical disease may interfere with the functional activity of the organ and inhibit the requisite excretion of urea, thus producing uræmia. As hæmaturia and death from renal congestion have occurred after the removal of twenty ounces of urine, it is safe to put the limit as a hard and fast rule at sixteen ounces. The patient should be put on the use of a urinary antiseptic, an opiate should be given to relieve the pain, and a hot sitz-bath should be ad-

ministered, or a hot rectal douche, together with the use of hot fomentations over the suprapubic and the perineal regions.

If in two hours the patient is able to pass a fair amount of urine spontaneously, he should be allowed to void it at intervals of an hour or two. If he cannot void it at the end of four hours, the catheter should be again inserted and twelve ounces should be withdrawn, and the same amount again in three hours. After this, eight ounces can be withdrawn every two hours until the bladder is empty or until the patient has regained the power of spontaneous urination.

In case the physician, on visiting the patient in this condition, cannot pass the catheter, which, by the way, should be an elbowed, soft-rubber, velvet-eyed instrument, No. 12 to 14 French, he should give the patient an opiate hypodermically and order a hot sitz-bath. Very often the patient can pass some urine in the bath. If not, after an hour's rest the physician should again try to pass the catheter. If unsuccessful after two or three attempts, he should puncture the bladder suprapubically with an aspirator and withdraw not over a pint of fluid. Then hot applications should be made above the pubes, and usually the patient will be able to urinate spontaneously after an hour or so, or else the catheter can be passed. If not, the patient should again be punctured at the end of from four to six hours, and this procedure should be repeated at these intervals until the prostatic congestion has gone down sufficiently to allow of spontaneous urination or to permit the introduction of a catheter. Generally a few punctures will suffice. There are cases in which 150 punctures have been performed.

When the patient has begun to urinate spontaneously, the physician can determine the amount of residual urine present, and can use the catheter at intervals the frequency of which is indicated by the amount thus found, according to the rules already given.

In case the patient has no spontaneous urination after the catheter has been used for several days, and if he has pain or tenesmus when from twelve to fourteen ounces have accumulated, then constant catheter life will probably have to be begun, and the frequency of using the catheter will depend upon the individual case.

Catheter life is usually introduced by an explosion which takes place when the patient is leading a methodical life, without thought of having to resort to artificial means for urination, the explosion being an acute attack of retention, such as has been described above. The explanation of this is as follows: A certain amount of residual urine had been present perhaps during a considerable period of time without the patient's knowledge, and then an acute congestion of the prostate took place and acute retention occurred in consequence. Although there are many cases in which the patient has never had retention, but consults his physician for a feeling of local weight, and it is found that he has from six to twelve ounces of residuum, there are other cases in which the patient knows he has prostatic hypertrophy and has been using the catheter right along, but suddenly the retention becomes acute, and the treatment described above has to be resorted to. When the daily use of the catheter has to be resorted to, the patient has to be shown how to pass the instrument himself, and the surgeon should not only furnish him with directions for doing this, but should teach him personally the details of the technique of catheterism. The catheters used should be of soft rubber with elbowed end and velvet eye, No. 12 to 16 French, and they should be bought by the dozen in assorted sizes, so that the patient may never find himself without the proper catheter, and may always have another one at hand if one fails to enter. It must be remembered, also, that catheters lose their tone and become roughened by sterilization. If the patients cannot use the soft-rubber catheters, they may be given the woven variety of the same shape and size. As catheter life is a very important matter for the prostatic patient, he should be properly equipped for the same, just as he is equipped with proper clothing for the different seasons. He should, therefore, purchase a small sterilizer, in which the catheters can be boiled over a small gas stove, or, if he is obliged to use the woven catheters, a small formalin sterilizer.

The physician should prop the patient up on a bed or sofa, should take a sterilized catheter, dip it into a bottle of glycerin that has been previously sterilized by placing the bottle in water up to its neck and boiling the water, and, holding the catheter by the distal end, should open the lips of the meatus, the glans having been cleansed, and let the proximal end of the catheter dangle over the opened meatus until the end is engaged. Then the catheter should be allowed to drop, partly of its own weight, partly impelled by a gentle impulse, down into the urethra as far as it will go. If the catheter stops, the surgeon must bring his hand down further on the instrument and gently guide it past the impediment in the prostatic urethra, or through the compressor urethræ if this is in a spasmodic condition. The catheter must now be given into the hands of the patient, and the surgeon should watch him as he passes the instrument, instructing him as he goes along. It may take several days of such instruction before the patient can pass the catheter into his bladder, but after he has mastered this procedure he should be allowed to pass it on himself as often as is necessary. The surgeon should, however, see the patient as often as is needed to treat the cystitis which is generally present and to continue the observation of the case.

Very often a patient broken into catheter life will be able to catheterize himself much more easily than this can be done by the physician; on several occasions the writer has failed to pass a catheter on patients who could perform this procedure very easily upon themselves. On the other hand, on many occasions the sur-

geon can pass the catheter on patients who cannot do so, owing to nervousness and lack of confidence. The only catheters which the writer would recommend are the soft-rubber and the woven ones, and no other varieties should be used by patients who catheterize themselves. The care of these instruments is comparatively simple, and yet it is very important that the patient be properly instructed in the manner of taking care of them if he is to lead a catheter life. Perfect sterilization of a soft-rubber catheter can be secured by boiling it for five minutes, and perfect sterilization of a woven catheter can be obtained by subjecting it for from five to ten minutes to the fumes of formalin. The formalin sterilizer resembles a tin bread-box in shape. In this box is an alcohol lamp, and on the chimney of the lamp is a cup, into which the pastille of formalin is placed. A shelf in the box serves for the catheters to be disinfected. After the catheters have been placed on this shelf, and after the lamp has been lighted and the tablet put into the cup, the door of the box is closed and the catheters are allowed to remain in the formalin fumes for five or ten minutes. This process can be carried on with woven catheters for an indefinite number of times, whereas if they were boiled they would be speedily destroyed. All catheters should be washed with soap and water and flushed out with warm water as soon as possible after they have been used, and again before sterilization.

When the patient goes to business in the morning, he should take his catheters, previously sterilized, wrapped up each in a sterilized towel and placed in his pocket. He should also take along a bottle of the sterile lubricant. When the time comes to pass his catheter, he should unwrap one catheter and let the end of the instrument drop into the lubricant. Holding the lips of his meatus open with one hand, he should next drop the catheter into the urethra and guide it past the obstruction, as already indicated. After using, he should wrap the soiled catheter in another towel and place it in another pocket. This procedure should be repeated during the day as often as is necessary, the frequency depending upon the urgency of the desire to urinate. On arriving home at night, the patient should wash the catheters, flush them out, and sterilize them again as directed, wrap them in a sterilized towel, and take them down to business in the same way on the following day.

Complications of Catheter Life.—Attacks of *acute retention* due to congestion or œdema of the prostate have already been spoken of. They are such frequent complications of prostatic hypertrophy as to constitute a part of its symptomatology. Next in frequency is *cystitis.* The treatment of cystitis in these cases should consist in washing out the bladder once or twice daily, in addition to the measures indicated under the heading of General Treatment. If the bladder is washed out every other day, the best treatment is by irrigation with weak solutions of silver nitrate, the usual strength being 1 to 3,000, given through the catheter. If the bladder is washed out once a day, a still milder solution of silver nitrate is indicated. It is often advisable to wash out one day with a saturated solution of boric acid, and the next day with a silver-nitrate solution. If the patient is directed to wash his bladder out twice daily, he should use either a saturated solution of boric acid throughout or one injection with boric acid and the other with silver nitrate. The technique of these irrigations is very simple, and they can easily be performed by the patient himself. A fountain syringe is hung up above his bed, and at the end of the tube a coupling nozzle is attached. The reservoir (bag or can) is filled with hot boric-acid solution. Before getting up in the morning the patient passes the catheter, draws off the urine, and leaves the instrument in place. The coupling nozzle is next introduced into the distal end of the catheter, and the patient allows the fluid to run into the bladder until it feels distended. He then withdraws the coupling and allows the solution introduced to run out into some vessel between his legs. This procedure is then repeated until the bladder has been thoroughly cleansed. At night, before he goes to bed, the same treatment is repeated. The fountain syringe (one of glass is to be preferred) can remain on the wall, and the end of the tube with the coupling nozzle can be dropped into a bottle containing a 1-to-2,000 bichloride solution standing on the floor under the bed. After a little practice the patient himself can attend to these irrigations as well as any one. He makes the boric-acid solution by adding a tablespoonful of the powder to a pint of water, and the silver-nitrate solution, 1 to 4,000, by adding four drops of a grain-to-a-drop solution in a quart of water, or eight drops for a 1-to-2,000 solution, if desired. These solutions should be as hot as can well be borne.

The next complication of catheter life which I shall consider is *urethritis.* This complication comes about in one of three ways. In the first place, it may occur in those cases in which the catheter has to be retained for continuous drainage, thus giving rise to a constant irritation of the urethral wall and an opportunity for some urine to pass down alongside the catheter, decomposing and acting as an irritant. Secondly, urethritis may develop as a result of unclean catheters or of rough catheters which produce traumatism along the urethral wall as they are passed in. Thirdly, a specific urethritis may occur when the physician has used a catheter in the urethra of a prostatic patient after having used the same instrument in a case of gonorrhœa. In such cases urethral irrigations of potassium permanganate, from 1 to 4,000 to 1 to 1,000, or of silver nitrate, from 1 to 8,000 to 1 to 4,000, will usually cure the inflammation in the urethra, or an ordinary hand-injection, such as is given in attacks of gonorrhœal urethritis, may be ordered. It may be noted, however, that urethritis but rarely occurs in these cases without cystitis, as the same catheter is used in the bladder as that which infects the urethra.

As the result of an inflammation of the prostatic urethra, another complication may ensue, namely, *epididymitis.* It must be remembered that in prostatic hypertrophy the posterior urethra is extremely sensitive, and the repeated traumatism of a catheter, in the endeavor to pass through the contracted sphincter, aggravates the congestion of the mucous membrane and prepares a favorable soil for infection. The inflammation in the prostatic urethra can easily extend down through the ejaculatory duct and give rise to epididymitis. The fact that this complication may occur shows the importance of care and gentleness in passing the catheter. If the sphincter rebels against the entrance of the catheter into the bladder, the patient should not force the instrument in, but should take a hot sitz-bath or a hot urethral irrigation of saline solution, and then rest for a while. Then he can employ another catheter, perhaps one of smaller size, with more gentleness. Epididymitis is one of the most distressing complications that occur in prostatic hypertrophy, and patients have frequently applied for a radical prostatic operation on account of the recurrent epididymitis from which they suffer. The treatment of this complication is the same as that of epididymitis due to any other cause. The inflammation is usually not so severe as that following gonorrhœa and generally subsides in a few days. A fifty-per-cent. ichthyol ointment or a poultice for two or three days is generally sufficient to make the acute symptoms disappear and enable the patient to resume his duties. Some urinary antiseptic, such as salol, urotropin, eucalyptol, or a benzoate, should also be administered in order to render the urine less infectious.

Finally we come to a group of complications of prostatic hypertrophy which depend upon the pressure of the urine which cannot find its way into the urethra, on the transmission of infection from the bladder upward, on reflex irritation of the kidney, or on a combination of these causes. In this group are included ureteritis, pyelitis and pyelonephritis, hydronephrosis and pyonephrosis, urethral fever, fatal syncope, acute renal congestion, acute nephritis, suppression of urine, and uræmia.

Ureteritis, Pyelitis, and Pyelonephritis.—This group of affections is due to an increased pressure in the urinary tract, combined with transmission of infection from the urethra and bladder. The ureters and pelves of the kidneys are, as a rule, the first seats of infection, but after a while the tissue of the kidney itself may become affected, the resulting condition being pyelonephritis, or "surgical kidney," as it is sometimes called. When pyelitis alone is present, there is, in addition to the local symptoms due to the obstruction, an occasional pain in the region of the kidneys, both on pressure and on motion.

The symptoms of pyelonephritis are, in addition to those described above, fever, headache, anorexia, dry tongue, nausea, vomiting, a tendency to somnolence, and a facies which is characteristic of systemic septic poisoning—sallow, emaciated, pale, and anxious. The attack may be preceded by a marked chill. The prognosis is very unfavorable, especially if both kidneys are involved, and but little can be done in the way of treatment except to remove so far as possible the local causes—the retention and the decomposition of urine and absorption of pus. It is to be remembered that any manipulation of instruments must be very cautiously performed, as the kidney may be still further irritated reflexly and still more septic material may be introduced with the catheter.

The urine must be drawn off with sufficient frequency to relieve the back-pressure. In cases of urethritis and pyelitis large quantities of water and urinary antiseptics should be given. If pyelonephritis is present, nephrotomy and drainage are the only means of saving the patient. The urine from each kidney should be examined to ascertain the condition of the organ, as nephrotomy should be performed only on one side at a time.

Hydronephrosis.—As the result of the obstruction there is sometimes an unusual dilatation of the pelves of the kidneys. As these become larger under the influence of increased pressure, the calices of the kidney are also dilated. This condition is a double one, as the obstruction is below the ureters. The treatment consists in treating the bladder as already described under Retention.

Pyonephrosis means that in addition to dilatation there is suppuration in the pelves of the kidneys. The suppuration may be present from the first, or it may follow hydronephrosis. The symptoms are similar to those of pyelitis with the enlargement of the pelvis. This is never marked in prostatics and usually affects both kidneys. The treatment is the same as for pyelitis and hydronephrosis.

Urethral Fever.—This term is used to designate a febrile disturbance which results from the passage of an instrument or the performance of a surgical operation on the urethra. The fever is, as a rule, due to absorption of some septic material from the urine which passes over an ulcerated surface in the urethra. It is to be noted that the quantity of infectious material necessary to produce urethral fever varies greatly, for in some cases a small erosion is sufficient, while in others large operative wounds are bathed with the same urine without causing any rise in temperature. Urethral fever, I may here add, is also a name applied to the fever due to acute renal congestion and acute interstitial nephritis or to suppurative pyelonephritis—conditions which I have described under special headings.

If an erosion is present in the urethra, the patient should be put on the use of some urinary antiseptic, such as one of the benzoates, a salicylate, or urotropin, and the urethra should be irrigated with a silver-nitrate solution at varying intervals. Bladder drainage by means of a retained catheter or a perineal section, with

daily irrigations, is often the only means of relieving the patient. A suppository containing half a grain of morphine and ten grains of quinine may also be given before each introduction of the instrument, to prevent an attack. Patients who are being broken into catheter life often have an attack of chills and fever and sweating occurring singly or in several attacks over a prolonged period of time, and they often attribute these symptoms to malaria, or, when they are accompanied with nausea and vomiting, to indigestion, or to some other gastro-intestinal disorder. These symptoms are, however, due to septic absorption through the urethra. It may be stated, as a rule, that all "malaria" arising and existing during urethral interference is sepsis.

Fatal syncope occurs when the bladder is suddenly emptied of a great amount of fluid, owing to the rush of blood into the veins, whose walls have been rendered paretic by pressure. This would never occur if the dilated bladder were emptied slowly and at regular intervals.

Sudden and complete emptying of the dilated bladder also results in *acute renal congestion,* and if the kidneys are previously affected, medically or surgically, and are barely able to excrete the amount of urea necessary for the continuance of life, such a congestion might bring on a serious attack of uræmia, which would prove fatal, or an acute nephritis, with the same results.

Uræmia as a complication of prostatic hypertrophy may be due to acute renal congestion, to acute nephritis, or to an advanced stage of compression and suppuration of the kidney, such as exists in hydronephrosis, pyonephrosis, or pyelonephritis, or to chronic interstitial nephritis. In other words, uræmia occurs whenever the functions of the kidney are so disturbed that sufficient urinary constituents cannot be thrown off and the patient dies of toxæmia. Suppression is a frequent forerunner of uræmia, although it must be remembered that we should judge the working force of the kidney not only by the amount of urine passed, but also by the percentage of urea it contains.

The clinical signs of uræmia vary considerably, both in severity and in rapidity of onset. There may be said to be two types of uræmia, the acute and the chronic, distinguished according to the intensity and duration of the symptoms. In the first the symptoms are usually headache, somnolence, mental languor, perhaps occasional nausea, vomiting, diarrhœa, spots before the eyes, interference with the sight, dry skin, sometimes twitchings, and mild delirium. Then there may follow the uræmic convulsions, which are characteristic and resemble epileptic attacks, in which case the face becomes blue, there is froth at the mouth, the pupils are widely dilated and scarcely respond to light, and the pulse is weak and rapid during the attack, but before it is tense and slow. The breathing is accelerated and sometimes difficult. The convulsions are followed by coma, which may last for a number of hours and be followed by repeated attacks of convulsions. In some cases there is violent delirium together with other evidences of psychic disturbances. As a rule, the temperature rises during the attack, and sometimes there is a marked rise before death. The prognosis is not always absolutely unfavorable, and even after a number of hours in the uræmic state patients have recovered. These symptoms are not always present, and in the great majority of cases only a few of them exist.

The treatment consists in stimulating the activity of the kidney in a cautious manner by diuretics and large quantities of fluids, and in increasing the activity of all the channels of elimination by cathartics and diaphoretics (hot pack, hot drinks, etc.), and by supplying the loss in water by means of high rectal injections of salt solution or water given by the mouth. As diuretics, we may use acetate or citrate of potassium, sweet spirits of nitre, *Triticum repens,* digitalis if the heart's action is bad, or strychnine; nitroglycerin if there is arteriosclerosis; pilocarpine to produce diaphoresis; cupping over the kidneys will also sometimes stimulate them. We should be on our guard in cases of prostatics who pass large quantities of urine with low specific gravity and have a rapid pulse.

If the patient with prostatic hypertrophy suffers to such a degree that he is not relieved by the use of the catheter and by the treatment which has been described in connection with catheter life, he must seek more radical treatment. The conditions which drive one to adopt such a course are usually vesical tenesmus, attacks of urethral fever, and recurrent epididymitis. When the patient feels that life is no longer worth living with the degree of suffering which he is enduring, he will often lean toward operative procedures, even if he knows that all such are dangerous. Of these operative methods, there are but two which are looked upon with favor today, and no prostatic should think of submitting to one of these until he has first been broken into catheter life. The two operations which may be performed if conservative treatment fails are prostatectomy and prostatotomy. The former is enucleation of the prostate, the latter the Bottini operation.

If the prostate is large and indurated, and has the feel of an apple or an orange on rectal palpation, and if the kidneys are in good condition, then prostatectomy by the perineal method or by the suprapubic route should be performed. If the lateral lobes are principally involved, the perineal method is to be preferred; if the posterior lobe is chiefly affected, the vesical method is to be used. It may be said that the larger a prostate is the better fitted it is for a prostatectomy. If the patient is old and his resisting powers are diminished, and if the prostate feels small on rectal palpation, although there is a considerable impediment in the posterior urethra, then the Bottini operation, or galvanocaustic prostatotomy, is indicated.

75 West Fifty-fifth Street.

Miscellany.

Death Rate of Santiago de Cuba.—The vital statistics of Santiago de Cuba for January, 1901, have been received through the courtesy of First Lieutenant Ira A. Shimer, A. S., U. S. A., acting chief surgeon and president of the board of health. They show the number of deaths for the month to have been 80, or 22.33 per 1,000. There were no cases of yellow fever, only one of small-pox, and twelve of diphtheria.

Teething at Eighty-five.—Cases of teething in old age, though by no means unknown, are not altogether common. A Trenton, N. J., woman, eighty-five years of age, having suffered for some months from pains in the jaws, has now grown two fine new teeth. But few of her second set are missing, and those that are present are said to be sound.

The Late Dr. William Pepper furnishes the subject for a glowing eulogy from the pen of Francis Newton Thorpe, formerly professor of American constitutional history in the University of Pennsylvania, in a recent number of the *Century Magazine,* under the suggestive title of A Remarkable American. The author, in speaking of his success in raising funds for the University of Pennsylvania, says: "He levied tribute right and left, on all sorts and conditions of men, and acted withal in a strikingly bold and irresistible way. After some thirty years of such action his public account stood something like this: Institutions founded: The University Hospital, the Commercial Museums, and the Philadelphia Free Library. Institutions reorganized and recreated: The University of Pennsylvania. Public reforms: The improvement of the city's water supply, and an entire change in the attitude of the public mind toward education and the ideals of life. To carry out these plans, Dr. Pepper raised above ten million dollars and secured about a hundred acres of land from the municipality, lying near the heart of Philadelphia. To the execution of this task he gave the service of one of the most acute and at the same time most practical minds ever vouchsafed to man. To this service of his genius he added the personal gift of nearly half a million dollars, which he earned in the practice of an exacting profession. It may be doubted whether any other American has run a like career."

Registration Essential to the Recovery of Fees.—A case of considerable interest has recently been decided by the appellate division of the New York Supreme Court in Brooklyn.

A physician named Michele Accetta had brought suit in the Municipal Court of the City of New York, Borough of Brooklyn, against Teresa Zupa, to recover for professional services rendered the defendant, and had received a judgment for $100.

The answer of the defendant denied that the plaintiff was duly qualified, registered, and authorized to practise medicine as a physician in the county of Kings, and appealed from the judgment rendered against her.

The plaintiff proved that he was admitted to practise; he had graduated in the University of Naples, and had passed an examination in the University of the State of New York, and was licensed by the regents of the university in 1896, and had practised medicine since that time. The defendant then offered in evidence the register of physicians and surgeons of Kings county, for the purpose of showing that at the time of the rendering of the services in question Accetta was not a registered o licensed physician in Kings county. This proof the tria justice refused to receive, saying that it made no dif ference whether the plaintiff was registered or not, an that the registry of physicians was only a police measur and did not affect a physician who was actually practis ing.

The appellate division, in reversing the judgment o the trial court, said: "The court erred in holding tha registry was not essential to recovery. The Public Healtl Law (laws of 1893, chap. 661, sec. 140) provides tha no person shall practise medicine 'unless previousl registered and legally authorized or unless licensed b the regents.' Section 149 provides that the license shal be registered in a book kept in the county clerk's office Section 153 provides that any person who violates th above provisions shall be guilty of a misdemeanor an subject to fine or imprisonment. * * * It is a set tled principle that one cannot recover compensation fo doing an act to do which is forbidden by law and is a misdemeanor. The contrary rule would make an absurd ity. It would permit one to hire another to commit a misdemeanor, and would compel the payment of the con tract price for doing what the law forbids. Whether thi statute is wise or not we cannot examine. It is enacte in the interest of the health of the public, to prevent in competent persons from practising as physicians. W must give effect to it. And we cannot permit a recover of compensation for doing an act which the statute de clares to be a misdemeanor." The case is reported a length in 54, Appellate Division Reports, page 33.

Mosquito-born Malarial Infection in an Infant.—Dr. J. C. Graham, of Deli, Sumatra, writes to the *Journal of Tropical Medicine* for January 1st that an infant three weeks old greatly alarmed its parents by suddenly developing a rise of temperature that could not be accounted for by any of the usual causes. In response to the question, the parents replied that the child was usually well looked after to prevent mosquito bites but that ten days previously the native servant had carelessly forgotten to close the mosquito-curtains at night with the result that the child was simply covered with mosquito bites the following morning. The irritation caused by these soon passed off and the incident was forgotten. Dr. Graham examined the blood of the infant and found the malarial parasite. The fever yielde readily to quinine inunction.

A Greek Fraternity and Dr. Achilles Rose.—O January 7th the members of the Greek Christian Union "Equality," in Lemisso Cyprus, on the motion of Mr Christodoulos S. Chourmouzios, nominated Dr. Achille Rose, of New York, an honorary member of their union in recognition of their gratefulness for his efforts t promote the use of Greek as an international languag among scholars, and as an expression of thanks for hi philhellenic sentiments which had been so vigorously manifested during the critical periods of the Greek nation. They begged him not to cease to show his affectio for the Greek language and nation, which still require all the support of their friends; for that the English administration in Cyprus had several times plotte against the Greek language, and had tried to force upo the inhabitants the use of English, on which accoun they wished him to express with his well-known vigor o speech the protest of the islanders and of all civilize people. A diploma of membership has been forwarde to Dr. Rose.

Original Communications.

BLOOD IN THE URINE AS A SYMPTOM, AND THE DIAGNOSIS OF ITS SOURCE.*

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The introduction of the cystoscope, the ureteral catheter, the Harris segregator, and similar instruments, together with the improvements in their construction, has of late years very much cleared up what formerly was an obscure field in medicine and surgery.

But in spite of the enormous stride forward in the diagnosis, and consequently of the treatment, of the diseases of the urinary tract, which the introduction of these instruments allows, the field is not yet as clear as in some other branches of surgery. The cause for this is not far to seek. The urinary organs are, for the most part, deeply placed in the body. The ordinary methods of examination, inspection, palpation, percussion, and auscultation are in very many cases of urinary disease of only negative value. We are thus compelled to seek other means to aid us in arriving at a diagnosis.

Unquestionably, the instruments which enable us to examine with the eye the prostate gland, the interior of the bladder, and the mouths of the ureters, are of enormous value. In many cases we can, from the cystoscopic picture alone, immediately make a positive diagnosis of the source of the blood in the urine. In some cases, likewise, the introduction of the ureteral catheter will tell us from which kidney the blood is flowing.

However, although cystoscopy is an easy and harmless procedure in most cases, yet there are numerous conditions which make it impracticable. I will mention only stricture of the urethra, the tendency to urethral sepsis, and profuse hæmorrhage from the prostate or bladder. Moreover, a patient may bleed once from his kidney or ureter, and there may not be a return of the hæmorrhage for weeks or months. Obviously, we cannot let such a patient wait until the hæmorrhage recurs before we make a diagnosis. Regarding the use of the ureteral catheter, it must be said that the procedure is not so easy, nor yet so harmless, as cystoscopy; neither are the results in all cases so satisfactory.

But the cystoscope and the ureteral catheter are not the only means at our disposal for diagnosticating the source of blood in the urine. Furthermore, they should be employed only after we have exhausted all other methods that we possess for arriving at a correct diagnosis.

What these other methods are, how we can employ them, and in how far they are of value, these are the questions which this paper will attempt to elucidate.

*Read before the Harlem Medical Association, December 10, 1900.

When a patient with hæmaturia presents himself to us, we have two problems to solve:

1st. From what part of the urinary tract is the blood flowing?

2d. What causes it?

The diagnosis may be made from:

1. The history.
2. The examination of the urine.
3. The examination of all the organs.

1. The History.—The *family history* may elucidate the tendency to tuberculosis, or to the uric-acid diathesis. The *previous history* of the patient may include a gonorrhœal attack, lues, typhoid fever, or one of the exanthemata. What changes may be produced in the bladder or kidney by these diseases need not be dilated upon at this time. The *age* of the patient is of importance. In early life we may find stone in the bladder, tuberculosis of the prostate or of the bladder, some of the sequelæ of gonorrhœa, sarcoma of the kidney, or a kidney lesion following one of the exanthemata. In adult life we find urethral stricture and its results, stone in bladder or kidney, and new growths of bladder and kidney. In old age we expect to find an enlarged prostate, or a stone in the bladder, sometimes a cancer of the bladder. The *time at which the blood appears in the stream* of urine should be most carefully ascertained. It is often of value in arriving at a correct diagnosis. Blood which issues from the urethra between the acts of micturition is almost certain to denote a bleeding from the urethra. Fluid blood appearing at the beginning of the stream is derived from the prostate or deep urethra. If a large amount of blood is lost from the prostate, however, it may flow back into the bladder and become intimately mixed with the urine. If a clot appears at the beginning of the stream, it is of urethral, prostatic, or vesical origin. The same is true of blood which appears at the end, or toward the end, of clear urination. In hæmorrhage from the kidney or ureter, the blood is generally intimately mixed with the urine. In a lesion at the neck of the bladder, the hæmorrhage is not limited to the beginning of the stream, but it is also seen at the end (being the bleeding that has taken place during the act of micturition). In tumor of the bladder and in vesical calculus, the hæmorrhage is most profuse at the end of the stream.

The *frequency and duration of the attacks* should also be noted. In renal hæmaturia the blood often appears suddenly, and just as suddenly disappears. After a short interval a long, thin clot may appear, followed again by profuse hæmaturia. In cases of movable kidney and of renal stone, the hæmorrhage likewise appears and disappears suddenly. If the attacks have been of long standing, the probability is that the disease is not malignant.

The *effects of exercise or of complete rest* in the course of an attack should be ascertained from the history. In bladder tuberculosis, there is a sudden appearance of bright blood, which is not influenced by rest.

Hæmorrhage due to stone in the prostate, bladder, or kidney is generally more or less relieved by rest. The same is true of hæmorrhage from a movable kidney. If, on the other hand, the bleeding persists in spite of prolonged rest, more especially if the hæmorrhage is more profuse at night, then a new growth is to be suspected (tuberculosis, sarcoma, carcinoma).

2. THE EXAMINATION OF THE URINE.—This includes macroscopic, chemical, and microscopic examinations.

Macroscopically, we can observe the size and shape of the clots, and the precipitate of blood formed on standing. Long or short, thin clots are almost certain to denote renal hæmorrhage. The clots are casts of the ureter; when they are formed, the bleeding may cease entirely, and recur with the passage of the clot. Long, thick clots indicate urethral hæmarrhoge; the clot is washed away by the stream of urine.

Regarding the precipitate of blood formed from the urine on standing, it may be said that, in hæmorrhage from the kidney, the blood is so intimately mixed with the urine that, even after long standing, there is very little precipitate of blood, the urine remaining deeply tinged. If the hæmorrhage is from the substance of the kidney, this is even more true than if it is from the pelvis of the kidney. In hæmorrhage from the bladder, prostate, or urethra, the blood is readily precipitated from the urine, and the supernatant fluid is only slightly tinged, or not at all.

Chemically, there is one examination of importance; its significance has been especially dwelt upon by David Newman, of Glasgow. I refer to the estimation of the percentage of hæmoglobin, and the comparison of it with the percentage of albumin in the urine. Naturally, urine that contains blood contains albumin; but the relative proportion existing between the red blood cells and the serum is dependent upon whether or not the hæmaturia is associated with inflammation. If, for instance, there is an acute nephritis complicating some lesion causing hæmaturia, considerable albumin will be found in the urine independently of the hæmorrhage. The ratio between the quantity of hæmoglobin and the amount of albumin in the urine will thus give us a clew in diagnosticating the cause of the hæmorrhage. If the ratio of albumin to hæmoglobin is about as 1 to 16, then we may infer that the albumin is entirely accounted for by the presence of blood. If the amount of albumin is considerably increased beyond the proportion of 1 to 16, then we may infer that we have to deal with an albuminuria as well as with a hæmaturia, and that in all probability the hæmorrhage is of renal origin.

Microscopically, we determine the size, shape, and color of the red blood cells, and the presence of other deposits besides blood cells. The careful examination of the red blood cells may aid us in determining the source of the hæmorrhage. Gumprecht was the first to point out the significance of the fragmentation of the red blood cells in hæmorrhage of renal origin. The cell stretches out amœba-like processes, so that the whole cell assumes the shape of a bottle, a club, a cross, or some similar shape. The processes thus stretched out contract into hæmoglobin-containing spheres, which either remain in connection with the mother cell, separated by a partition wall or hanging by a thread, or they tear themselves loose entirely from the mother cell. The influences which bring about these changes are manifold. Max Schultze has drawn attention to the fact that this fragmentation took place most readily if the blood is warmed to from 50° to 52° C. Arndt found that it took place even at 40° C. That the fragmentation may take place even at still lower temperatures, 26° to 29° C., if kept up for some hours, was discovered by Maragliano. Gumprecht noticed in examining urine in twenty-three cases of nephritis, that many of the red blood cells in the urine showed fragmentation, but that in cases where the blood came from the bladder these changes were not present. The probable explanation is that the blood extravasated in the kidney comes in contact with the renal epithelium, which is saturated with urea, and in consequence of this contact a certain amount of fragmentation takes place. In bladder hæmorrhage this is naturally absent. That neither the acidity of the urine in the kidney is the cause of the fragmentation, nor the alkalinity of the urine in cystitis the cause of its absence, is proved by the fact that fragmentation does take place in alkaline urine. However, it must be remembered that some fragmentation may take place on the microscope slide as an *artifact.* Hence the finding of a few red blood cells that show this change is of no value. But if many cells (up to several per cent.) show it, then the hæmorrhage is of renal origin. In bladder tumors, however, when the hæmorrhage is profuse, the clotting of the blood alone will cause fragmentation. In large renal hæmorrhage, only a small amount of blood can come in contact with the renal epithelium, and hence the fragmentation will not be so evident. It is in the small hæmorrhages, whether from the kidney or from some other part of the urinary tract, that the presence or absence of fragmentation of the red blood cells is a valuable sign.

Aside from this morphological change, there is almost always in renal hæmorrhage, as was pointed out by Gerhardt, a chemical change in the hæmoglobin, which is readily recognized by the microscope. In contrast to the unchanged greenish-yellow color and biconcave form of the red cells in hæmorrhage from the pelvis of the kidney, ureter, or bladder, we find the red cells in renal hæmorrhage at times indeed round, but as a rule somewhat smaller than normal, more spherical, and no longer biconcave; in color they are distinctly brownish-yellow or leather-yellow, some of them more or less decolorized. This change in form and color is seen in the single free red blood cells, as well as in those that are rolled together into cylinders. The same brownish-yellow color is seen

n nearly all the organized products of the urinary sedi-ıent, cells from the kidney, leucocytes, casts, and blad-er cells, of course in different degrees of intensity; the ıost marked pigmentation is seen in the kidney epi-helium. The microscope will likewise aid us by show-ıg the presence in the urine, besides blood cells, of pus, ıucus, epithelial cells, tuberculous material, portions of umors and micro-organisms.

3. The Examination of all the Organs.—Every rgan in the body should be carefully examined in a ase of hæmaturia. A severe cardiac lesion will lead us ɔ suspect a complicating kidney lesion. A tuberculous ffection of the lung, of a bone, a joint, or glands, will raw our attention to a possible tuberculosis of some por-ion of the urinary tract. Enlargement of the epididy-ıis or seminal vesicles will lead us to look for secondary isease of the bladder. A large spleen will make us hink of malarial hæmoglobinuria.

The chief characteristics of hæmorrhage from the arious portions of the urinary tract are:

1. *Hæmorrhage from the Urethra.*—If the blood omes from the urethra anterior to the compressor ure-hræ muscle, it will exude from the meatus independ-ntly of urination. If the blood comes from the urethra osterior to the muscle, it will flow into the bladder. In eneral, blood at the beginning of the stream or inde-endent of the stream, and the presence of long, thick lots, are characteristic.

2. *Hæmorrhage from the Prostate.*—Blood appears hiefly at the beginning or at the end, or toward the end f the stream. If the hæmorrhage is severe, the blood lows into the bladder and mixes with the urine.

3. *Hæmorrhage from the Bladder.*—The blood is nainly seen at the end, or toward the end of the stream. The urine is mixed with considerable mucus and is right red in color, unless it has been long pent up in he bladder. Large clots in the urine generally denote bladder hæmorrhage.

4. *Hæmorrhage from the Kidney.*—The blood is gen-erally intimately mixed with the urine, to which it mparts a brownish-red or brown color, except where the hæmorrhage is profuse or rapid. The hæmorrhage may suddenly cease and then suddenly recur, preceded by the passage of a long, thin clot. The red blood cells do not precipitate entirely from the urine even after long stand-ng. The red cells are altered in size, shape, and color, nd often show the phenomenon of fragmentation.

After having discovered in what organ the hæmor-hage has its origin, we have next to determine what auses it.

1. *Urethral Hæmorrhage.*—The chief causes are tricture and traumatism. The traumatism may be rom without (a fall or a blow), or from within the rethra (catheter, sound). Hæmorrhage in cases of tricture may come from the seat of the stricture, or rom a false passage.

2. *Prostatic Hæmorrhage.*—The chief causes are enlargement, stone, and new growth. In some cases the hæmorrhage emanates from varicose veins in the prostate. The age of the patient, the onset and duration of the symptoms, are important aids in diagnosis. Rectal and bimanual examinations are of great value.

3. *Bladder Hæmorrhage.*—The principal causative factors are stone, tuberculosis, benign and malignant new growths. We have various methods of examination which will assist us in making a diagnosis; to wit, catheter, sound, microscope, rectal and bimanual examination. The diagnosis between stone and tuberculosis, we are often called upon to make. The following table will be found useful:

VESICAL TUBERCULOSIS.	VESICAL CALCULUS.
1. Tuberculous family history.	1. Gouty or rheumatic family history.
2. Most frequent between 16 and 25 years.	2. Most frequent in adult life.
3. Urine very light, odorless, feebly acid or neutral, sometimes containing tubercle bacilli.	3. Urine turbid, often offensive, mucus and pus, urates, oxalates or phosphates.
4. Stream often arrested voluntarily on account of pain.	4. Stream arrested involuntarily.
5. Marked irritability of bladder at night.	5. Irritability only diurnal.
6. Sudden appearance of bright hæmorrhage, not influenced by rest.	6. Hæmorrhage ceases on rest.
7. Usually a few drops at end of stream, accompanied by straining.	7. Hæmorrhage most profuse at end of micturition.
8. Distinct periods of quiescence, uninfluenced by violent exertion.	8. No distinct periods of quiescence, except on rest.
9. Sudden relief of suprapubic pain and rapid cessation of pain in glans after emptying bladder.	9. Pain often persists after emptying the bladder.
10. Persistent post-scrotal pain.	10. Absent.
11. Involvement of epididymis, prostate, or some other organ.	11. Absent.

The diagnosis between benign and malignant new growths of the bladder is often difficult to make. Moreover, some growths are on the border line of malignancy. Frequently a benign growth (papilloma) degenerates into a malignant one (carcinoma). The age of the patient and the duration of the symptoms are important data. A cystitis will seldom or never supervene on a new growth unless an instrument (catheter, sound) has been introduced into the bladder. If a cystitis develops without such an interference, the probability is that the process is a tuberculous one. Primary new growths of the bladder are three times as common in men as in women. In seventy-five per cent. of cases of vesical cancer, and in over ninety per cent. of the benign bladder tumors, hæmaturia is the first symptom. This is quite characteristic, particularly if the hæmorrhage takes place without any discoverable cause. In cases of vesical calculus the hæmorrhage can often be referred to exercise or to examinations of the bladder. In vesical tuberculosis we generally have other signs and symptoms besides the hæmorrhage. In new growths of the bladder, on the other hand, the hæmorrhage is generally the first symptom in an otherwise healthy subject, and the bleeding is often profuse. This sudden profuse hæmorrhage generally ceases just as abruptly as it set in.

In benign growths there is often a history of long duration, and the onset of the disease is generally insidious. The hæmorrhage recurs at longer or shorter intervals, sometimes not for many months, and it is distinctly intermittent even in the advanced stages, but it is rarely profuse or arterial in character. In the male, coition will bring on or increase the hæmorrhage. The hæmorrhage is generally relieved by rest. At some time in the course of the disease it is of a distinctly vesical type—*i. e.*, there is blood at the end of a clear urination.

In malignant growths the hæmorrhage at the onset may be slight, but more often it is profuse. At first it is intermittent, depending on exertion, but it soon becomes more or less persistent, and becomes offensive from the presence of mucopus and *débris*.

Among other symptoms called forth by a tumor of the bladder are pain and frequent micturition. In benign growths these symptoms are frequently absent. Another symptom, which is of importance only in the absence of stricture or enlarged prostate, is the inability of the bladder to empty itself completely (residual urine). Sometimes particles of tumor are voided in the urine and can be recognized microscopically. Examination under chloroform may be of value. It may be carried out by a finger in the rectum and a catheter in the bladder. The finger in the rectum feels the bladder wall against the catheter. The careful examination with the catheter or sound may show the presence of rough areas on the vesical mucous membrane. According to Guyon, a catheter should be introduced into the bladder and the urine withdrawn. If toward the end of the catheterism bloody urine is withdrawn, there is probably a new growth in the bladder.

4. *Renal Hæmorrhage.*—The commonest causes are stone, tuberculosis, tumor, and injury. In diagnosticating the source of the hæmorrhage, the "cathétérisme en deux temps" of the French is sometimes of value. Introduce a catheter, empty the bladder, and keep the specimen for examination. Wash out the bladder, empty it, and keep the last few drops of fluid in a second glass. Wash out the bladder again, empty it, and allow the catheter to remain while bimanual pressure is made over one kidney and along its ureter; collect this fluid in a third glass, and that obtained from the opposite side in a similar manner in a fourth glass.

The diagnosis between renal calculus and renal tuberculosis is, in the initial stages, perhaps the most difficult we are called upon to make. Newman calls attention to the fact that, as it is not uncommon to meet cases of profuse and frequent hæmoptysis long prior to the development of any recognizable physical signs of pulmonary tuberculosis, so also in renal tuberculosis hæmaturia may be present as a premonitory symptom. But while hæmoptysis has been looked upon as a valuable danger signal of pulmonary tuberculosis, hæmaturia has not been looked upon in a similar light; although in some cases it undoubtedly carries with it a similar warning. Polyuria, due to the presence of the growth, may be the first symptom, even antedating the aching in the loin. Before destructive processes commence within the renal pelvis, or the substance of the kidney, traces of albumin and small quantities of blood may be found; but, when the tuberculous deposit has begun to break down and to become evacuated into the ureter, we find many tubercle bacilli in the urine and considerable albumin, along with pus and *débris* of renal tissue. The albuminuria differs from that of Bright's disease in that the urine is not clear, but is cloudy, and contains much mucus, but no casts. Profuse hæmorrhage occurs only rarely in renal tuberculosis. As the disease advances, the urine generally becomes more and more foul. The hæmaturia is often absent for long periods, is not increased by exercise, and is rarely so severe as in cases of renal stone. In the early stage, according to Newman, the amount of albumin is generally in excess of that accounted for by the blood; and in the later stages, when pus appears in considerable quantity, the pus and blood are not so rapidly or so completely precipitated from the urine as in calculous pyelitis. In the initial stage, however, renal tuberculosis has many points in common with renal calculus. There is the same pain in the loin, which may radiate to the groin, testis, thigh, or knee; the same recurrent severe colic; the blood and pus in the urine; the frequent micturition, and the same pain in the penis after emptying the bladder.

In hæmaturia due to renal calculus, the hæmorrhage is usually small in amount, and generally recurs at short intervals. The hæmorrhage bears no close relation to the pain, or to the other symptoms; it is generally increased by exercise and diminished by rest. This is an important point of difference from renal tuberculosis. As there is usually no nephritis associated with the presence of a stone in the pelvis of the kidney (at least in the earlier stages of the disease), the quantity of albumin is fully explained by the presence of the blood. When the blood is absent from the urine, there is likewise no albumin present. The blood is thoroughly mixed with the urine, but not so thoroughly as when the hæmorrhage is from the renal parenchyma. As a result, after standing a few hours, the red blood cells will all be precipitated, leaving the supernatant fluid clear. Pus is found in the urine only after the stone has produced inflammatory changes. A calculus obstructing one ureter may reflexly cause inhibition of the other kidney with complete anuria. Irritation of the bladder by fragments of stone, and consequent frequent micturition, are common. Gastric disturbances are likewise often present.

In the advanced stages of both renal stone and renal tuberculosis, there is a pyelitis present. If the pyelitis is of tuberculous origin it will in time spread to the ureter or bladder, while in the case of a calculous pyelitis it will not.

PRIMARY RENAL TUBERCULOSIS.	RENAL CALCULUS.
1. *Family history* of tuberculosis.	1. Family history good, or of uric-acid diathesis.
2. *Age*, between 20 and 40 years.	2. Age, about 40 years.
3. *Personal history:* Perhaps tuberculous joints, bones, glands, or lungs.	3. Negative, except perhaps passage of sand or gravel; testicular neuralgia.
4. *Symptoms, onset:* Polyuria of a murky type, vague lumbar pain or a sudden chill and severe pain in one kidney, but rarely a colic. Frequency of urination *at night* in the early stages.	4. Vague lumbar pain or a sudden colic. Small quantities of urine passed often during day, but *not at night.*
5. *Colics* appear later, are usually less severe, do not usually retract the testicle, and are preceded by bright blood, if due to ulceration.	5. More or less severe according to size, location and composition of stone. They may be followed by bleeding. Pain radiates to peritonæum, testicle, or down the thigh. It may be referred entirely to the opposite side.
6. *Hæmaturia* slight in amount and *not* influenced by rest.	6. More marked, intermittent, *dependent on exercise.*
7. *Urine* cloudy at outset from admixture of mucus and pus. Acid, low specific gravity, light color, depositing a thin layer of pus with streaks of blood. Albumin appears early, and is generally in excess of that accounted for by the blood.	7. Clear at outset, containing signs of calculus in the shape of crystals. Not more albumin than is accounted for by the presence of blood.
8. *Urine in advanced stage.* Pus and blood not so rapidly or so completely precipitated from the urine as in calculous pyelitis. The deposit contains small caseous masses, mixed with renal *débris.* On standing, it is not all precipitated, but some remains suspended and makes urine appear cloudy.	8. When urine is passed, blood and pus are intimately mixed with it, but if + urine is allowed to stand a few hours the blood cells are precipitated and the supernatant urine is clear.
9. *Tubercle bacilli* may be found after repeated examinations; or inoculation of urinary deposit into animals induces a tuberculous inflammation.	9. Negative.
10. *General condition* of patient, even in early stages, is poor.	10. Patient often in excellent general health in early stages.
11. *Inflammation* may spread to ureter, bladder, seminal vesicles and prostate.	11. Inflammation does not spread to other organs.

Renal Tumor.—Very often hæmaturia is the first symptom, and it is generally profuse, appearing without any preceding pain. Renal colic may, however, arise from the temporary impaction of a clot in the ureter. There may be blood casts of the pelvis of the kidney and ureter. The hæmorrhage is most frequent at night, when the patient is in the recumbent posture. Sometimes, though not often, pieces of new growth may be recognized in the urine. In most cases a tumor can readily be felt.

Among the rare causes of renal hæmorrhage may be mentioned hæmophilia, movable kidney, hydronephrosis, cues, parasites (filaria and *Bilharzia hæmatobia*), torsion of renal vessels, cystic degeneration of kidney, and mechanical causes, such as pregnancy. Of course, as is well known, hæmaturia takes place in some cases of acute nephritis and occasionally in chronic nephritis.

Errors in the diagnosis of hæmaturia from the appearance of the urine may arise under various conditions:

	Age.	*Symptoms.*	*Frequency of Urination.*	*Pain.*	*Blood.*	*Influence of Rest on Amount of Blood in Urine.*	*Time at which Blood Appears in the Stream.*	*Condition of other Organs.*
PROSTATE.	Middle to old.	Absent in early stages.	Increased, diurnal and nocturnal.	Usually none.	Clot at beginning. Blood at end, or towards end, of clear urination.	Relieved, especially if due to stone.	Beginning or end. If profuse, blood is mixed with entire stream.	Cystitis; later, pyelonephritis.
STONE IN BLADDER.	Usually childhood and adult.	Urination involuntarily arrested. Those of a cystitis.	Markedly increased; diurnal; relieved by rest.	Glans pain even after urination. No post-scrotal pain.	Most profuse at end quite constant.	Very much relieved by rest.	Completely precipitated on standing. Most at end.	Normal.
TUBERCULOSIS OF BLADDER. . .	Early life.	Urination voluntarily arrested.	Diurnal and nocturnal; not relieved by rest.	Pain in glans ceases after urination. Persistent post-scrotal pain.	Sudden appearance of bright blood. Transitory. Usually few drops at end, with straining.	Not influenced by rest.	Generally at end.	Prostate, seminal vesicles, and epididymis often involved.
TUMOR OF BLADDER.	Advanced.	Generally absent except in advanced stages.	Often not increased.	Generally absent.	Intermittent. Often nocturnal; often profuse.	Not influenced by rest.	Completely precipitated on standing. Mostly at end.	Generally normal.
STONE IN KIDNEY.	Adult, usually about 40 years.	General condition good; later, pyelitis.	If increased, relieved by rest; diurnal.	Severe repeated colics.	More than in tuberculosis; rarely profuse.	Relieved by rest; increased by exercise.	May appear and disappear suddenly. Intimately mixed. Almost completely precipitated on standing.	Pyelitis in later stages.
TUBERCULOUS KIDNEY.	Young adult, 20 to 40 years.	General condition poor; anæmia; later, often pyelitis.	Marked diurnal and nocturnal.	Severe pain; rarely severe colic.	Often absent for long periods. Usually slight amount.	Not influenced by rest or by exercise.	Very intimately mixed. Not completely precipitated on standing.	Pyelitis spreading to ureter and bladder.
TUMOR OF KIDNEY.	Advanced (carcinoma); early (sarcoma).	Those of an abdominal tumor.	Not markedly increased.	Colic due to clot in ureter.	Profuse; often more at night.	Not relieved by rest.	Very intimately mixed. Not completely precipitated on standing.	Generally normal.

1. Hæmoglobinuria.
2. Drugs which cause blood in the urine, or bloody-looking urine. { *Potassium chlorate, Turpentine, Cantharides, Carbolic acid, Sulphonal,* } Spectroscopic examination in a doubtful case.
3. Food.—Rhubarb, strawberries, and gooseberries cause hæmaturia in some subjects.
4. Menstrual blood often gets into the urine, and may cause an erroneous diagnosis to be made.

Hæmoglobinuria may be readily recognized by the color of the urine together with the absence of red and white blood cells. In a doubtful case the spectroscope would show the characteristic two dark bands between the Fraunhofer lines D and E. Hæmoglobinuria is found in malaria, typhoid, scarlatina, and lues. Some cases have been reported in which intense cold or severe exertion was believed to be the ætiological factor.

In conclusion, I would say that I have attempted to show how, in many cases of hæmaturia, the diagnosis can be made without the use of any complicated apparatus. We are perhaps a little too prone in this age of medical and surgical progress to lay aside old methods (many of which are of value) for new ones, which, though giving promise of great results, too often disappoint in the end.

That the diagnosis of the source of blood in the urine cannot in many cases be made without the use of the cystoscope, goes without saying. There will always be doubtful cases of hæmaturia, some of which even the cystoscope, ureteral catheter, and Harris's segregator will not be able to clear up. But, if the diagnosis can be made without these instruments (and in many cases, by the conscientious application of the methods above enumerated, it can be so made), then we say it is better for the doctor and better for the patient. Let us attempt, in every case of hæmaturia, to exhaust all the older methods at our disposal before we fall back upon the new ones. Very often we shall be able, by painstaking systematic study of the case after the cystoscope and ureteral catheter have left us in the lurch, to arrive at a correct diagnosis.

The table accompanying this paper is intended as an epitome of what has been said above, and is not by any means intended as a complete exposition of the subject matter:

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THE SPECIFIC TREATMENT OF ACUTE DYSENTERY.*

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Dysentery is a disease of antiquity, concerning which much has been written; it was recognized by Hippocrates, who clearly distinguished it from diarrhœa, and pointed out its gravity. Herodotus mentions it, and an accurate clinical picture of the disease is drawn by Celsus. Galen wrote of two kinds of dysentery, one coming from disease of the liver, which he named hepatic dysentery, and the other resulting from ulceration of the mucous membrane of the intestine. Since Galen's time the disease has occupied the attention of many observers, and during recent years the *bacteriology* of the subject has been earnestly considered by such men as Lambl, Blanchard, Bertrand, Lösch, Kartulis, Harris, Koch, Councilman, La Fleur, Shiga, Kitasato, Osler, and a host of others. "There are few subjects in medicine," says Professor Flexner, "that have attracted more attention than dysentery. Its history dates from the earliest written records, and its ravages, unlike those of many of the pestilential diseases, have continued practically unaltered to the present day." Many contributions to the literature of dysentery have been added by *clinicians*, who have had the opportunity of observing the disease in tropical climates. One of the most interesting of these contributions is that of Sodré, of Rio Janeiro, which is to be found in volume xvi of the *Twentieth Century Practice of Medicine*. He defines dysentery to be an infectocontagious disease, endemic in warm countries, sporadic or epidemic in temperate regions, characterized anatomically by lesions of various organs, such as specific ulceration of the large intestine, and, clinically, by the occurrence of frequent bloody mucous or serous dejections, accompanied by tormina and tenesmus, and by more or less accentuated general symptoms. A realization of the gravity of dysentery is hardly possible without reverting to the history of its mortality. In Japan, according to Shiga, dysentery prevails annually with considerable intensity. From January to December, 1897, 90,000 persons were taken with it, 20,000 of whom died. According to the statistics of Ogata and Eldridge, which are incorporated in the very interesting paper of Professor Flexner on the Ætiology of Tropical Dysentery, published in the *Philadelphia Medical Journal* for September 1, 1900, there occurred in Japan, from the year 1878 to 1899, inclusive, 1,136,047 cases of dysentery, 276,309 of which were fatal, making a mortality of between twenty-four and twenty-five per cent. These statistics have been carefully tabulated and show a remarkable increase of the disease, year after year. The epidemic, which was studied bacteriologically by Ogata, says Flexner, occurred in the Province of Oita, where, in 1890, 801 cases occurred with 225 deaths; and in 1891, 8,390 cases with 2,163 deaths, an average mortality of from twenty-six to twenty-seven per cent. This epidemic had been preceded by sporadic cases in the previous winter, and in its spread showed a strikingly contagious character. A truly ubiquitous disease, says Sodré, it is not limited by latitude, and we think we can affirm without fear of denial that there is no country and no extensive district of any country from the equator to the poles, in which dysentery has not been observed. In Greenland, Northern Russia, Norway, Iceland, Sweden, Siberia, etc., its presence has been noted at different times. According to Lombard, it is one of the most widely spread diseases in Sweden, where it sometimes assumes great gravity. In the year 1857, for example, 37,000 persons were attacked with it in that country, of whom 10,000 died.

* Read before the Kings County (N. Y.) Medical Association on December 11, 1900.

Every country in Europe has paid a heavy tribute to dysentery. More or less extensive and deadly epidemics have at different times visited these countries, producing ravages similar to those of the so-called pestilential diseases. In referring to the gravity of the disease, Sodré says that dysentery is one of the four great epidemic diseases of the world. In the tropics it destroys more lives than cholera, and has been more fatal to armies than powder and shot. The statistics of the French army illustrate the difference in the rate of mortality between temperate and intertropical regions. In France, for example, the death rate among the troops from dysentery is said to be one twentieth of the total mortality, while in Algeria it is one fifth, and in Senegal one third. In the English army at home the disease is comparatively rare, while in India and China more soldiers die from dysentery alone than from all other diseases to which they are liable in Europe. In the tropical climates the natives, as well as the foreigners, are attacked by it, and its fatality is usually great, particularly among the native population. It is asserted by Zimmerman that infants whose mothers have dysentery are born with it. According to Hirsch, the death rate recorded from dysentery in Europe has been as high as from seventy-six to eighty per cent. of the number attacked, while in epidemics occurring in temperate climates, ordinarily, the mortality is said to vary from seven to fifteen per cent. From 1841 to 1846, in the epidemics which prevailed in France, seven tenths of those attacked died. From 1836 to 1837-1838, twenty-five per cent. died; and in 1857 one out of every five died. In tropical epidemic dysentery the mortality is recorded as being from twenty to thirty per cent. Even in Hong Kong it has reached a mortality of twenty per cent. *Some* statistics which have been collected from the tropical countries show a mortality of from thirty-five to forty per cent., and even as high a one as from sixty to eighty per cent. has been noted. A long sojourn in endemic countries, says Sodré, will not confer immunity from dysentery. On the contrary, according to some observers, the longer the term of residence of a European in the colonies, the more predisposed he is to contract the disease. A careful investigation of the experience of soldiers situated in the tropical countries proves conclusively that there is no acclimation to dysentery. In Martinique, for example, it has been shown that more dysenterics are found among the soldiers of the garrison who have remained on the island several years than among the soldiers who go and come, staying only for a short time. This experience is concurred in by writers who have also observed the disease in India. Dysentery has proved itself a great scourge to the people of the United States. It requires only the most superficial examination of the statistics to convince one of this fact. In the article written by West on Dysentery, which is to be found in volume i of Loomis and Thompson's *Practice,* the author says, in speaking of the disease: "It takes rank in malignancy and mortality with yellow fever, small-pox, and cholera; it is the scourge of armies, causing more sickness and death than any other disease, patients with dysentery and diarrhœa rivaling the wounded in multitudes and constituting a large proportion of the discharged for disability." Pepper has said that epidemic dysentery has probably killed more soldiers than all the other diseases put together, and he gives it as his opinion that in the civil war of the United States the disease was the means of killing over 300,000. The total death rate from dysentery in the United States in the year 1850 was 20,556, or 6 $\frac{32}{100}$ths per cent. of the total mortality. In 1860, 10,468, or 2 $\frac{65}{100}$ths per cent. During the war of secession the disease existed to an alarming extent in both armies. According to Woodward's report, which appears in volume ii of the *Medical and Surgical History of the War of the Rebellion,* there were in the Federal army, in all, 257,071 cases of acute dysentery and 28,451 cases of chronic dysentery. With reference to these statistics Woodward says: "Probably a considerable proportion of the 182,586 cases of chronic diarrhœa should also come within this category." In 1880, in the United States, out of a total death rate of 785,-893, there were 10,825 deaths from dysentery. Recent official reports from the United States army and navy do not give detailed and definite accounts of the number of cases of dysentery, with its accompanying death rate, which occurred during the late war with Spain. These reports, so far as I have been able to determine, include dysentery under the head of diarrhœal diseases. Flexner's reference to this point is, however, interesting. He says, in referring to the report of the surgeon-general of the United States army for 1899: "This compilation fails to give an adequate idea of the extent, severity, and mortality of dysentery in Manila. Although, unfortunately, figures are not obtainable, I am convinced, after nearly three months' residence in Manila, that the enteric diseases, of which dysentery was the most frequent and important, were the chief causes of disability and mortality among the land forces of the American armies." (Professor Flexner was one of a commission sent to Manila by the Johns Hopkins University for the purpose of studying the diseases prevailing in the Philippine Islands.)

In a personal communication from Dr. Roger S. Tracy, the registrar of vital statistics for Greater New York, he informs me that in the whole city, in the year 1898, there were 368 deaths from dysentery, 164 of this number occurring in the Borough of Brooklyn. In 1899 there occurred in the whole city 267 deaths, 111 of this number occurring in the Borough of Brooklyn. These figures are interesting, since they suggest either a great mortality or a very large number of cases occurring at our own door.

With regard to the ætiology of dysentery, there seems still to be some doubt, and much conflict of opinion pre-

vails concerning its specificity. The preponderance of evidence, however, seems to be in favor of the amœba theory. After a careful review of the bacteriology of the subject, Sodré expresses himself as being thoroughly convinced of the amœbic ætiology of the disease, and regards the existence of the amœbæ in the contents of tropical abscess of the liver as being one of the most powerful arguments in favor of his belief. There does not seem to be any further question among bacteriologists that dysentery is produced by the introduction into the system of micro-organisms. But there seems to be considerable contention as to whether the infection is polybacterial or specific, and many conflicting opinions are expressed along these lines by eminent observers. The part of this branch of the subject which interests the clinician more particularly, however, is to know how the infection gets into the human system, thence into the intestine, there to produce the lesions of the disease. According to Councilman and La Fleur, the germ reaches the large intestine in food or drink. Sodré expresses the opinion that the germ may also be taken in with the air; and he makes the positive statement, which seems to be borne out by equally eminent observers, "that the food may be contaminated by the hands of persons who have been in contact with dysenterics, and that in this way the disease is frequently propagated." Foquet, who made observations in Brittany, concludes that contamination by the hands is the most common mode of contagion, nurses and other persons who are in attendance upon the sick frequently handling the bread, the clothes, the table, the dishes and cooking utensils, without washing their hands. There seems to be very little doubt that in this way the disease is transmitted to different members of the same family. The theory that dysentery may be propagated by contagion is apparently established, and the following experience of Bertrand, as related by Sodré, in this connection, is very interesting: "In the course of certain epidemics of dysentery, two pharmacists made the chemical analyses of dysenteric matters. These pharmacists were not in any way engaged in the hospital where the dysenteric patients were received and treated. Their chemical operations lasted several days, and, notwithstanding that they carefully washed their hands with antiseptics at the end of each session, they were attacked by the disease." Sodré further reports Arnold as saying that the contagion of dysentery is an illusion which is lost after a close observation in hospitals where patients with dysentery are received.

May I be permitted, now, briefly, to say a few words concerning the pathological lesions which accompany this morbid process, in so far only as they have bearing on the intelligent treatment of the disease? Pathologists all agree that all of the tunics of the large intestine may be involved in the inflammatory process, the destruction of the tissue at times extending to perforation of the peritoneal covering. In mild cases the lesions are confined to the lower part of the large intestine, or, perhaps, to the upper part, and the anatomical changes do not pass to extensive ulceration, but I think it may be safely asserted that the characteristic lesions are found in nearly all cases. The whole of the mucous membrane of the large intestine, or any part of it, may be the seat of the disease, the inflammation sometimes extending beyond, to the lower part of the ileum. "The specificity of dysentery," says Sodré, "demonstrated by the study of the cases that proceed under its genesis, is absolutely confirmed by *post-mortem* examinations." It is true, he says, that in relation to certain details of the anatomical process the descriptions do not completely agree, but in all of the descriptions we find the specific and characteristic lesion of the disease, viz., the undermined ulcer of Councilman and La Fleur. Furthermore, "the diversions observed in *post-mortem* examinations performed by various investigators are not at all surprising when we consider the more or less important rôle that micro-organisms foreign to the disease, normally inhabiting the intestine, or reaching it accidentally, play in the anatomical process of dysentery." The gangrene of the intestine, for example, which sometimes occurs, Sodré does not regard as a true lesion of the disease, but a complication of it, and in all reasonable certainty due to foreign bacteria. Councilman and La Fleur, says Sodré, describe the process as essentially one of advancing infiltration and softening in the submucous and intermuscular structure, with subsequent necrosis of the overlying tissue. "The amœbæ reach the submucosa, producing but few lesions in the mucous membrane, and the essential changes are produced in the submucosa, the mucous membrane being attacked from below. So far as could be seen, the changes which they produce in the mucous membrane are an œdema with some fibrin formation, and, occasionally, necrosis. The œdematous tissue then softens, the mucous membrane is broken through, and the ulcer follows. On the surface of the ulcer there is always found a gelatinous substance which can be wiped away, leaving the ulcer clean. When examined fresh under the microscope, it is found to contain amœbæ, large, round, swollen cells, red corpuscles, and pus cells. These cells are also found scattered through the thickened tissues of the submucosa, being more numerous at the points where the morbid process is more advanced. They seem to be connective-tissue cells which have become free by the softening of the tissues around them. The blood-vessels always present more or less marked lesions, and are frequently thrombosed; the walls of the arteries are thickened and infiltrated with round cells. In the arteries are often found the alterations of obliterating endarteritis in a more or less marked degree; the walls of the veins are likewise infiltrated with round cells and generally regressive degenerations which facilitate their rupture." According to Harris, "an amœba may occasionally be seen in the act of penetrating the walls of the veins, part of the

body being within and part without the lumen of the vessels"; "the lymphatics are always dilated; the lesions of the mucosa at a certain distance from the ulcers are in general little accentuated; very intense hyperæmia of the tissue is noticed, particularly in the superficial layer; hypersecretion of mucus; accumulation of leucocytes, and frequently interstitial hæmorrhage."

The variety of the pathological changes described by Eldridge, Ogata, Shiga, and others, and recently by Flexner, who reports his findings in three cases occurring at Manila, is very interesting from a bacteriological point of view, but need not be considered here, because the differences do not seriously affect questions involving the gross pathology of the disease. The descriptions all show that the mucous and submucous tissues may be simultaneously involved in the pathological process, or that the submucosa may suffer independent alterations, and also that the diseased conditions may extend to all the tissues of the large intestine.

There is, in my opinion, no branch of the literature of acute dysentery more thoroughly misleading to the general practitioner than that which is devoted to the consideration of the so-called different types or varieties of the disease; and I am convinced that investigation will result in conclusions which will simplify our progress toward a uniform and specific plan of treatment. Just as the former use of vague terms and a multiplicity of words, for years, misled the medical profession in the diagnosis and treatment of inflammatory troubles of the vermiform appendix, so we have been misled here. The real truth seems to be that dysentery is one disease, and one only, and that the so-called varieties have for their foundation mainly the mistaken ideas which have prevailed regarding the ætiology and pathology of the disease. The writers of antiquity had a much more exact conception of the truth of this suggestion than did many of those who expressed later opinions; and those who, like Trousseau, remained faithful to tradition, expressed themselves along the line of what is now in this connection recognized to be the truth by advanced pathologists. Subsequent to the comparatively accurate description of true dysentery given by Celsus, medical literature became filled with accounts of many varieties of the disease, based on all sorts of erroneous ideas concerning its ætiology and morbid anatomy. To use the words of Sodré, "The clear and accurate conception of dysentery in the works of ancient authors was modified in the course of time under the influence of the ruling medical doctrines. The morbid unity so well established disappeared and was replaced by the varied forms of dysentery described and considered as different entities, without the common features of clinical and anatomical characters. The disease came to be confounded with simple diarrhœa and enteritis." Thus we find Sydenham, the so-called English Hippocrates, writing on epidemics in 1680 and describing three forms of dysentery. The first he characterizes by "gripes without stools," or "dry colics, sometimes accompanied with fever." The second form he describes as with "frequent and slimy motions attended with griping and usually with fever," "which," he says, "is a true bloody flux, although there may be no passage of blood from first to last." His third variety is described as having fever, bloody and mucous stools, with griping and tenesmus. And thus we read of various descriptions of the disease, including so-called "putrid dysentery," "bilious dysentery, due to putrid decomposition of the blood," "diphtheritic dysentery," "intermittent dysentery," "remittent dysentery," "scorbutic dysentery," "rheumatic dysentery," "hepatic dysentery," etc. "It is a rheumatic fever," says Stoll, when writing of the disease, "the humors of the perspiration driven in by cold." Hunter, who observed the disease in the tropics, wrote of a non-infectious variety, and did not believe the true disease contagious. "After the writing of Sydenham, Wells, and Stoll," says Sodré, "dysentery was considered independent of any intestinal lesion." One of the most common and misleading of these so-called varieties is what is described by most authors as "malarial dysentery." "Typhoid dysentery" is also spoken of, owing to the fact, no doubt, that dysentery is developed concomitantly with the various forms of malarial infection and typhoid fever. Thus we travel through a labyrinth of types and varieties of the disease until we arrive at the more recent writings of Councilman and La Fleur; and we find even these eminent investigators attempting to prove that there is a variety of independent forms of dysentery; but the words of Sodré, in pointing to the views expressed by these gentlemen, seem to me to carry conviction. He says: "Councilman and La Fleur, two careful and competent American observers, who published an excellent monograph full of original investigations on the ætiology and pathological anatomy of dysentery, endeavored to establish a distinction which I do not think entirely convenient and which appears destitute of foundation. They hold that the term dysentery embraces various affections of the intestine and describe a special form, which they call amœbic dysentery. Amœbic dysentery, they write, is a form of dysentery which ætiologically, clinically, and anatomically should be regarded as a distinct disease. *Clinically* this disease is characterized by the presence of amœbæ in the stools, which in addition present physical characters different from those seen in the stools of other forms of dysentery. Anatomically, the disease is characterized by the production of ulcers in the colon, which generally differ from those found in any other form of dysentery. The ulceration is produced by infiltration of the submucous tissue and necrosis of the overlying mucous membrane, the ulcer in consequence having the undermined form. Frequently, in addition to the ulcers there is infiltration of the submucous tissue, without ulceration. Abscess of the liver is a frequent complication, much more so than in any

other form of dysentery. And they conclude with the assertion that this is the form of dysentery which has been commonly called 'tropical dysentery.'" "At first sight," says Sodré, "we might suppose that Councilman and La Fleur considered this dysentery of the tropics as different from the dysentery observed in the temperate regions. Such is not the case, however, since these observers made their investigations far away from the tropics, and write referring to amœbic dysentery: 'The disease is widely distributed in most countries in Europe, in most parts of the United States, and in the tropics everywhere.' It would have been more logical and rational had Councilman and La Fleur, while establishing the relation of cause and effect between dysentery and the *Amœba coli,* proclaimed the specificity and unity of the disease, separating it from all forms of enteritis not proceeding from the same cause. To admit a dichotomy in the morbid process; to recognize the existence of an amœbic dysentery and another not amœbic, seems to me to be absolutely unacceptable. Dysentery is one disease and one only, whether considered from an ætiological, clinical, or anatomical point of view. Various ætiological factors, some of which are trifling even, concur efficaciously to the genesis of dysentery; they act in a secondary manner, preparing the ground and aiding the action of the dysenteric germ, without the concourse of which the disease cannot occur, whatever the latitude in which the observation is made."

"Various clinical modalities from mild dysentery to gangrenous dysentery are observed, and sometimes simulate different diseases. Nevertheless, among the varied clinical features, common traits are always found which represent the clinical character of the disease. The same may be said in regard to the pathological anatomy. Various anatomical forms have been described, but among the lesions of different character, extension, and seat, we always find a characteristic lesion, which represents the true substratum of the disease. Just as it is not allowable to separate acute miliary tuberculosis, pneumonic tuberculosis, and chronic ulcerous tuberculosis, as constituting three special diseases; just as we may not consider atrophic beri-beri and dropsical beri-beri as two distinct diseases, although appearances may lead us to do so, in like manner there is nothing to justify the divisions of dysentery into two or more different affections from an ætiological, anatomical, and clinical point of view. *Dysentery is one disease and one only, and is always the same whether observed in the tropics as endemic and with marked tendencies to become chronic, or in temperate regions as sporadic or epidemic.*" Thus, we find this experienced observer reducing the whole subject to a simple classification which has for its principal foundation the intensity of the disease, viz., "the mild form, the medium form, and the grave form," each of which he describes according to its clinical aspect, taking always into consideration the morbid anatomy. May we not, therefore, practically eliminate from this branch of the subject those misleading and disturbing theories of ætiological variety which have contributed much toward the development of empiricism in the treatment of this disease, and in their stead ought we not strive to build on the true foundation already established by such men as Sodré? I fully realize the fact that this simple classification is open to some criticism, but such criticism must, it appears to me, be purely technical. Even so careful and conservative a writer as Flexner, who has contributed very recently an account of his scientific experiments with the dysentery occurring among our soldiers in the Philippine Islands, expresses the opinion *that the conclusions of bacteriologists which have been the means of establishing various types of the disease may not be in keeping with the real facts,* and says: "When we recall the protean nature of other infectious diseases, among the most common of which are tuberculosis and typhoid fever, there can be no *a priori* objection to the hypothesis that the causative agent of dysentery need not necessarily vary for each of the many types of the disease that have from time to time been distinguished." And further: "The literature of dysentery is burdened with an interminable mass of appellations indicating the nature of the disorder, or the author's conception of its pathological anatomy." While Flexner does not entirely agree with those writers who, with Sodré, express the *positive* belief in a specific organism, still, his bacteriological suggestions are necessarily so incomplete as to prove nothing against the theory that dysentery is one disease, whether occurring in one place or another, and do not in any way affect the clinician in the treatment of the morbid conditions. For even if the specific ætiological factor is the *Amœba dysenteriæ* of Lösch, or a bacillus which has not as yet been isolated, or both, the pathological indications for a rational plan of treatment remain identical—*and to a great extent disregarded.*

(To be concluded.)

THE PATHOLOGY OF INTRA-UTERINE DEATH.

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(Continued from page 364.)

Ectopic Pregnancy.—This erratic form of pregnancy is almost always fatal to the fœtus. It is somewhat remarkable that such a serious condition should be for so long a time neglected and its victims allowed to perish without any effort being made to save them. Until the marvellous advancements achieved in recent years of abdominal surgery, little or no progress was made in elucidating the pathology of this variety of pregnancy. In 1875, Parry wrote a singularly interest-

ing book upon the subject, and by his critical acumen, profound research, and beautiful diction attracted the attention of the profession to this neglected subject. True it is, that Albucasis was long before familiar with the condition, but little in a practical way was done in elucidating its ætiology or pathology until Lawson Tait grappled it to the surface with hooks of steel. After he had written his excellent monograph, describing its frequency and the methods of operation, his methods were quickly taken up and followed by other surgeons. How grudgingly merit is tendered to its rightful possessor! The withholding fame or applause from ability by the narrow-minded bickerings of narrow-minded men has seldom been more markedly exemplified than upon this identical subject. But now that the ashes of a great man have been gathered to his forefathers, we hope that other minds shall sit in judgment, that the memory of the late Robert Lawson Tait shall stand pre-eminent and proud for rescuing from the thraldom and teachings of the ancients and placing upon a firm scientific basis the subject of ectopic pregnancy.

We have long maintained, and recent events have but added to the conviction, that in order to thoroughly understand the pathology of ectopic pregnancy, it is absolutely essential to have a clear and distinct conception of certain theories of menstruation, as well as of those of normal fecundation, and here we come upon peculiarly interesting ground. They are much too long and altogether too intricate to enter into fully here; but, nevertheless, they require a few passing remarks. For this purpose we are obliged to eliminate many theories that were inculcated into our young and unsuspecting minds by our various teachers of obstetrics; theories that have been handed down from one text-book to another with unerring fidelity. With them the æstrus, or rut, of animals was considered analogous to menstruation of the human female. Their teachings in regard to the impregnation of the human ovum still haunt our text-books and college halls. They maintained that, after an ovum reached the Falloppian tube it remained in its lumen until such time as a spermatozooid came along and impregnated it. Speaking in a broad, general way, the more one contemplates the subject of menstruation the more does one come to realize that, in order to fully understand the mysterious principles that are called into action, it obliges us to comprehend the subject all along the scale, from the lowest order of animals up through intermediate stages, until we come to the highest specimen of animal life, namely, that of man. The subject, therefore, presents itself in a much broader light than was formerly, or is now generally, supposed.

In such investigation, we find that, according to each phase of evolution, essential principles are required, and actually exist, for the maintenance of each distinct species. We find that they are governed, not by any one law, but by the requirements for the propagation and existence of each distinct species, and that no two are governed exactly alike. These theories may, at the first blush, appear revolutionary and heretical, but recent investigations seem to prove their accuracy. The belief that impregnation takes place in the Falloppian tubes we have found to be an erroneous deduction, by investigation upon the lower animals. As a matter of fact, the Falloppian tubes do not exist as such except in those animals that assume an upright position. Granting this hypothesis, and I cannot imagine a belief that can gainsay the truthfulness of it, the ætiology of normal fecundation becomes much more intelligible. When we consider the erroneous opinions that have been maintained on these subjects, it is little wonder, is it not, that the ætiology and pathology of ectopic pregnancy have remained for so long a time enshrouded in confusion and doubt? As the mysteries surrounding this matter became unraveled, a flood of light was thrown upon the cause of the ectopic variety. It is astonishing, however, how the subject is still misunderstood, and the consequence is that a vast amount of confusion and uncertainty exists upon many points of this peculiar condition. Traces of this can frequently be seen in many of our text-books and in the medical literature. The amazing strides of abdominal surgery during the last fifteen years have been the means, in their gigantic sweep, of elucidating, more than anything else, this peculiar form of pregnancy.

It would be carrying the subject beyond the scope of my present purpose to array before you in full the various theories that have been maintained upon the subject of animal fecundation. It is, however, interesting, as a piece of medical history, to contemplate the different and discordant opinions that have been maintained upon this subject; for example, the ancients believed that a vapor passed from the seminal fluid to the ovum, thereby fertilizing it. Again, the theory that the seminal fluid was absorbed, and through the circulation reached the ovum, was held for a time, and so on in this manner has the subject become much confused. If this latter theory were the correct one, there can be little doubt there would be many more cases of tubal gestation than we at this time have. Sufficient knowledge of the functions of the ciliated epithelium of the Falloppian tubes establishes the fact that impregnation normally takes place in the uterine cavity. The cilia, by their peculiar formation and action, propel the ovum down the tubes to the uterus, at the same time preventing the spermatozooid from ascending. When the ciliated epithelium becomes destroyed, the ovum will remain in the tube, and, there being nothing to prevent the spermatozooid from ascending, it meets the ovum in the tube. There fertilization takes place and the ovum becomes adherent to the walls of the tube and goes on developing. This delicate membrane then becomes of enormous importance in the regulation of the normal functions of reproduction, and its destruction places the life of any married woman in constant jeopardy. This

theory not only explains sufficiently well the causes of extra-uterine pregnancy, but places our opinions of normal gestation where they ought to belong. We may conclude, therefore, that all ectopic pregnancies are originally tubal, but that it will depend upon several conditions what the future history of any such pregnancy will be. Should impregnation take place in that part of the tube that passes through the uterus, we get what is called the interstitial variety. This form is one of the most difficult to diagnosticate from normal pregnancy. Such pregnancies invariably rupture into the peritoneal cavity, and are universally fatal unless a surgeon chances to be near at hand and possesses the moral courage to operate without delay. A feature quite noticeable in the histories given in such cases is, that the woman has shown a previous inaptitude for conception, or, if she has given birth to a child, there has intervened a long period of sterility. An ectopic pregnancy in any part of the tube necessitates rupture. This may take place any time before the fourth month, generally between the twelfth and sixteenth week. According to the direction in which the rupture takes place, you will have a disastrous catastrophe, or one of comparative safety—*i. e.,* a rupture upward into the peritoneal cavity, or downward. The former variety is known as intraperitoneal, and the latter as extraperitoneal. There are many classifications other than this, but those I mention have been given by various authorities. Many of them are more or less misleading or confusing, and have, no doubt, been formulated upon erroneous opinions of the pathology. If, however, the principal and fundamental theory, that every case is originally a tubal one, is remembered, the subdivisions become apparent and intelligible. When the fœtus develops at or near the fimbriated extremity, it almost invariably ruptures inward; when, in these instances, it survives, it may go on developing in the abdominal cavity.

It is unfortunate that the term abdominal pregnancy has been applied in these cases, because the placenta still remains attached to the tube. Under this head come those cases in which secondary rupture has taken place. A form of the extra-uterine variety frequently discussed is the ovarian. Its existence has been contested, and strangely dogmatic views have been maintained upon the subject. I know the difficulties that are frequently experienced by expert pathologists in distinguishing the relationship of certain pathological specimens. That the ovarian tissue is often found adherent to the sac in ectopic pregnancy is no reason that we should conclude that the fœtus originally developed from the ovary itself. Growths like these, especially when considerable exudations are thrown out, stretch and contract the tubes and ovaries beyond recognition. Such is especially true when development goes on after the downward rupture and before the secondary rupture. Some of the reported cases of abdominal pregnancy are probably not authenticated, and the trend of opinion is rapidly coming to the conclusion that it does not take place, but that such cases are due to the stretching of the ovarian tissues against the rapidly distending walls of the extraperitoneal variety.

Much discussion has taken place as to the early diagnosis of this anomaly. A feature quite noticeable, and one that is suggestive in these discussions, is that the men who have had experience in the matter sufficient to enable them to speak from a practical standpoint, are almost unanimous in their declaration that accuracy in the early stages of such diagnosis is far from being satisfactory; whereas the parties who confine themselves to literary work and the play of their imagination, and those who have had little experience, are quite agreed in their assertions that the diagnosis should be accurately made. They even go so far as to say that this can be accomplished with greater ease and certainty than in normal pregnancy. While but a small proportion of those whom we examine will have a line of symptoms sufficiently clear to enable the physician to come to a clear and accurate diagnosis, yet there is a large proportion who do not complain of anything so unusual as to seek advice until all of a sudden the rapidly distending tube, whose walls are getting thinner every day, gives way, and the patient is immediately whirled into a precipice of danger that contrasts in its awfulness with the peace and serenity of her previous symptoms. So we are met at the threshold with the almost insurmountable difficulty that not more than ten or fifteen per cent. complain of such unusual state of health as to demand our attention. Many of those who do consult the physician are either wanting entirely in symptoms, or give such an erratic and irregular history of the case as to render it absolutely untrustworthy. The symptoms that are sometimes present in normal pregnancy are frequently altogether different from those found in the ectopic variety. Herein have erred the theoretical party, and those who claim to have cured such cases by the electrolytic treatment, or by applying with mathematical exactness the cut and dried symptoms of normal gestation. They err again in comparing the rather confusing symptoms of rupture with those usually accompanied and followed by that event. It is accepted that the rapidly growing fœtus so dilates the tube as to cause rupture at some period. In ordinary pregnancy few symptoms or signs are reliable up to the second or third month.

But few women would suspect pregnancy were it not for the cessation of menstruation and occasional morning sickness. In the early period of tubal pregnancy, these signs are often found wanting. There can, however, be very little doubt that there are cases where an almost positive diagnosis can be made, by one who has given any study and consideration to the subject, but the percentage must necessarily remain small, and must render them of little consequence when compared

with the large number that will remain unrecognized for the reasons I have already given.

When rupture takes place into the peritoneal cavity, there are alarming and characteristic symptoms of pain and collapse. There will be colic, distention, vomiting, thin, rapid pulse, coldness of hands and feet, and the patient may faint away. By the aid of rest and stimulants, she may recover, only to be taken with a similar attack unless a surgeon, recognizing the condition, immediately cuts down to the base of the broad ligament and secures the bleeding vessels.

Until a few years ago, when surgical aid came to their assistance, such cases were left and abandoned to their inevitable fate. The woman having extra-uterine pregnancy is entirely at the mercy of accidents, and it can be truthfully said she is only safe when upon the operating table. She can have no warning signal of the many pitfalls that lie in her path. Throughout all its existence, dangers surround and encompass her. In the early period, there are dangers of hæmorrhage; when this is subperitoneal, the patient generally survives to a later period. Peritonitis and suppuration of the sac may continue for an indefinite period. Injury to the bladder and other viscera is frequent. The constitution may become undermined and the patient gradually sink unless surgical aid is secured. The symptoms of ectopic pregnancy are sometimes very irregular. Occasionally the patient presents all the signs of normal pregnancy, but generally many of the usual symptoms are entirely lacking. Frequently menstruation ceases and subsequently returns irregularly. One symptom that is generally accepted as pathognomonic is the expulsion of the decidual membrane. This, however, does not always take place, or, if it does, it is not recognized; sometimes an enlargement is discernible, but usually not before the period of rupture. More frequently the patient complains of vague pains and uncertain symptoms for which she does not even consult her physician.

When the rupture takes the downward position between the folds of the broad ligament, the symptoms will not be so alarming, the pain not so severe, and the chances of the child surviving become more favorable. Inflammatory exudations are thrown out, pressing on the bladder, causing incontinence of urine, intestinal colic, diarrhœa, or constipation. A condition that is generally present in this variety is an annular constriction of the rectum. Frequently it will perish, and become evacuated in the shape of pus. The pus may break into the rectum, the vagina, or bladder. Many cases are mistaken for a pyosalpinx which are but broken-down tubular pregnancies. These terminations are unfortunate, as they tend to remain suppurating centres, rendering their victims chronic invalids. Sometimes the sac becomes absorbed. This, however, is not to be looked for, because it is extremely rare.

The sac sometimes becomes calcified, and remains as a foreign body imbedded; it is then called a lithopædion. Several queer incidents of such have been recorded. When the fœtus remains viable, the diagnosis becomes comparatively easy, as you will then have fœtal heart sounds, sympathetic and other reflex symptoms. There were peculiar conditions that upon two occasions taxed my diagnostic ingenuity to the utmost to enable me to determine between normal gestation and one of the ectopic variety. A peculiar condition sometimes found in normal pregnancy, and one which is very puzzling, is extreme thinness of the abdominal and uterine walls. I have seen very little mention of this anomaly. Why is it that very rarely during normal pregnancy both the uterine and abdominal walls become so thin that you can detect under your fingers every part of the fœtus, even to the toes and fingers? With my first patient, there was a condition of elevation of temperature for three months. I had at one time concluded that I had an extra-uterine fœtus to remove, but during the last two months the walls of the uterus and abdomen became thicker, and the woman had in every way a satisfactory delivery.

(To be continued.)

ICHTHYOL IN TREATMENT OF DEEP-SEATED INFLAMMATIONS.

By WALTER T. SLEVIN, M. D.,

BROOKLYN.

After having used ichthyol in a number of different formulæ where the resultant action has not been as desired, I have at last obtained a formula which, if used properly, will relieve deep-seated, as well as superficial, inflammations.

The formula is as follows:

℞ Ichthyol	45	grains;
Lead iodide	45	"
Ammonium chloride	10	"
Petrolatum, enough to make	1	ounce.

The substitution of glycerin, rose ointment, or cacao butter does not alter its efficiency.

It should be applied by rubbing upon the inflamed parts. The results of the application in three different cases are here described:

Case I.—James F., aged twenty-one years, had a marked swelling on both sides of face, involving the nose and extending to the eyes, with high fever, great prostration, and partial delirium.

Diagnosis: Erysipelas.

Treatment: Had the preparation rubbed into site of inflammation every hour; subsidence of the condition in twenty-four hours.

Case II.—Mary McN., aged thirty years, had a large swelling on left side of the face, involving the glands of face and neck; could not open the mouth; high fever; dyspnœa; dysphagia, and appearance of impending death. The swelling was very hard and tense; therefore to incise it would be futile.

Diagnosis: Circumtonsillar abscess (quinsy sore throat).

Treatment: Application of the preparation every hour, with cure in twelve hours.

CASE III.—John C., aged six months; râles over both sides of the chest; bronchial breathing; broncophony and slight dyspnœa.

Diagnosis: Bronchopneumonia.

Treatment: The preparation was rubbed into chest, and all symptoms disappeared on the following day.

From the cases described it can be readily seen that in acute inflammatory conditions the results have been most excellent.

It seems to me that this formula should be most effective when used in chronic conditions, inflammations, glandular enlargements, and ulcerations, whether of specific nature or otherwise, as it is a great aid to absorption.

I trust that this formula will be made use of by the profession and its effects reported.

386 UNION STREET.

RESORCIN AS A PRESERVATIVE FOR SUPRARENAL EXTRACT SOLUTION.*

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THE most serious difficulty in obtaining a satisfactory aqueous extract of the suprarenal gland has been the necessity of making a solution that would not decompose and cause infection when applied. Since the drug has come into general use, numerous formulæ have been recommended in which a preservative is added to prevent putrefactive changes. Of the many drugs used for this purpose, boric acid, camphor, glycerin, bichloride of mercury, the various silver salts, and alcohol have received the most attention. Boiling the aqueous solution has to some extent also been advised for this purpose, but this method falls far short of its aim, as it only insures that the solution remain sterile for a very short time.

Boric acid will undoubtedly preserve the active portion of the gland for several weeks, and the same can be said of glycerin and weak alcohol solution, but the addition of these substances to the suprarenal extract materially weakens its physiological effect. Camphor or any preservative with a distinctive odor should never be used for this purpose, as it is practically impossible to detect changes in the solution until they become apparent to the eye, on account of the powerful odor of the preservative masking the odor of decomposition.

I have found that the metallic preservatives, as silver and mercury, whether in organic combinations or not, produce a precipitate in conjunction with the suprarenal, making the solution practically worthless, as it diminishes the vasomotor constrictor action, and within a short time the solution becomes to a great extent inert.

Two important objects are essential to the production of a solution of the suprarenal capsule that will be physiologically active and produce its maximum vasoconstrictor action when locally applied to the mucous membrane. First, the prevention of the putrefactive changes that result on account of the large proportion of animal matter present in the desiccated powder, and, secondly, the preservative used must be nontoxic and must not impair in any way the full efficiency of the gland.

These requirements, in my experience, are all fulfilled by the addition of resorcin, which, while retaining its preservative qualities, is not, in the strength here used, an irritant to the mucous membrane, and is not, like the majority of drugs, incompatible, thus impairing the value of the suprarenal.

A series of experiments to determine the usefulness of this drug for the purpose mentioned was undertaken on guinea-pigs. A one-per-cent. solution of resorcin in sterile water was prepared, to which the desiccated gland was added in the proportion of sixty grains to the ounce, and one cubic centimetre of the filtrate was injected into the peritoneal cavity of guinea-pigs at various times and covering a period of several months. In every instance it was found to be non-infectious, the animals showing no evidence, local or otherwise, of any septic effects from the inoculations.

A series of clinical tests was then undertaken by applying the solution, when filtered, to the nasal mucosa, and it was found in every instance that there ensued prompt contraction of the vascular walls, differing in no way from that produced by the fresh aqueous solution of the gland. This maximum energy was not diminished by age, as the active physiological results were obtained and were as well marked in the fresh solution as in that used at the expiration of six months after it had been first prepared. At the same time the solutions showed no evidence of bacterial change, remaining perfectly sterile for an indefinite period. By the use of a one-per-cent. aqueous solution of resorcin, therefore, an almost permanent solution can be obtained, thus eliminating the annoyance of having to prepare a fresh solution whenever the drug is applied.

For practical purposes, it is my habit to add sixty grains of a good desiccated suprarenal extract to one ounce of the resorcin solution. The quantity necessary for daily use is filtered, thus obtaining a clear aqueous solution. It is not my desire here to mention the numerous uses to which the suprarenal gland may be applied, but, as a hæmostatic and vasomotor constrictor, this solution can be recommended to you as being of great service.

706 MADISON AVENUE.

*Read before the Metropolitan Medical Society, December 18, 1900.

THE RADICAL TREATMENT OF MALIGNANT DISEASE OF THE LARYNX.

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In Professor John Noland Mackenzie's article upon the Surgery of Laryngeal Cancer (*New York Medical Journal,* September 8, 1900), the last word appears to have been said upon the subject of the radical operation. "Early total extirpation of the entire organ, with its tributary lymphatics and glands, whether the latter are apparently diseased or not, is the only possible safeguard against local recurrence or metastasis. By no other method can we give the patient a reasonable assurance of a permanent lease on life."

It is much to be regretted that the writer adds no statistical data of the assurance which he expresses in the first part of this sentence, for this cannot but remain unconvincing without some such support. A removal of all the glands in any way related to the lymphatic circulation of the larynx, coupled with the extirpation of the diseased organ, should indeed prove a safeguard against local recurrence; but without evidence of the possibility of so complete and radical a measure, we must remain skeptical of the practical utility of the advice which the writer gives us. Where are we to draw the boundaries of the susceptible lymphatic area? In the case of malignant disease of the breast, actual experience would seem to have limited the dangerous area of the large majority of cases, but in the case of the larynx, can such a line ever be drawn by the experience of operators? Certainly not until we have a more competent mastery of the surgery of the chest.

I have in my mind a case of carcinoma of the larynx in which, at the autopsy, no evidence of lymphatic infection was met with until an enlarged gland, proved by microscopical examination to be carcinomatous, was detected in the neighborhood of the right bronchus.

Instances of the involvement of lymphatic glands within the thorax must occur to many observers, and will illustrate the force of my doubt.

It may be replied that, in the majority of cases, the area of danger lies wholly outside the thorax and within the "operable" regions, but before we can accept that statement we must receive convincing proof of its truth.

The distinguished position of the author of the remarks under consideration and the *ex cathedra* character of their delivery at the annual congress of the American Laryngological Association are matters which emphasize the need of carefully weighing the purport of the words. These words would seem at once to offer us a means of almost certain cure—"a safeguard against local recurrence"—and thereby cut at the root of a hope and confidence which has been steadily growing in this country for the past thirteen years.

The basis of our work in Great Britain has bee early diagnosis, and our guiding motive the maximu of cures with the minimum of mutilation. In theor what could be more rational? But in practice, wha has been the outcome?

Unlike Professor Mackenzie, we have an answer t give. In the words of the writer of the *Mikado,* we hav "made the punishment fit the crime," and ten years' ex perience has justified this laudable motive.

For Professor Mackenzie there are "exceptiona cases" (page 399) which may be dealt with otherwis but "the general rule of practice shall be total extirpa tion with the neighboring area of possible (!) lymphati infection." For British laryngologists the whole ain and endeavor has been to bring these exceptional an limited cases into the forefront and, by constant preach ing to students, to drag the early cases into the spher of operative surgery. To the younger laryngologists i this country it does indeed seem wide of the mark fo the opener of a debate in one of the most prominent o laryngological associations to entitle his work A Ple for Early Naked-eye Diagnosis, and finally to deseen to what is here considered the low-water mark in th matter, namely, "the extirpation of the entire organ."

And surely the author of the article under consideration reveals a curious misapprehension of the surgery of malignant disease of the larynx in the following sentence: "Thyreotomy with curettement or removal o all apparent (visible) disease is not up-to-date surgery is in direct defiance of the rules that should govern u in the treatment of cancer, and is a reversion to, and a resurrection of, a method of procedure that was discredited and abandoned over half a century ago." The truth contained, in fact, in this statement is indeed a travesty of the truth, and as such is the more misleading. One may say that even less than a quarter of a century ago thyreotomy received its death-blow at the hands of Paul Bruns, who, in 1878, was able to report nineteen cases, with two deaths from operation, sixteen local recurrences, and one death from adrenal cancer. Thyreotomy, indeed, died, and was scarcely practised for a decade, but is not the author aware that the name of what has been happily nicknamed "the incomplete operation," has been given again to a wholly new operation, based on sound theoretic foundations, carried out with minute regard to new technical possibilities, and followed by brilliant surgical results? The new thyreotomy may be said to have been born in 1888 under the auspices of surgeons of the widest experience. Even before this, in 1886, Semon (Heath's *Dictionary of Surgery,* and *Centralblatt für Laryngologie,* 1887, Vol. v) drew attention to the earliest diagnostic features of malignant disease of the larynx. Somewhat later, B. Fraenkel stated his agreement with most of Semon's diagnostic points. But from 1888 thyreotomy took a new place in British surgery, when Butlin first broke away from the doctrine of Bruns, and, in the thirteen

years which have followed, the brilliant results of British laryngological surgery have engendered a new hope and confidence, as I have said, in this deplorable affair of malignant disease of the larynx.

In the interests, then, of American surgeons, and still more of American patients, let it be said that there is a new thyreotomy and a new statistics—a statistics which is overwhelmingly more favorable than that of any other radical operation for malignant disease of the larynx.

In the first place, it is worth noticing that Sendziak's statistical tables, including all available cases between 1851 and 1894, show as in Table I:

TABLE I.

	Number of cases.	*Deaths from operation.*	*Recurrence.*	*Good results—free from recurrence at end of 1 year.*	*Cures—free from recurrence at end of 3 years.*
Total extirpation.....	188	44.7%	32.4%	12.8%	5.85%
Thyreotomy.....	85	9.8%	53.3%	13%	8.7%

Even these data, commencing, be it noted, from 1851, give a more favorable set of results for the smaller than for the larger operation, while the operative mortality is greatly in favor of thyreotomy.

But now mark the difference in the figures when, on a rational basis, the old thyreotomy is separated from the new thyreotomy.

And, in parenthesis, one might ask the general surgeon, What is the mortality for the operation of ovariotomy? For the first hundred ovariotomies the mortality was 34 per cent. At a later date the figure came to 11 per cent., and I understand that some few years back it was from 2 to 3 per cent., and that consecutive centuries of the operation have yielded no deaths. In computing the risks for his patient, what is the mortality figure in the surgeon's mind? Does he include the first hundred cases among his figures in forming an estimate of the dangers to life up to date?

So with thyreotomy, let us divide Sendziak's figures according to date. From 1851 to 1894 the definite three-year cures came to 8.7 per cent. for thyreotomy. Divided into the categories before and after the birth of the new thyreotomy, the figures stand as in Table II:

TABLE II.

Thyreotomy—1851 to 1888—definite 3-year cures.....	6.4%
" —1888 to 1894— " " "	29.9%

The new thyreotomy gives, then, a percentage of 29.9 of three-year cures, against 5.85 per cent. after total extirpation.

Now, this in no wise hits at Professor Mackenzie's contention for a new total extirpation which shall include the removal of the whole area of possible gland infection, and the question still remains—shall we make trial of his new method of which we have no statistics, or shall we take early thyreotomy as our desideratum?

First, his new operation. Is it truly a desideratum, or is it a forlorn hope, to be undertaken in the exceptional cases where operation is just feasible and thyreotomy out of the question? The life of a man deprived of his larynx is not a happy one. At least four successful patients have exemplified their views on the subject by committing suicide. Those endowed with more fortitude lead but a maimed existence, either whispering by means of the expulsion of the air contained in the mouth and pharynx, or dependent on the caprice of an artificial larynx which, when perfectly clean, gives them a monotonous voice; some are free, it is true, from the escape of saliva from a pharyngeal fistula, but none are able to fix the chest walls in preparation for a muscular effort. All wear a tracheal tube and all have passed through an ordeal which, in spite of Professor Mackenzie's contention that the dangers of an immediate fatal result are avoidable by modern surgeons, has hitherto availed to bring 44.7 per cent. (Sendziak's table) to their death within a few days. Are they free from all danger of recurrence? This will depend upon the completeness of the mediastinal interference, of which we have yet to learn the technique. Short of something unheard of in the way of radicalism, they are not really free even after the passage of the three-year limit, for the reader of Sendziak's paper will recall the cases reported by Navarro and by Hahn, in which recurrence occurred after six years and eight and a half, respectively. So much for the total extirpation case—the triumph of radical surgery—the pathetic picture of a maimed, pitiable man, scarcely able to earn a living, and not even secure against recurrence!

And now let us consider if we are justified in trifling with a case of laryngeal malignant disease by the method of thyreotomy as practised in England in suitable cases. It would be impertinent in me to draw a picture of the suitable case, as it has been already clearly described by distinguished authors and accepted by eminent American surgeons at the meeting of the British Medical Association in 1895.

First, and least important it is true, it is to be observed that the comfort and ability of the successful thyreotomy case is almost complete. There is, of course, no fistula and no tracheal tube. The voice must always be the last consideration in the matter, but Semon, well recognizing this fact, records the vocal results in ten of his successful cases thus:

Voice good.....	6
Voice weak, but better than before operation.	2
Whisper.....	2

Secondly, what is the death rate for the new thyreotomy? Now, the technique of the operation has been minutely stated by two authors, Semon and Butlin, and

the improvements made from year to year punctually noted. It is, therefore, only fair to record the results of those operators who have had large opportunities of conforming to these details. Butlin's results are, I believe, at this moment being brought up to date, and are not available for this article, but Semon's have appeared as lately as November, 1899 (*Monatsschrift für Ohrenheilkunde*), a fact which the silence of Professor Mackenzie leads me to think he has overlooked.

Semon's death rate from operation for the period 1888 to 1897, including the early cases which served to invite rather than exemplify a final and improved form of operation, amounts to 6.66 per cent. In a word, out of fifteen patients, one died from the operation, and he was a chronic bronchitic, seventy-two years of age.

And now, finally, can we give the patient a reasonable assurance of a permanent lease on life after thyreotomy? I presume the reasonableness of the surgeon's assurance in any case of malignant disease occurring in any part of the body will in a measure be left to the final judgment of the patient or his friends. And what data can we offer on which he or they can base their opinion before acceding to the advice of the surgeon, when on scientific grounds he advises thyreotomy for malignant disease of the larynx? An answer to this inquiry can be found in Semon's latest paper (*Monatsschrift für Ohrenheilkunde,* November, 1899). We are at this moment not concerned in a criticism of Sendziak's later work, and need not follow Semon where he points out: 1. That thyreotomy, as we regard it in this country, includes, where necessary, the removal of small particles of cartilage. This proceeding in no wise alters the character of the operation or the manner of after-treatment, and cannot be held to constitute a partial extirpation. 2. That the three-year limit of cure is a purely arbitrary one, seeing that the great majority of recurrences take place within a few months of operation, and in reality denote incomplete removal. Semon, indeed, regards freedom from recurrence after one year as sufficient to constitute a cure, and his personal experience and an examination of Sendziak's list would seem to fully justify his view. But let that pass, and let us take the three-year limit. Semon's figures for thyreotomy performed upon twelve cases of malignant disease of the larynx, all of them proved to be such by microscopic examination (Shattock), stand as in Table III.

TABLE III.

Cases.	*Death from operation.*	*Recurrence.*	*Sound more than one 1 year.*	*Sound more than 3 years.*
12.	1	1 (doubtful)	10	6

The six cases which remain free from recurrence more than three years after operation represent the results of eight thyreotomies, which amounts to no less than 75 per cent. of definite cures.

Into a second category we may place the four cases well more than one year after operation. These represent the result of four operations, or 100 per ce Semon himself sees no good reason for this division i two categories, and computes his percentage of cu (*i. e.,* more than one year free from recurrence) as 8 per cent., or ten out of twelve operations.

We are not, however, likely to enter into any disp as to the exact percentage, for the figures are so infinit superior to those of total extirpation that they scarc come into comparison. I bring these percentages f ward simply to show that thyreotomy, as practised Semon, Butlin, and a large number of British surgeo is an operation which yields brilliant results. A m ment's thought will convince the reader that, in face such results, it is absurd to sweep aside thyreotomy wi the remark that it is an operation which half a centu ago was discredited and abandoned. Professor Macke zie's new operation may, it is true, give us a better pe centage of three-year cures than 75 per cent., but mea while we await the results of his experience in the ma ter. For the present his operation must remain in t doubtful stage of experiment, and by no means be thru upon the public from a presidential chair as the on rational safeguard against recurrence.

In the interests, not less of American patients tha of American surgeons, it has seemed to me necessary t bring this matter forward, and I must do so with n light heart, for almost every word that I have writte has been already said again and again by surgeons c experience and acknowledged prominence. Thyreotom is not for the first time ignored by writers on malignan disease of the larynx, and no doubt this is due to th fact that the majority of cases seen in hospitals hav already passed the stage in which the most extensiv operation that can be imagined is out of the questio In the routine of daily work at the hospital, thyreotom must indeed but seldom come into question; but, on th other hand, our hopes in attacking laryngeal cancer d not rely upon an increasingly extensive method of oper ating.

Figures show very clearly that success in the matte depends rather upon the limitation of the disease tha upon the degree of the surgical mutilation.

Early diagnosis, all will admit, must be the watch-word of the thoughtful and progressive surgeon, but a we enter a new century armed with growing abilities t recognize the first stages of laryngeal cancer, we must not abandon a victory already developing and convert an orderly advance into a kind of forlorn hope. Thyreotomy, as now practised, is doing admirable work; it cannot be repressed in favor of an operation which has yet to win our confidence; and which, at best, can offer the patient an insecure lease of life, purchased at a terribly heavy premium.

The German Dermatological Congress will be held at Breslau on May 28th, 29th and 30th.

HE SURGERY OF THE TURBINAL BODIES, WITH A NEW METHOD OF OPERATING.*

By J. E. BOYLAN, M. D.,

CINCINNATI, O.

THE method of dealing with hypertrophy and de-nerative changes in the turbinated bodies—common these conditions are, and fraught with dire conse-ences—is undoubtedly one of the most important, in-resting and persistent problems which it is the task of r specialty to solve. I offer no apology, therefore, for introducing to you this familiar, though not trite, sub-ct. Glancing back over very few years, we realize at ce that the series of momentous observations made in rn by Virchow, Hack, Kölliker, Kohlrausch, Zucker-ndl, and Biglow not only have proved of absorbing terest to the physiologist and pathologist, but have en happily followed by triumphant practical results, that thousands of patients to-day find relief from a ndition which, before the anatomy and function of e turbinated tissue were understood, remained a eaded bugbear to the physician. But the great pro-ess made in this short period, as well as the good re-lts attained at times by very crude methods, only tends strengthen the assumption that, far from being an hausted field, this is one in which a comparison of ethods is likely to lead to much better results in the ture.

In days gone by, I have resorted to different pro-dures one by one, as they were developed by the rapid arch of rhinology: Linear incision with the galvano-utery knife in soft hypertrophy; the use of chromic d the chloracetic acids; the more extensive surface duction with the cautery blade, in excessive indurated pertrophy, and in many instances the gradual reduc-on of the extremities of the bodies, from which the best sults were obtained.

As time progressed, however, and the accumulation f cases afforded an opportunity of convincing myself of e preponderance of hypertrophy in certain regions, no-bly at the extremities, rather than in the central part f the bodies, I resorted with increasing frequency to the moval of larger segments of the excessive tissue by ne smooth operation, and the results attained proved satisfactory that I now give this procedure the first lace in the treatment of this condition and believe that the advanced hypertrophy so frequently associated ith interference with the respiratory function the judi-ious amputation of portions of the turbinated bodies ill be the operation of the future in rhinology.

In support of this postulate, let me recall that the ypertrophy in question, whether always originating in he erectile tissue or not, has its chief development in nd about its walls, as the result of chronic engorgement, his being not a matter of theoretical conjecture, but a demonstrated fact, as the result of microscopic research, notably by our fellow, Dr. J. N. Mackenzie;* further, that the location, or at least the great preponderance of this tissue, is near the posterior and anterior extremities and in less degree—in the lower part and along the free margin of the middle and lower turbinated bodies. Thus, Zuckerkandl,† who has made an exhaustive study of this tissue, states: "The autopsy has determined that in the engorgement of the turbinated bodies the posterior extremities are most increased in size, the middle part the least; this being easily explained when we consider that there is less need of erectile tissue upon the convex, protruding middle part of the body, than at the pointed (*zugespitzten*) extremities."

The conclusions following are drawn from 111 turbinotomies in private practice, and from clinical cases in which a record has been kept; 42 of which were examined at least one year after the date of the operation. The conclusions are: 1. That, while in exceptional cases involvement of the whole erectile-tissue area of the pendulous portion of the body may coexist, hypertrophy is usually greatest where this tissue is most abundant—namely, at the anterior and posterior extremities.

2. That the relief of obstruction and the reduction of hypertrophy in these cases is accomplished more certainly and scientifically by ablation than by cauterization.

3. That, while venous dilatation is greatest at the posterior extremities, obstruction is rarely due to hyperplasia at this point *alone*.

The reason for the prevalence of the erectile tissue in the region of the choanæ must be obvious, if we accept the proposition that it is part of Nature's plan to have the air pass in thin sheets between closely approximated walls for the warming and moistening process so essential to perfect respiration; the posterior opening, being not only quite straight, but widened to a lumen much larger than the narrow passage in the vestibule, naturally requires a larger supplement of erectile tissue to produce in this region the condition referred to, and it is owing to this free posterior opening that a greater degree of engorgement or hypertrophy may here exist without obstruction.

Without dwelling further on this phase of the subject, however, I pass to the consideration of the method of operating which it is the object of this paper to describe.

To deal as briefly as possible with statistics, in the cases above referred to, the lower part of the inferior turbinated body was removed throughout its entire length in three instances with the saw, and in twenty further cases sections embracing the anterior extremity, with the same instrument. In twenty-four cases turbinotomy of the lower or middle body was performed with the scissors, or with the saw and scissors together,

*Read before the American Laryngological Association at s Twenty-second Annual Congress.

Medical News. 1884.

†*Wiener medicinische Wochenschrift*, 1884, p. 1125.

and in sixty-four cases sections of varying size were removed with the cold snare.

The clean, smooth edge of the cut made by the transverse passage of the wire through the body, the small amount of hæmorrhage, and the possibility of following the loop with the eye quite to the point to be reached commended this latter method to me above the others, and the use of the saw and the scissors was in time restricted to cases in which excessive induration suggested an exceptionally thickened bone. If in any of these sixty-four cases the turbinated bone was ever seriously crushed with the loop, I have never been able to detect it, and have certainly never once known either an osteitis or any deformity to result. If the wire used is stiff and thin, and the snare powerful, the tissue is cut through smoothly and usually with ease.

A serious objection to this method, however, was the slipping forward of the loop over the medial surface and lower margin of the body, at times even after it had been inserted into a short incision dividing the anterior extremity of the body from the side wall, by which slipping either a complete failure to engage the tissue resulted or the amount removed was much less than had been intended. To prevent this accident, it occurred to me that the end of the loop might be fixed by burying the point of a fine tenaculum, the hook of which formed a right angle, into the lower margin of the turbinated body at the point of operation, carrying the loop over its handle into the meatus and adjusting it so that it passed behind and was held in place by the back of the hook. This device, first tried upon the middle turbinated body, proved entirely successful, and has since been used with gratifying results in numerous cases. By means of it it is possible to entirely control the removal of the amount of tissue required, and, combined, if necessary, with the lateral incision above referred to, amputation can be done with accuracy as far back as the middle of the body. Finding that the point of the hook was at times caught in the loops, I afterward had this bent to an angle somewhat more acute than a right angle, and in operating it was tilted still farther forward by depressing the proximal end of the tenaculum. During the manipulation the snare should be pressed firmly backward and upward, so that the loop is drawn from above rather than from in front. The back of the hook is corrugated for the better retention of the loop.

The method just described was not applicable to cases in which the removal of the posterior extremities of the lower bodies was performed with the snare, this being usually accomplished by conjoined manipulation through the mouth—in two cases with great difficulty—twice under anæsthesia. The proportion of cases, however, in which obstruction rendered this operation imperative was surprisingly small—they numbered twelve.

In eighteen cases in which marked enlargement of the posterior extremities coexisted with causes of obstruction farther forward, such as polypi, hypertrophy at the anterior extremities, or of the lower margin of the body, and irregularities of the sæptum, the removal of the latter sufficed to restore the lumen of the passage, after which the posterior hypertrophy was no longer a source of serious annoyance, and in several instances receded rapidly under local treatment. A diminution of hypertrophy at the two posterior extremities, I may add, I have repeatedly observed after the removal of adenoid vegetations and enlarged tonsils.

The principle involved in turbinotomy is the radical removal of that part of the tissue which is the final cause of obstruction, and in which hypertrophy is furthest advanced, leaving the less affected part, which is to perform the function of the body, uninjured by operative procedures. The indication is to remove as little tissue as possible consistent with the freeing of the passages from obstruction to respiration.

A comparison of results obtained by this method with those from the use of the cautery will, I believe, operate more and more to restrict extensive burning out of the nose in the days to come. If cauterization is sufficient to materially reduce the hypertrophy, the process must of necessity result in the wholesale destruction of the glands so essential to the function of these bodies, and the conversion of an already diseased tissue into a cicatricial one.

In forty-two of the cases referred to it was my fortune to inspect the patient at least one year after operating; in no instance was there a complaint of discomfort attributable to the operation, while I regret to say that in a number of cases in which the cautery was used inspection now shows in some instances, instead of the normally curved body at the site of operation, a flat, dry, resisting surface, giving rise at times to an annoying sense of dryness, while in others the process has not been arrested, but has continued to develop, either beneath the tissue cauterized or in immediately adjacent parts.

The number of cases reported in which troublesome adhesions, septic inflammation, and—the one case, at least, Dr. Quinlan's—in which meningitis resulted from cauterization of the middle turbinated body, should preclude the use of the galvanocautery in this region at least. The method above described has the great advantage over the use of scissors that the view is not obstructed by the instrument. This is particularly apparent in resection of the middle turbinated body, so frequently necessitated by disease of the ethmoidal sinuses, in which procedure the application of either scissors or saw may be extremely difficult.

The St. Louis Medical Society of Missouri.—At the last regular meeting, on Saturday evening, the 2d inst., Dr. William A. McCandless read a paper entitled The Removal of Foreign Body from the Bronchus, with a Report of Cases.

Therapeutical Notes.

Pastilles for Painful Affections of the Throat.—Neumeier (*Pharmaceutische Centralhalle,* January 17th) uses the following formula for pastilles in anginal affections of the throat:

℞ Borax. . . . . 1½ grains;
Cocaine. . . . . $\frac{1}{32}$ of a grain;
Antipyrine. . . . . 3¾ grains.
M.

From four to eight pastilles may be used daily for an adult, and smaller doses for children.

A Movement Treatment for Vertigo.—M. Urbantschisch (*Indépendance médicale,* February 25th), at a recent meeting of the Imperio-Royal Society of Medicine of Vienna, said that, having noticed that the sensations of vertigo determined, even in the normal state, by rotary movements of the head, were proportionately more tardy of production as the subject was accustomed to execute such movements, he had prescribed frequent rotary movements of the head to many patients subject to vertigo. The patient, lying down, turned the head alternately from side to side, stopping as soon as vertigo appeared. When certain movements of the head or the eyes alone provoked the sensation of vertigo, he caused these movements to be practised to the exclusion of others. After a certain time the use of these manœuvres induced the complete disappearance of the trouble. He had thus succeeded in curing the vertigo of a patient, which, following on the radical cure of a caries of the petrous portion of the temporal bone, was recognized as having its cause in a lesion of the horizontal semicircular canal.

A Paste for Epithelioma.—*Progrès médical* for February 16th ascribes the following to M. Danlos:

℞ Arsenious acid. . . . . 15 grains;
Hydrochloride of cocaine. . . . . 15 "
Orthoform. . . . . .150 "

Stir up with a little water to a thick paste and apply to the previously freshened surface of the cancer.

For the Intractable Cough of Phthisis.—Dr. Weissenberg (*Presse médicale,* February 13th) employs with great success the following drops in phthisical patients in whom an ulcer of the epiglottis or a particular nervous condition produces severe accesses of cough on eating, drinking, or speaking:

℞ Hydrochloride of dionine, } of each. . . .150 grains;
Hydrochloride of codeine, }
Hydrochloride of cocaine. . . . . .375 "
Valeriate of ammonium, } of each. . . . .112½ "
Water of bitter almonds, }
M.

Fifteen drops three or four times daily on a lump of sugar, to be put far back in the mouth and allowed to dissolve slowly.

For Diarrhœa.—*Progrès médical* for January 26th gives the following:

℞ Benzonaphthol, }
Bismuth salicylate, }
Bismuth benzoate, } of each. . . . . 75 grains.
Prepared chalk, }
Antipyrine, }
M. To make 25 wafers. From four to five may be taken daily.

For Vomiting after Chloroform.—The *Journal of Tropical Medicine* for February 15th cites the following from *Clinica moderna:*

℞ Cerium oxalate. . . . . 2 grains;
Codeine sulphate. . . . . ⅕ grain;
Calomel. . . . . 1 "

A Tonic Wine for the Tuberculous.—*Progrès médical* for January 26th cites the following by M. Blanc from the *Bulletin général de thérapeutique:*

℞ Sodium arsenate. . . . . 1½ grains;
*Bitter drops of Baumé. . . . . 45 "
Cinchona wine. . . . . .3,750 "
Coca wine, } of each. . . . . .1,875 "
Kola wine, }
Acid phosphate of wine. . . . . 300 "
M. A soupspoonful to be taken after the two principal meals.

*[*Gouttes amères de Baumé,* of the French codex, is "a preparation made by macerating for eight or ten days in a closed vessel, with occasional shakings, and afterward expressing and filtering, 500 parts of grated St. Ignatius bean, 5 parts of potassium carbonate, 1 part of soot, and 1,000 parts of dilute alcohol. The Belgian pharmacopœia employs hard-coal soot." Foster's *Encyclopædic Medical Dictionary.* See "gutta."]

The Treatment of Pyorrhœa Alveolaris.—*Nord médical* for February 15th ascribes the following treatment to Dr. Bruneau, citing the *Journal de clinique et de thérapeutique.* The disease is divided into three stages.

The *first stage* is marked by a slight loosening of the gum, a grayish rim a millimetre in thickness, and a zone of livid congestion extending as far as the loosening; a purulent oozing on pressure, on waking in the morning, and absence of pain. The condition is localized about one or more teeth, around which a tartar accretion may be seen. The treatment consists of thorough cleansing of the mouth, the removal of pieces of tartar, and the application of caustic (chromic or carbolic acid, and especially the actual cautery).

Every morning a good brushing followed by a hot antiseptic lavage with

℞ Chloral. . . . . 2 parts;
Boiled water. . . . . .100 "
M.

Or:

℞ Boiled water. . . . . .4,000 parts;
Thymic acid. . . . . 3 "
M.

Then apply with a stylet, making it penetrate to the bottom of the loosened part, a piece of cotton steeped in the following solution:

℞ Carbolic acid. . . . . 3 parts;
Glycerin. . . . . .10 "
Distilled water. . . . . .20 "
M.

Renew the antiseptic lotions after each meal. In the evening, after a fresh lavage, apply to the edges of the gums some of the following mixture:

℞ Sodium biborate. . . . . .100 parts;
Salol. . . . . 50 "
Saccharin. . . . . 1 part.
M.

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LEGAL INCONSISTENCIES.

THE luminaries of the law seem to extract endless satisfaction out of expressing their scorn for medical differences of opinion as occasionally exemplified on the witness stand. In our issue for February 9th we cited the opinion of a Philadelphia judge in the case of a physician whom he scored for being late in attendance at a trial in which he was cited to appear as a witness, remarking that it was better that a patient should die than that the commonwealth should be treated with contempt. In commenting on this extraordinary legal dictum we then said: "It is easily conceivable that the circumstance might occur under conditions in which no loophole of escape from the dilemma of a choice between duty to life or to the commonwealth would be forthcoming—*e. g.*, the case * * * of an obstetrician or surgeon in the midst of a confinement or an emergency operation." A curious commentary hereon is afforded by a law report in the *San Francisco Examiner*, cited in the *Sun* for March 1st. A physician of San Francisco, meeting with obstruction to his course of action in a midwifery case, finally declared concerning the patient's opposition that "if she did not quit he would quit," and eventually carried out his threat. Over an hour elapsed before another physician could be found and the obstetrical operation completed. For this breach of duty the physician was fined $2,000. He appealed against the decision; and, in affirming the decision of the court below, the Supreme Court said, in part:

"It is the undoubted law that a physician may elect whether or not he will give his services to a case, but having accepted his employment, and entered upon the discharge of his duties, he is bound to devote to the patient his best skill and attention and to abandon the case only under one of two conditions. First, where the contract is terminated by the employer, which termination may be made immediately. Second, where it is terminated by the physician, which can only be done after due notice and an ample opportunity afforded to secure the presence of other medical attendance. * * * He can never be justified in abandoning it (a case) as did this defendant."

We certainly consider this a very just and proper interpretation of the principles involved; but if the physician "can *never* be justified in abandoning it (a case), as did this defendant," what becomes of the Philadelphia judge's dictum that "it is better that a patient should die than that the commonwealth should be treated with contempt"? The terms of the California decision undoubtedly uphold our contention in the article before referred to, and we feel sure that the common sense of the community will be in entire accord therewith. But the expert evidence of lawyers thus appears at times to come to loggerheads on first principles no less than that of doctors. We do not mean of lawyers acting as advocates, but of judges, whose obligation to avoidance of partisanship and to the simple elucidation of truth *per se* is just as great as that of the physician who is unfortunate enough to be in the invidious position of an expert witness.

THE EXTERMINATION OF MALARIA.

ANNOYING as the two hundred or more species of the *Culicidæ* all are, and richly deserving of suppression, it is reassuring to find that very few of them are capable of conveying malarial disease. It seems almost certain that all the species of the genus *Culex* are innocent, and perhaps but few species of the genus *Anopheles* are a source of danger. It is highly desirable that all localities where mosquitoes of any sort exist should receive the entomologist's careful attention, in order that the work of exterminating the *Anopheles* may not be needlessly made more difficult by that of destroying the *Culex*. The arduous character of the work which the entomologist will be called upon to perform in some localities is well shown by Gorham, of the anatomical laboratory of Brown University, in an article entitled Notes on Mosquitoes taken at Providence, R. I., in 1900, published in the January 15th issue of the *Journal of the Boston Society of Medical Sciences*. Speaking of *Culex pungens*, he says: "The great numbers of this species that infest the 'East Side' of Providence probably come from the old Blackstone canal, the waters of which, though loaded with impurities of all sorts, are literally filled during the summer and fall with their

larvæ. They are so abundant in parts of the canal that the color of the water is changed, and a quart jar of the water scooped up at random will have two solid inches of mosquito larvæ on the bottom."

Gorham alludes to what may prove an invaluable means of exterminating mosquitoes. He says that he had supposed, before beginning his search for their breeding-places, that every body of water would be found to contain mosquito larvæ in greater or lesser abundance, but as the quest went on he was surprised to find that in only a few of the ponds and streams near Providence were mosquitoes breeding, and he soon came to the conclusion that the presence of fish of any kind in the water was a sure sign that there were no mosquito larvæ there. We must see to it, then, that those of our ponds and streams that are not too foul for fish to flourish in are speedily stocked with our finny allies in the war of destruction to be waged against mosquitoes. In the case of those that are too foul for the purpose other measures will of course have to be taken.

Charles Sedgwick Minot, the well-known embryologist, contributes to the same number of the journal cited an article entitled Notes on Anopheles. It appears that before he became engaged in embryology Dr. Minot gave considerable attention to the study of insects, and his observations on the mosquitoes, made in 1879, are perhaps among the earliest that may be found available in the task of suppressing the *Anopheles*. Concerning the larval form of one of the species found in West Roxbury (now a part of Boston), he mentions having observed a most remarkable method of feeding. As it lay quite motionless upon the surface of the water, it would suddenly twist its neck, so that the mouth faced the sky instead of the bottom of the pond, and beat the water very rapidly with its oral appendages, thus creating a current that brought particles of floating material to its mouth. This twisting movement it was able to execute by reason of its long and slender neck. Not knowing at the time what this odd larva was, he designated it in his notes as the "head-turner," and he now suggests that name for adoption as a popular term.

Preceding the articles thus far mentioned is one by Theobald Smith, in which he treats of *Anopheles punctipennis* and *Anopheles quadrimaculatus* as they are found in the suburbs of Boston, where, however, they are few in number. Inasmuch, he says, as in our climate only tertian malarial fever prevails, we have still before us the important problem of why tropical malaria does not take root among us, and therefore that of whether the transmitters of the three different races or species of malarial parasites are the same or specifically distinct. He lays stress on the necessity of promptly treating malarial disease in the human subject, so that *Anopheles* may find nothing to transmit, but he seems to go hardly so far as Koch, who maintains that this is the paramount means of stamping out malaria. We are encouraged to entertain the expectation that before long malarial disease will indeed be much restricted, if not altogether annihilated.

MARK TWAIN AND THE OSTEOPATHS.

Our humorous friend, Mark Twain, whom we all appreciate, in his amusing speech at Albany in support of the claims of the osteopaths to legislative recognition, entirely misses the point at issue. He pleads for the right to experiment with his own body to his heart's content, by which he seems to mean to let others experiment with it. But this bill claims more than the right to gratify him and those who agree with him. It aims to confer State recognition upon a body of persons professing to be what they are not, namely, properly, adequately, and scientifically educated, and qualified to deal with disease in all its aspects and relations, not only to the individual, but to the community also; for, as it happens, these two aspects can never be entirely separated. Mark Twain may believe nickel to be as good in every respect as silver, and he has a perfect right to consider it so if he pleases, and even to label his own property in nickel with the word "silver"; but would he seriously (if he ever does anything seriously) uphold the propriety of stamping some one else's nickel with a sterling mark that should authoritatively proclaim it silver in the name of the government? The attempted parallelism between religious and medical liberty is not to the point. A man's religious convictions concern no one but himself; they are, moreover, matters of opinion and faith, and are not, and cannot be, matters of certainty and knowledge—for the most positive conviction is not knowledge. That alone is knowledge which is susceptible of demonstration, not only to one's own satisfaction, but by logical processes to the logical faculty in others also. Neither is his appeal to the legal status of the homœopathic and eclectic schools of medicine any more to the point; for, while therapeutic dogmas may be in the same category as religious convictions in relation to this question, therapeutics is by no means the whole of medicine. The homœopathic and eclectic

schools of medicine, of the State recognition accorded to which Mark Twain made such a point, at least train their alumni in the actual basal sciences of anatomy, physiology, and pathology, and in all their subsidiary branches of knowledge, upon acquaintance with which depends the capacity to distinguish one disease from another and to cooperate in stamping out, or at least preventing the further spread of, communicable and preventable disease. This aspect of disease is not of individual, but of collective import; and, however much the non-sectarian, the homœopath, and the eclectic may differ in regard to the more individual, and relatively less important, matter of treatment, they are at least possessed in common of the same scientific knowledge, and use the same available methods, for the protection of the community against the injuries that might accrue to its individual members from a person sick with a transmissible disease. It concerns no one but the patient (and his immediate friends, with whom he may be left to fight the question out) that he chooses to expect curative results from methods that some, perhaps the majority, of competent judges consider lacking in reasonable support. But it concerns the entire community that the man called in to a case of sickness should be so trained as to be competent to recognize the difference between a simple sore throat and diphtheria, or between a pustular skin eruption and small-pox. It may be true that it is the inalienable right of any man to experiment on himself, or to make a fool of himself in any way that he pleases; but that right does not give him the right also to imperil the welfare, and perhaps even the life, of all other persons with whom he may be unavoidably thrown into contact. A man whose house is his own has an inalienable right to do with it as he chooses. He has a right to burn it down to the ground if he likes; and so long as it is so situated that he does not thereby endanger the persons or properties of other people (as, for instance, if it is situated a mile or so from any other building) and does not, moreover, endeavor to defraud the insurance companies, probably no one would attempt to interfere with him. But let him try to burn down his house which is one of a block, and he would promptly and rightly be interfered with; not because his theoretical right to do as he chooses with his own is disputed, but because by so doing he would endanger the property of others.

The principles involved in these considerations apply with even greater force in the case of the other and yet more dangerous fanatical craze of the day, "Christian Science"—at which, by the way, Mark Twain himself had his little jibe not so very long ago.

Literary men seem of late to be specially attracted by these fads. First, it was the late Harold Frederic and Christian Science; now, Mark Twain and Osteopathy—or is it just possible that Mark has suddenly remembered the *Innocents Abroad*, and is putting his own quaint conceits into practice on the community at large and the medical profession in particular?

THE PUBLIC SPITTING NUISANCE.

A CORRESPONDENT of the *British Medical Journal* for February 23d writes from Rome to describe the measures taken in that city against this disgusting and pernicious habit. He translates the following notice, which is posted in public galleries and vehicles: "S. P. Q. R.—Spitting on the floor is prohibited. Receptacles should be kept in the place with a little water, to be changed daily, or quicklime in little pieces, renewed weekly. Breach of this regulation, under Article 22 of the Health Ordinance, is punishable by a money fine of from fifty-one to five hundred *lire* [approximately from $10 to $100]. The obligation is imposed in the interest of the public." The writer appears to approve of such a measure for Great Britain. We imagine that it is even more needed in the United States. It is satisfactory to note that the Metropolitan Street Railway Company of New York and the Manhattan Elevated Railway have taken the initiative by calling the attention of their passengers to the fact that the disgusting practice constitutes a misdemeanor and is punishable by a heavy fine, or imprisonment, or both. We trust that it will be carried out.

THE MORAL EFFECT OF CLOTHES.

IN our issue for December 16, 1898, we had an article on The Soldier and His Uniform, in which we said that the effect produced on the soldier affected his self-esteem, and added, in regard to recruiting: "There can be no doubt that the jaunty appearance of a soldier, whether on duty or on leave, makes the service attractive to young men who are thinking of entering it." And again, "we have nothing but contempt for 'dudishness,' but we feel convinced we are not overrating the importance of a smart uniform for the soldier."

A curious illustration of this view comes to us through the *Indian Lancet* for January 28th. It is said that when, during the siege of Mafeking, Baden-Powell applied to the principal medical officer for volunteer nurses, the doctor replied that a lot of his young women wanted first of all "to know what the kit would be like." Whereupon "B.-P.," who is an excellent artist, rapidly created a picturesque study of a pretty girl, made still

more pretty by a khaki blouse and a "B.-P." hat, with a green puggaree and a jay's wing. The physician returned next day with the remark, "You can take your pick—they are all crazy to join." Shall we not, then, admit the great moral effect of clothes, particularly in relation to *esprit-de-corps?*

MORE NEWSPAPER MEDICINE.

In a New York daily paper, of date March 7th, appears a ludicrously inaccurate account of an operation of gastro-enterostomy, recently performed in this city, which is described as the "removing the patient's stomach, cutting away the pyloris (*sic*) and several malignant growths in its vicinity, and restoring the stomach to its former place," etc. Incidentally we are informed that Murphy's button is "so called from having been invented to suit" the case of Colonel Michael C. Murphy, commissioner of police of this city. Chicago tries, we know, to get ahead of New York at all times, but we must protest against such an unfair method of retaliation as the "conveyance" of the credit of the Murphy button from the distinguished Chicago surgeon to a—shall we say equally distinguished?—New York patient.

PUBLIC INSTRUCTION IN SANITATION IN MICHIGAN.

For years the Michigan State Board of Health has been noted for its industrious and well-directed efforts to teach the people the elements of the art of preventing disease. Its *Teachers' Sanitary Bulletin,* several issues of which are before us, must be one of the board's most efficient agencies, for in no other way, we conceive, can the rising generation be better imbued with the importance of sanitation and furnished with elementary information in that branch than through the medium of the school-teachers.

SCHOOL-BOOK "PHYSIOLOGY."

We are glad to see that our excellent contemporary, the *Brooklyn Medical Journal,* takes the stand that ought long ago to have been taken by the medical profession on the absurd, fanatical, and injurious legislation which, unfortunately, is widely in force in the United States, whereby writers of text-books to be used in the public schools must inculcate what they know to be false concerning alcohol, or else suffer their books to be proscribed, and whereby the teachers are compelled to devote a certain proportion of their time to expounding false doctrine. Our legislators are too pliant in the hands of zealots.

News Items.

Society Meetings for the Coming Week:

Monday, *March 11th:* New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynæcological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

Tuesday, *March 12th:* New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Societies of the Counties of Rensselaer and Ulster (quarterly), N. Y.; Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioner's Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

Wednesday, *March 13th:* New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Medical Societies of the Counties of Albany and Montgomery (quarterly), N. Y.; Pittsfield, Massachusetts, Medical Association (private); Worcester, Massachusetts, District Medical Society (Worcester); Philadelphia County Medical Society.

Thursday, *March 14th:* Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Societies of the Counties of Cayuga and Cortland (quarterly), N. Y.; South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

Friday, *March 15th:* New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynæcological Society.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending March 2, 1901:

Diseases.	Week end'g Feb. 23.		Week end'g Mar. 2.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	28	5	23	11
Scarlet Fever	437	24	541	30
Cerebro-spinal meningitis	0	0	0	0
Measles	198	5	167	8
Diphtheria and croup	257	37	293	36
Small-pox	46	9	64	11
Tuberculosis	250	179	267	161

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending March 2, 1901:

Cordeiro, F. J. B., Surgeon. Detached from the *New Orleans* and ordered home *via* the *Buffalo.*

Persons, R. C., Medical Inspector. Detached from duty as fleet surgeon, Asiatic Station, and ordered home to await orders.

Pickrell, G., Surgeon. Detached from the Cavite Naval Station and ordered to the Mare Island Navy Yard.

Rogers, F., Medical Inspector. Detached from recruiting duty and ordered to the Asiatic Station for duty as fleet surgeon, sailing from San Francisco, March 15th.

Rush, W. H., Surgeon, retired. Detached from the Pensacola Navy Yard and ordered home.

Stokes, C. F. Surgeon. Detached from the *Buffalo* and ordered to the *New Orleans.*

Thompson, J. C., Assistant Surgeon. Detached from the *Solace* and ordered home to await orders.

Wentworth, A. R., Surgeon. Detached from the *Independence* and ordered to the *Solace.*

Marine-Hospital Service Health Reports:

The following cases of small-pox, cholera, and plague were reported to the surgeon-general during the week ending March 2, 1901:

Smallpox—United States.

Mobile, Alabama	Feb. 16-23		1 death.
Los Angeles, California	Feb. 9-16	1 case.	
Washington, District of Columbia	Feb. 2-23	12 cases.	
Jacksonville, Florida	Feb. 16-23	3 cases.	
Chicago, Illinois	Feb. 16-23	10 cases.	
Delaware County, Indiana	Feb. 2	1 case.	
Lawrence, Kansas	Feb. 8-16	1 case.	
Wichita, Kansas	Feb. 16-23	8 cases.	
Lexington, Kentucky	Feb. 8-23	3 cases.	
New Orleans, Louisiana	Feb. 16-23	14 cases.	3 deaths.
Shreveport, Louisiana	Feb. 16-23	2 cases.	
Baltimore, Maryland	Feb. 16-23	1 case.	
West Bay City, Michigan	Feb. 8-23	2 cases.	
Minneapolis, Minnesota	Feb. 8-23	15 cases.	
Winona, Minnesota	Feb. 16-23	13 cases.	
St. Joseph, Missouri	Jan. 1-31	34 cases.	1 death.
Omaha, Nebraska	Feb. 8-23	12 cases.	
Manchester, New Hampshire	Feb. 16-23	30 cases.	
Newark, New Jersey	Feb. 8-26	3 cases.	
New York, New York	Feb. 16-23	43 cases.	9 deaths.
Ashtabula, Ohio	Feb. 16-23	3 cases.	
Cincinnati, Ohio	Feb. 13-22	3 cases.	
Cleveland, Ohio	Feb. 16-23	48 cases.	
Erie, Pennsylvania	Feb. 16-23	1 case.	
Pittsburgh, Pennsylvania	Feb. 16-23	3 cases.	
Steelton, Pennsylvania	Feb. 16-23	1 case.	
Greenville, South Carolina	Feb. 16-23	2 cases.	
Memphis, Tennessee	Feb. 16-23	21 cases.	
Nashville, Tennessee	Feb. 16-23	6 cases.	
Galveston, Texas	Feb. 16	123 cases.	
Salt Lake City, Utah	Feb. 8-23	46 cases.	1 death.
Huntington, West Virginia	Feb. 16-23	1 case.	

Smallpox—Foreign and Insular.

Prague, Austria	Jan. 26-Feb. 9	17 cases.	
Antwerp, Belgium	Jan. 26-Feb. 2	1 case.	
Ghent, Belgium	Jan. 19-26		1 death.
Bahia, Brazil	Jan. 19-26	3 cases.	
Pernambuco, Brazil	Dec. 17-Jan. 15		62 deaths.
Rio de Janeiro, Brazil	Dec. 16-Jan. 15		39 deaths.
Colombo, Ceylon	Jan. 6-12	1 case.	1 death.
Guayaquil, Ecuador	Jan. 8-26		11 deaths.
Paris, France	Jan. 16-Feb. 9		32 deaths.
Bradford, England	Feb. 2-9	2 cases.	
Liverpool, England	Feb. 2-9	1 case.	
London, England	Jan. 26-Feb. 9	4 cases.	
Newcastle-on-Tyne, England.	Jan. 26-Feb. 2	7 cases.	1 death.
Bombay, India	Jan. 13-27		9 deaths.
Calcutta, India	Jan. 12-26		186 deaths.
Karachi, India	Jan. 13-27	22 cases.	14 deaths.
Madras, India	Jan. 15		6 deaths.
Mexico, Mexico	Feb. 1-16		4 deaths.
Rotterdam, Netherlands	Feb. 8-16	1 case.	
Ponce, Porto Rico	Feb. 1-10	32 cases.	
Moscow, Russia	Jan. 19-Feb. 2	17 cases.	2 deaths.
Odessa, Russia	Jan. 26-Feb. 9	35 cases.	13 deaths.
St. Petersurg, Russia	Jan. 26-Feb. 2	1 case.	
Warsaw, Russia	Jan. 19-26		12 deaths.
Dundee, Scotland	Jan. 26-Feb. 9	17 cases.	
Glasgow, Scotland	Feb. 8-15		10 deaths.
Singapore, Straits Settlements.	Dec. 29-Jan. 12		1 death.

Yellow Fever.

Rio de Janeiro, Brazil	Dec. 8-Jan. 15		10 deaths.
Havana, Cuba	Feb. 8-16	2 cases.	2 deaths.
Vera Cruz, Mexico	Feb. 8-15		1 death.

Plague.

Cape Town, Africa	Feb. 8	2 cases.	
Bombay, India	Jan. 16-29		837 deaths.
Calcutta, India	Jan. 12-26		89 deaths.
Madras, India	Jan. 19-26		1 death.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Fourteen Days ending February 28, 1901:

BERRY, T. D., Assistant Surgeon. Relieved from duty at Havana, and directed to proceed to Cienfuegos, Cuba, relieving Assistant Surgeon F. E. TROTTER.

HARRIS, B. Y., Acting Assistant Surgeon. Granted leave of absence for ten days.

MARSH, W. H., Acting Assistant Surgeon. Granted leave of absence for four days from February 27th.

NYDEGGER, J. A., Passed Assistant Surgeon. Upon the expiration of his present leave of absence, he will report at Washington for orders to proceed to Cape Charles Quarantine as inspector.

PECKHAM, C. T. Surgeon. Granted leave of absence for twenty days, on account of sickness, from February 17th.

PURVIANCE, GEORGE, Surgeon. Granted leave of absence for one day.

TROTTER, F. E., Assistant Surgeon. Upon being relieved by Assistant Surgeon T. D. BERRY, he will proceed to Havana, Cuba, and report to the chief quarantine officer for duty.

WICKES, H. W., Passed Assistant Surgeon. Granted leave of absence for thirty days from March 11th.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from February 16 to March 2, 1901:

ASHFORD, BAILEY K., First Lieutenant and Assistant Surgeon, will proceed from Fort Slocum, N. Y., to the Presidio of San Francisco with recruits, and return to his proper station.

BUSHNELL, GEORGE E., Major and Surgeon. The sick leave granted him is extended two months.

EDIE, GUY L., Major and Surgeon, is ordered to temporary duty for making the medical examination of officers and enlisted men belonging to volunteer regiments, *vice* ROBERT J. GIBSON, Major and Surgeon, relieved.

HELLER, JOSEPH M., Major and Surgeon, will proceed to Fort Myer, Virginia, for duty with the squadron of the Fifth Cavalry, now under orders to proceed to the Philippine Islands.

HOWARD, DEANE C., Captain and Assistant Surgeon, is granted leave of absence for two months, to take effect upon his being relieved from duty at Fort Hancock, N. J., by a medical officer of the Army.

POLHEMUS, ADRIAN S., Major and Surgeon, is detailed as a member of the board of officers to meet at Fort Leavenworth, Kansas, *vice* ROBERT N. WINN, First Lieutenant and Assistant Surgeon.

REYNOLDS, FREDERICK P., Major and Surgeon, will proceed to Washington Barracks, D. C., for duty.

STARK, ALEXANDER N., Major and Surgeon, will proceed to Fort McHenry, Maryland, for duty, relieving GEORGE J. NEWGARDEN, Captain and Assistant Surgeon.

WILSON, ROY A., Acting Assistant Surgeon, will proceed to Fort Ethan Allen, Vermont, for duty with the squadron of the Fifth Cavalry.

Change of Address.—Dr. Russell Pemberton, from Richmond, Virginia, to No. 200 West Eighty-eighth Street, New York.

Osteopathy in Wisconsin.—A bill licensing osteopaths has passed the Wisconsin senate, but has been held up in the public health committee of the house assembly.

"Botanical, Magnetic and Hydropathic Physicians" sought to obtain recognition and the license to practise under a bill introduced in the Nebraska legislature, but the measure has been defeated.

In Memory of Dr. O'Reilly.—A memorial meeting in honor of the late Dr. Thomas O'Reilly was held by the St. Louis Medical Society on February 28th, a series of engrossed resolutions having been adopted for presentation to his family.

Osteopathy before the Minnesota Legislature.—Senator Horton's bill providing for a State Board of Osteopathic Examiners in Minnesota was defeated on a tie vote, the chairman voting adversely, on February 27th. On a subsequent motion the bill was allowed to retain its place on the general calendar.

A Physician Ennobled.—The Grand Cross of the Order of St. Nicholas, with the title of Court Counsellor, has been bestowed upon Dr. Zambaco Pasha, of Constantinople, by the Czar of Russia, who has also ennobled

him. He is already a foreign associate of the academies of medicine of Paris and of St. Petersburg.

Philadelphia Physicians Robbed.—During the past week a thief has been visiting physicians in Philadelphia, and while their attention was directed to other callers he would pick up anything found lying loose. Dr. Moslander, of Ninth and Cooper streets, is minus a gold watch and two gold rings. Dr. Emma Richardson had the same caller, and after he had gone a case of surgical instruments was missing.

Impersonation at Medical Examinations in Ireland.—A case was recently tried in Dublin in which the defendant was proved to have in two cases impersonated candidates desiring to qualify as medical students. The defendant and another student appeared for examination at the same time and each signed the other's name to his paper. For this service the defendant received in one instance £2 and in the other £5.

Memorial to Dr. Samuel C. Busey.—Arrangements are being made by a committee representing the various scientific societies in Washington, D. C., of which the late Dr. Samuel C. Busey was a member, to hold a meeting in his memory. The societies that will participate are the Washington Academy of Sciences, the Medical Society, the Columbian Historical Society, the Anthropological Society and the Philosophical Society. The date selected is the 8th day of April, the anniversary of the graduation of Dr. Busey in medicine fifty-three years ago.

Li Hung Chang's Surgeon Returns to China.—Dr. Robert Coltman, Jr., former surgeon to Li Hung Chang and professor in the Imperial University at Peking, passed through San Francisco recently on his way back to China from Chicago, where he has been spending a much-needed vacation. He has a claim against the Chinese Government for $35,000. Three houses that were his property were leveled to the ground by the Boxers, and everything, with the exception of the clothes on his back, was confiscated by the rioters.

The Bell Bill Amended.—At a conference held in New York city on March 2d, it was agreed to so amend the Bell bill now before the New York State legislature that the bill will only interdict the practice of osteopathy, Christian Science, etc., where it is done for pay. Mr. Bell says of the amended measure: "The bill now meets all the objections which have been made to it by the Christian Scientists and Spiritualists. They have at all the hearings on the measure argued that their religious liberty was unconstitutionally hampered by its provisions. According to the bill as it now stands, these people may minister to the sick after the pattern of Him whom they call the 'master healer,' but will not be permitted to use their religion for commercial purposes, to pose as 'latterday prophets,' while at the same time charging fees for their spiritual ministrations."

Advantage Taken of New York's Free Treatment for Hydrophobic Patients.—President Michael C. Murphy, of the New York City board of health, is trying to stop the treatment at New York's expense of persons from out of town suffering from rabies. Following the discovery that a case of small-pox which originated in Mount Vernon had been sent here to be cared for, it has been learned that many persons thought to be suffering from hydrophobia have come for free treatment at the fine laboratory maintained by New York. This practice has resulted from doctors in other places telling patients that by pleading poverty they could obtain free treatment. At considerable expense, the board of health installed the Pasteur treatment for rabies to provide treatment for those poor residents of New York who might be unable to pay for attention at private institutions. Then the rule was that patients from outside of the city should pay a fee sufficient to cover the outlay in their cases. This rule has gradually been broken down.

A Prize for the Best Essay on the Dangers of Quackery.—The Colorado State Medical Society offers for the best essay on the dangers from quackery a prize of twenty-five dollars. The competition is open to all, but young physicians are especially requested to compete. Every essay must bear a motto, be typewritten, submitted before May 15, 1901, and be accompanied by an envelope bearing the same motto as the manuscript, with name and address of the author. The society reserves the right to claim the prize essay for publication, and others will be returned on application. All manuscripts should be addressed to the Literature Committee, Room 315, McPhee Building, Denver, Col.

[No limits appear to be placed to the length of the essay. Is this an oversight?]

Confederate Medical Officers.—The annual meeting of the Association of Medical Officers of the Army and Navy of the Confederacy will be held at Memphis, Tenn., simultaneously with the annual reunion of the United Confederate Veterans, on May 28th, 29th, and 30th. All surgeons, assistant surgeons, acting assistant surgeons, or contract physicians and hospital stewards, in the army and navy of the Confederate States, and all regular physicians who served honorably in any capacity in the Confederate States army and navy, and all regular physicians who are sons of confederate veterans, are eligible to membership, and are invited to attend and contribute reports of important cases coming under their observation, and any reminiscences worthy of preservation connected with their service in the army or navy of the confederacy. Applications for membership should be made to Dr. A. L. Elcan, Southern Express Building, Memphis, Tenn. A special rate of one cent per mile has been made for the occasion by the Southern railroads.

The Medical Society of City Hospital Alumni, St. Louis.—At the last regular meeting, on Thursday evening, the 7th inst., the following papers were read: Types of Migraine, by Dr. Frank R. Frye; Observations and Remarks on the Removal of the Gasserian Ganglion in the Cadaver, by Dr. Robert F. Amyx; and A New Nonsurgical Treatment for Pelvic Inflammatory Exudates, by Dr. Hugo Ehrenfest.

The Medical Society of the Missouri Valley.—The semi-annual meeting of the Medical Society of the Missouri Valley will be held in Omaha on March 21st. This organization is composed of the physicians of the States of Missouri, Kansas, Nebraska, Iowa, and the Dakotas, and was founded in Council Bluffs, Iowa, more than thirteen years ago. Among the physicians who will read papers at the meeting in Omaha are: Dr. Jacob Geiger, Dr. O. B. Campbell, Dr. Daniel Morton, Dr. C. H. Wallace, Dr. M. F. Weymann, and Dr. S. E. Cloud. The

officers of the society are: Dr. V. L. Treynor, president, Council Bluffs; Dr. T. B. Lacey, treasurer, Council Bluffs; Dr. Charles Wood Fassett, secretary, St. Joseph.

The W. W. Keen Surgical Society, of Jefferson Medical College, Philadelphia, held its annual banquet recently in that city. In addition to the forty-eight members of the society, there were present as guests a number of physicians. Albert B. Craig was the toastmaster of the evening. Dr. Keen responded to the toast, "The W. W. Keen Surgical Society"; Professor J. C. Wilson spoke on The Borderland between Medicine and Surgery; Professor E. P. Davis on The Great Tripod; Professor Hobart A. Hare on Students Always, and Professor W. M. L. Coplin on The Student Abroad. Among the physicians present were Dr. John B. Deaver, Dr. F. X. Dercum, Dr. H. A. Wilson, Dr. Young, of Johns Hopkins University; Dr. John H. Brinton, Dr. Wilmer Krusen, Dr. Thomas G. Ashton, Dr. M. B. Tinker, Dr. George Spencer, and Dr. J. H. Gibbon.

The New York Academy of Medicine.—At the next meeting of the Section in Surgery, on Monday evening, the 11th inst., Dr. Frederick Whiting will read a paper entitled The Indications for the Ligation of the Jugular Vein in Sinus Thrombosis.

At the next meeting of the Section in Otology, on Wednesday evening, the 13th inst., the following papers will be read: Tinnitus Aurium: Its Causes and Treatment, by Dr. Thomas J. Harris; and Tympanic Vertigo Due to Obstruction in the Eustachian Tube, by Dr. William P. Brandegee. Cases will be presented and specimens and new instruments will be exhibited.

At the next meeting of the Section in Pædiatrics, on Thursday evening, the 14th inst., the following papers will be read: Interesting Experiences in an Epidemic of Typhoid Fever, Fœtal and Infantile Typhoid, Scarlatina Complicating Typhoid and *vice versa,* by Dr. J. Finley Bell, of East Hampton, N. Y.; The Pathology of Typhoid Fever, by Dr. Martha Wollstein; and The Value of the Widal Reaction, by Dr. John Lovett Morse, of Boston. Dr. A. Bassler will present an interesting case of congenital heart affection.

At the next meeting of the Section in Orthopædic Surgery, on Friday evening, the 15th inst., patients and cases will be presented as follows: Two patients illustrating the mechanical treatment of congenital clubfoot and a case of funnel chest, by Dr. A. B. Judson; a case of spondylolysthesis, by Dr. Henry L. Taylor; a case of coxa vara, by Dr. W. R. Townsend; a baby with fracture of the femur and congenital dislocation of the hip, and a case of congenital dislocation of the patella, by Dr. George R. Elliott. Dr. S. A. Twinch will exhibit a modified plaster-of-Paris jacket for the treatment of cervical caries, and specimens, other apparatus, and photographs will be exhibited.

The Medical Society of the County of New York and the Commission in Lunacy.—The following preamble and resolutions, after due consideration by the *Comitia Minora,* were recommended to the society, and by it adopted at a stated meeting, held on February 25th:

Whereas, Bills are now pending in the legislature (Senate bill No. 255, Assembly No. 396) relating to the appointment and qualifications of the Commission in Lunacy, and repealing the existing provision of law which requires the president of the commission to be a physician who has had "five years' actual experience in the care and treatment of the insane, and who has had experience in the management of institutions for the insane," therefore

Resolved, That, in the opinion of the Medical Society of the County of New York, the qualifications now required of the president of the State Commission in Lunacy are highly important, and no law should be enacted which would make possible the appointment, as president of this commission, of any person who has not had at least five years' experience in the treatment of insanity, and also some practical experience in connection with the management of institutions for the insane. In view of the fact that on the Commission of Lunacy there is only one medical member, which commission has authority to discharge any patient who in its opinion is improperly detained in any public or private institution for the insane, and which has also in large measure the control of the erection of buildings for the State hospitals for the insane and also of the administration of such hospitals and the general direction of the treatment therein, it is extremely important that the one medical member of the commission should be a thoroughly qualified and experienced expert in the treatment of insanity; and

Resolved, That a copy of these resolutions be sent to each member of the legislature and to the press.

Foreign University News.—Dr. K. Brandenburg and Dr. Joh. Burghart have been appointed to the post of *privat-docent* at Berlin.——Professor A. Jentzer has been nominated as successor to Professor Vaucher as director of obstetrical and gynæcological clinic at Geneva.——Dr. Ad. Jarisch, extraordinary professor of dermatology and syphilis at Graz, has been promoted to the regular professorship.——Dr. Adam Solowij has been appointed *privat-docent* in gynæcology and obstetrics at Lemberg.——Dr. E. Heuss has been made *privat-docent* in diseases of the skin at Zurich.

Foreign Obituary Notes.—Max Josef von Pettenkofer, M. D., professor of hygiene in the University of Munich, in a fit of temporary depression, shot himself on February 10th, at the age of eighty-three. Professor Pettenkofer, on leaving school, engaged in the study of pharmacy, which he left for the stage, but after a brief experience as an actor he took up the study of medicine, taking his doctor's degree at Munich in 1843. He was appointed extraordinary professor of pathological chemistry at Munich in 1847 and six years later became ordinary professor. In 1866 he assumed the chair of hygiene, which he occupied up to the time of his death. He was the pioneer of hygiene in Germany and has exerted a powerful influence in the advancement of sanitary science throughout the world. He received many evidences of the consideration in which he was held by his countrymen, the most marked being the Prussian *Ordre pour la Mérite,* which confers hereditary nobility upon its recipient.——Dr. Heinrich Schapero, a professor in the royal clinical institute of the royal princess Helene Pawlona, at St. Petersburg, died on January 22d at the age of forty-eight.——Dr. Ritter von Hochberger, of Carlsbad, died recently at the age of ninety-two. He was able only two years ago to take an active part in a medical congress.——Dr. Johann Natterer, a Vienna medical practitioner, whose scientific work in the domain of experimental physics—*e. g.*, the liquefaction of gases—was of a quite uncommon order for a man engaged in active medical practice, died recently at the age of eighty.——Dr. Victor Pashutin,

professor of pathology in the St. Petersburg Military Medical Academy, is dead at the age of fifty-five. His researches on the physiology of the nervous system and on medical chemistry, together with his text-book on general pathology, marked him as a worthy representative of Russian medical science.

Accused Hospital Nurse Acquitted.—Jesse R. Davis, the first of the three Bellevue nurses accused of having caused the death of Louis R. Hilliard, inmate of the insane pavilion, on December 12th, has been acquitted, and it is not believed that the others will be tried.

The Fitch Hospital Closed.—At midnight on February 28th the Fitch Accident Hospital, of Buffalo, N. Y., closed its doors and went out of existence. This course was decided upon because the Charity Organization Society, which managed the hospital, found the institution too expensive. The hospital was one of the oldest accident hospitals in Buffalo.

Hospital Staff Changes.—Dr. Benjamin H. Cheney, chairman of the board of physicians and surgeons of Grace Hospital, New Haven, Conn., has resigned, together with Mrs. B. H. Cheney, chairman of the woman's board of the same institution. They are the parents of Dr. Arthur S. Cheney, head of the surgical staff in Grace Hospital, who was summarily dismissed on the charge of taking fees from a hospital patient.——Mrs. Mary V. Kimmell has resigned as superintendent of the Atlantic City (N. J.) Hospital. She has filled the position since November, 1898, and her resignation was unexpected.——Dr. Pannacci, a Roosevelt Hospital surgeon, who had refused to enter a building after a fire to attend to an injured fireman, has resigned. Ill health was given as the cause, and the surgeon's friends declare that his refusal was also based on that ground; that being subject to rheumatism, he feared to enter the water-soaked building. The dismissal of the surgeon was ordered by the hospital governors just before he resigned.

Hospital Buildings and Endowments.—The Charity Hospital of New Orleans recently received $50,000 from a person who requested that his name be withheld from the public. The money is to be used for the erection of a home for the nurses of the institution.——Complete specifications and drawings of the new buildings to be erected for Mount Sinai Hospital in New York have just been filed. The buildings will cost, according to estimate, $1,600,000.——F. Augustus Schermerhorn, of Lenox and New York, has presented to the Pittsfield (Mass.) House of Mercy Hospital a valuable parcel of land.——The board of directors for the Illinois Central Hospital, at Paducah, Ky., have closed a contract for a $20,000 addition to be made to that institution.——The Boston Board of Aldermen has indorsed the bill before the Massachusetts legislature granting the sum of $10,000 to the Carney Hospital.——Next summer Aberdeen, Neb., will have a handsome new brick and stone hospital, to be built by the managers of St. Luke's.——The Board of Estimate and Apportionment has been asked to appropriate the sum of $10,000 to build a pavilion for the insane in connection with the Kings County Hospital in Flatbush, L. I. There are but two small wards in which to receive the insane, and it is necessary to have more space both for the male and female patients.——Two gifts have been made to Wesley Hospital. of Chicago, recently, one of $5,000 and the other of $1,000. The names of the donors will be announced when the dedicatory exercises of the new buildings of Wesley are held in May.——A plot of land 99 by 100 feet, on Central Park West, has just been purchased by the Red Cross Society of New York city, and a new hospital and a training school for nurses will soon be erected there.——The new annex to the German Hospital and Dispensary on Seventy-seventh Street and Lexington Avenue, New York city, is nearing completion and will be ready for patients in June.——The wards of Washington Hospital, Washington, D. C., are very much overcrowded, and the visiting physician has asked permission of the district commissioners to refuse to accept more patients.——The Hon. Charles A. Schieren, of Brooklyn, has started a subscription for a hospital at Bristol, Va. This building has long been contemplated by the prominent men of the city, and at last is about to be realized.——The board of health of Ottawa, Ont., has decided to call for tenders for a contagious disease hospital. Plans have been submitted and a suitable site will be selected.

Births, Marriages, and Deaths.

Born.

APPLE.—In Philadelphia, on Saturday, February 23d, to Dr. W. Edson Apple, United States Army, and Mrs. Apple, a son.

STONE.—In Matanzas, Cuba, on Friday, February 22d, to Dr. John Hamilton Stone, United States Army, and Mrs. Stone, a daughter.

Married.

BALL—CLAGUE.—In St. Louis, on Tuesday, February 19th, Dr. Otto Fisher Ball and Miss Leonora Montgomery Clague.

BORLAND—MANLEY.—In St. Louis, on Monday, February 18th, Dr. W. A. Borland, of Nashville, Arkansas, and Miss Mabel Manley.

GRIFFITH—POWELL.—In Washington, on Thursday, February 21st, Dr. Wilmer E. Griffith and Miss Harriet Aldine Powell.

HART—FIFIELD.—In San Francisco, on Tuesday, February 19th, Dr. Charles Edwin Hart and Miss Louise Fifield.

HETRICK—CLAYTON.—In New York, on Saturday, February 16th, Dr. Llewellyn Hetrick and Miss Laura E. Clayton.

KISTLER—NEUWEILER.—In Allentown, Pennsylvania, on Monday, February 25th, Dr. Eugene M. Kistler and Miss Caroline Neuweiler.

SKAIFE—BRAGG.—In San Rafael, California, on Thursday, February 21st, Dr. Francis W. Skaife, of San Francisco, and Miss Ada May Bragg.

WHERRITT—BARNES.—In Kansas City, on Tuesday, February 26th, Dr. Hugh S. Wherritt, of Joplin, Missouri, and Miss Edna L. Barnes.

Died.

AIKEN.—In Savannah, on Wednesday, February 27th, Dr. William F. Aiken, in the thirty-seventh year of his age.

AMET.—In Waukegan, Illinois, on Sunday, February 24th, Dr. Charles P. Amet, in the eighty-eighth year of his age.

BEST.—In Millersburg, Kentucky, on Sunday, February 17th, Dr. I. R. Best, in the fifty-ninth year of his age.

BIXBY.—In Boston, on Wednesday, February 27th, Dr. George Holmes Bixby, in the sixty-fourth year of his age.

CHAPMAN.—In Medina, N. Y., on Wednesday, February 27th, Dr. James Chapman, in the seventy-seventh year of his age.

DITTENHOEFER.—In San Francisco, on Friday, February 22d, Dr. Matilda Dittenhoefer, in the fortieth year of her age.

FESSENDEN.—In Portland, Maine, on Thursday, February 28th, Dr. Edward A. Fessenden, in the fifty-fifth year of his age.

HANDEL.—In Onawa, Iowa, on Wednesday, February 20th, Dr. Daniel Handel.

HYDE.—In Hamilton, Bermuda, on Sunday, February 17th, Dr. Seneca T. Hyde, of Neponset, Massachusetts, in the sixty-first year of his age.

King.—In Flat Rock, North Carolina, on Monday, February 25th, Dr. Mitchell C. King, in the eighty-fifth year of his age.

Marten.—In Toronto, Canada, on Monday, February 25th, Dr. H. Oake Marten.

Morrow.—In New York, on Sunday, March 3d, Lucy Slaughter Morrow, daughter of Dr. Prince A. Morrow, in the nineteenth year of her age.

Seiple.—In Lehighton, Pennsylvania, on Friday, March 1st, Dr. W. G. Seiple, in the fifty-fifth year of his age.

Smith.—In Winchester, Virginia, on Tuesday, February 26th, Dr. S. John Smith, in the seventy-third year of his age.

Talmage.—In Waterloo, N. Y., on Saturday, February 23d, Dr. Alonzo S. Talmage, in the sixty-third year of his age.

Obituaries.

RICHARD J. DUNGLISON, M. D.,

PHILADELPHIA.

Dr. Richard James Dunglison died at his home in Philadelphia from dropsy and heart failure following pneumonia, on March 5th, at the age of sixty-seven. Dr. Dunglison was the son of the late Dr. Robley Dunglison, professor of institutes of medicine and medical jurisprudence in the Jefferson Medical College, and the author of *Dunglison's Medical Dictionary.* Dr. Richard J. Dunglison was educated at the University of Pennsylvania, receiving the degree of M. A. in 1855, and graduated from the Jefferson Medical College in 1856. He practised medicine for a few years in Philadelphia, but relinquished his practice for literary work, to which he devoted his life, with the exception of the period between 1862 and 1865, when he was in the Federal service as acting assistant surgeon on duty in the army hospitals in Philadelphia. His principal contributions to medical literature are *Dunglison's History of Medicine, The Practitioner's Reference Book, A Hand-book of Diagnosis, Therapeutics, and Dietetics, A New School Physiology and Hygiene,* and *An Elementary Physiology and Hygiene, The Present Treatment of Disease.* He also edited the later editions of *Dunglison's Medical Dictionary.* He translated from the French Guersant's *Surgical Diseases of Children.* He was editor of the *College and Clinical Record* from 1880 to 1895, and one of the original editors of the *Philadelphia Medical Times.* He was a frequent contributor to periodical medical literature prior to 1876, but has not written much since that time. He has at various times acted as treasurer of the Philadelphia Medical Society, corresponding secretary of the Medical Society of the State of Pennsylvania, assistant secretary and also treasurer of the American Medical Association, occupying the latter position for seventeen years; secretary-treasurer and vice-president of the American Academy of Medicine, assistant secretary of the International Medical Congress of 1876, corresponding secretary of the Centennial Medical Commission, secretary of the executive committee of the Ninth International Medical Congress, 1887, and president of the Musical Fund Society of Philadelphia for twenty-five years. For twelve years he was attending physician to the Pennsylvania Institution for the Instruction of the Blind, and to the Burd Orphan Asylum. He was also corresponding secretary of the Alumni Association of Jefferson Medical College from the date of its organization, and for many years honorary local secretary of the New Sydenham Society, of London.

Pith of Current Literature.

Medical News, March 2, 1901.

Veratrum Viride; its Value in some Conditions of Toxæmia. By Dr. A. B. Isham.—The author asserts that the physicians of the past fifteen years are practically unacquainted with the virtues of this potent medicinal agent. The most striking of all the issues proceeding from a sufficient dose of veratrum viride is the profuse skin transpiration which acts promptly in lowering the temperature when it is above the normal. The drug induces in the heart muscle a retraction or contraction, which is a conservative process in that it squeezes out from the fibrils all waste and noxious products, brings the organ down from a distended overacting state to one working in perfect order and to the best advantage. In this way it protects the heart muscles from the pathological changes that so aften accompany toxæmias. The author also points out that a reduction of the body heat to the normal, or approximately so, greatly retards the activity and multiplication of pathogenic organisms. At the same time phagocytosis continues energetically—a process of great consequence in overcoming toxæmia. Veratrum viride proves a most excellent remedy in the toxæmia of acute alcoholism. The action of the drug in the toxæmia accompanying peritonitis is illustrated in six cases which accompany the text.

The Treatment of Delirium Tremens by the Intravenous Infusion of Saline Solution. By Dr. James P. Warbasse.—In favor of this procedure the author submits that it increases the amount of the circulating medium in which the toxic materials are dissolved, thereby diluting the poison and bathing the nerve centres with a more attenuated solution of the same. The amount of the circulating fluid is increased above the normal, so that the excretion of fluids through all the fluid excreting channels is increased, thereby carrying off in solution much of the contained toxines. The action of the heart is improved by the filling of the relaxed vessels. These suffice to restore the physiological equilibrium and turn the balance in the favor of recovery.

Yohimbin and its Salts; a New Aphrodisiac. By Dr. Roberts Bartholow.—The experiments made on animals indicate that this drug is a central paralyzer of motility, but not of sensibility. Mendel, of Berlin, found it useful in sexual neurasthenia; but the author's results, so far, are rather negative in this respect. The dose favored by the Berlin observers ranges from one twentieth to one tenth of a grain. The author believes that its use in sexual neurasthenia, in depression of the sexual organs by age and premature debility, seems warranted by the mode of action disclosed in the experiments on animals. He also expresses the opinion that yohimbin may prove of use in albuminuria, and the fact that it has a marked effect upon the renal and genitourinary systems indicates that it may exert an action of substitution in diseases of these organs.

Belladonna vs. Scopolia. By Dr. Reynold Webb Wilcox.

Immunization for Typhoid Fever: A Review. By Dr. H. W. McLaughlin.—The original work of Brieger, Kitasato, and Wasserman, in this connection, is referred to, and the author then comments on the recent work of Dr. A. E. Wright, of the English army. His vaccine

consists of a pure cultivation of typhoid bacilli in broth or agar-agar, and is not a serum or a lymph. The strength of the vaccine after sterilization depends upon the number and the virulence of the bacilli it contains, so that the dose varies between three tenths of a cubic centimetre and one cubic centimetre. The latter is the full dose for a man, and represents an amount which would prove fatal to a three-hundred-and-fifty gramme guinea-pig. The immunizing effect of the inoculation is prolonged for at least eighteen months. Although there is much to be hoped for in this procedure, fuller statistics are absolutely necessary, and especially the following up of the inoculated cases.

Malarial Fever, with Special Reference to the Value of Blood Examinations; Report of Cases. By Dr. Herbert Old.—This article concerns itself with the practical side of the question, the author asserting that the microscopical technique involved can be readily mastered by any one, and reporting a few cases in which the diagnosis was made only through the microscopical examination.

Is Rubeola Infection Antagonistic to Pertussis Infection? By Dr. William Byrd Young.

Complete Transposition of the Viscera. By Dr. George W. Webster.

Medical Record, March 2, 1901.

The Treatment of Rheumatic and Allied Diseases of Joints Complicated by Deformity. By Dr. Virgil P. Gibney.—The author states that it is difficult to fix upon any one form of treatment that has yielded the best result, but he commends the forcible breaking up of adhesions, when inflammatory conditions have subsided, a frequent recurrence to these operations, and the discriminate use of plaster of Paris. He approves emphatically of absolute immobilization to promote absorption of chronic inflammatory products. He also commends the protection of joints with a limited range of motion by apparatus within the bounds of this motion.

An Improved Method of Examining the Female Bladder, Admitting Intravesical Operations and Treatment of the Ureters. By Dr. William R. Pryor.—The author, after detailing the advantages and disadvantages of the knee-chest posture, contrasts it with his own procedure, which is as follows: The patient is put on the back in the lithotomy position, and the urethra is dilated with straight sounds to a 30 or 36 French. The obturator speculum is then introduced and the urine evacuated. In women who have flaccid abdominal walls and who have marked prolapse of the anterior vaginal wall, it is advised to pass the catheter immediately before they are placed on the table. The bladder having been emptied, the table is lowered to the requisite angle, usually about forty-five degrees. The uterus then sinks away from the pubes and drags with it that portion of the bladder which is covered by peritonæum. This, being attached also to the pubes, is straightened out. At the same time the cervix sinks away from the vulva and the base of the bladder is also straightened. The bladder assumes the shape of an open equilateral triangle with rounded corners. The advantage of this posture over the knee-chest is due chiefly to the straight lines which the vaginal segment (in which the ureteral orifices are found) and the pubic segment assume.

Some Facts Regarding Ureine. By A. F. Chase, Ph. S., A. B., and William J. Gies, Ph. D.—The authors assert, as the result of very extensive experiments, that ureine is not a chemical individual. It is a mixture containing several of the organic substances and a considerable proportion of inorganic salts ordinarily found in normal urine. Further, its toxicity can be referred to some of these normal urinary constituents. They take issue with Dr. Moor as to ureine being the cause of uræmia, and they refuse to accept any of his deductions regarding the biological significance of this urinary complex.

A Method of Reducing Dislocations of the Thumb. By Dr. John F. Erdmann.—This consists in applying force in such a manner that the index fingers of the operator pull the metacarpal bone in a condition of extension or abduction, while the thumbs raise and push the phalanges into a position of flexion. The author has used this method with gratifying results since 1887. A case is cited.

Tuberculosis in Prisons and Reformatories. By Dr. S. A. Knopf.

The Pupil after Death. By Dr. J. E. Courtney.—To the rule that the pupils are quite widely dilated and about equal after death, the author notes the following exceptions: (1) In persons dying of large cerebral hæmorrhage, the pupils were large on the side opposite the lesion and remained perceptibly so at autopsy ten or twelve hours after death; (2) in cases of death from paretic dementia with a general meningocerebritis and adhesions of the pia to the convolutions, the pin-point pupils seen in life were unchanged at autopsy; (3) in the condition of pachymeningitis hæmorrhagica the pupil contracted on the side of the hæmorrhage has been repeatedly found so at autopsies.

Aneurysm of the Pulmonary Artery, with Report of a Case. By Dr. B. C. Loveland.

Blunders in Caring for Parts of the Body Intended for Chemical Examination. By Edward Bartow, Ph. D.

Ischio-rectal Abscess Complicated with Gangrene and Priapism. By Dr. H. H. Haralson.

Boston Medical and Surgical Journal, February 28, 1901.

The Use and Abuse of Spectacles. By Dr. Hasket Derby.—It is the author's opinion that in hypermetropia we see glasses worn too much, in myopia probably too little. He inveighs against the highly complicated and costly lens, and he asserts that where vision in each eye is normal, whether without glasses or by the aid of the ordinary sphericals, there is little to be gained by going into the question of the existence of slight degrees of astigmatism.

Avulsion of the Finger, with a Case in which this Accident Occurred to an Infant Twenty Months Old. By Dr. George H. Monks.

Two Cases of Ligature of the Internal Jugular Vein for Infective Thrombosis of the Sigmoid Sinus Due to Purulent Otitis Media; One Recovery and One Death. By Dr. Frederick L. Jack.—The author advises that in acute cases, before ligating the vein, the purulent material in the sinus should be removed until a healthy clot is reached. After this operation, if rigors and elevation of temperature recur immediately, ligate the jugular vein and then remove the entire thrombus above and below until a free flow of blood takes place. If at the original operation no healthy clot is found, ligate immediately. In chronic cases no time should be lost in ligating the vein and completely removing the thrombus.

Case of Brain Tumor with Astereognosis. By Dr. G. L. Walton.

Operation for the Removal of a Foreign Body Impacted in the Œsophagus for more than Two Weeks. By Dr. H. H. A. Beach.

Backward Dislocation of the Ulna; Fracture of the External Condyle of the Humerus; Fracture of the Radius and Ulna Near the Wrist Joint. By Dr. H. H. A. Beach.

Retention of Urine from Obstruction by the Third Lobe of the Prostate Gland. By Dr. H. H. A. Beach.

A Series of Cases Illustrative of the Clinical Importance of Bacteriological Examinations. By Dr. R. H. Fitz.—Of these cases, three were of inflammation of the respiratory apparatus, and the examination showed, in one a pneumococcous pneumonia, in another a pneumonia from Friedländer's bacillus, while in the third the influenza bacillus was the organism concerned.

Idiopathic Dilatation of Colon; Chronic Rheumatic Arthritis; Chronic Mitral Endocarditis; Hemiplegia; Embedded Needle. By Dr. R. H. Fitz.

Operation for Gunshot Wound. By Dr. C. A. Porter.—An illustration of the possibilities of accuracy in diagnosis by means of the x-ray.

Philadelphia Medical Journal, March 2, 1901.

Three Dangerous Operations: Repair of Lacerated Cervix, Curettement, and Rapid Dilatation of the Cervix. By Dr. John B. Deaver.—The author points out the various dangers and possible contingencies that may arise in the performance of these three operations, and in a general way shows the methods to overcome them and to carry the procedures to a successful issue. The vulva should be shaved and prepared by soap and water, permanganate of potassium and oxalic acid, bichloride of mercury, and carbolic acid solution, and protected by a pad of sterile gauze; the vagina, by the use of soap and water, bichloride, and carbolic solution and iodoform gauze packing. During the operation every rule of aseptic detail must be adhered to; sterile instruments and gauze, linen, blankets, etc., and hands protected by sterile rubber gloves. The author advises, however, that these three operations should be confined to the realm of surgery, and not be classed as work which is the duty and prerogative of the general practitioner of medicine.

On the Desirability of Combined Operations in Pelvic and Abdominal Surgery. By Dr. W. P. Manton.—In the opinion of the author, in every instance, whatever is necessary should be done, whether the conditions lie within the pelvis, the abdomen, or both; and the limit of execution should be gauged only by the general condition of the patient, her behavior under the anæsthetic, and the inherent dangers of the operations to be performed. These, together with experience, skilful operating, strict asepticism, and watchful care of the patient, are the *sine qua non* of success.

Urinary Hyperacidity. A Consideration of Cases with Symptoms Suggestive of Cystitis, but with no Infection, Due to this Cause. By Dr. Thomas R. Brown.—The author dwells upon the absolute necessity of accurately diagnosticating this condition. If the condition is correctly diagnosticated, proper medical treatment can bring about a complete cure in the majority of cases without any local treatment whatsoever of the bladder; if, on the other hand, a wrong diagnosis is made, and the condition is regarded as a cystitis, and treated as such, often a real infection of the bladder will be set up by the long-continued use of irrigations and local applications that are so usually employed. So far as the author is aware, the determination of urinary hyperacidity as an ætiologic factor has not been described before.

Multiple Brain Abscess Following Empyema. By Dr. Thomas A. Claytor.—This case is interesting because of its rarity. Contrary to Albutt's dictum, the author asserts that these abscesses are more likely to be multiple than single. Surgical intervention is practically useless in the case of multiple abscesses.

The Use of the Aqueous Extract of the Suprarenal Gland in Persistent Epistaxis. By Dr. Lewis S. Somers.—With this use the author's results were very encouraging, and, in any nasal pathological condition characterized by congestion and erosion of the mucous lining, they clearly indicate that the suprarenal gland possesses a still further action than that of vascular constriction, and this is shown by the rapid changes taking place in the physical condition of the parts. The author asserts that it is of great value for its local nutritional effects, and its power of acting as a pure muscle tonic.

The Biochemical Basis of Pathology. By Dr. Henry A. Bunker.—In an interesting paper the author expresses his profound faith in the future of this comparatively new field of research. The possible modifications of metabolism must be infinite, and it is in these modifications and perversions of normal biochemical relations—those of physiological sequence—that the cause of morphological change must be sought; and it is upon the recognition and understanding of the chemistry and molecular physics involved in tissue structure and in tissue maintenance, that the pathology and therapeutics of the future must be based.

Cultivation of the Aspergillus in Urine. By Dr. L. Napoleon Boston.

A New Blood-stain. By Dr. Randle C. Rosenberger.—The stain for which the author claims most satisfactory results is formulated as follows:

Saturated aqueous solution of methylene-blue	50 cubic centimetres
Saturated aqueous solution of phloxin	20 cubic centimetres
Alcohol (95 per cent.)	30 cubic centimetres
Water (distilled)	60 cubic centimetres

This stain is useful for blood cells, and it is a fairly good one for the malarial parasite of any variety.

Journal of the American Medical Association, March 9, 1901.

Nutrition and Stimulation. By Dr. I. N. Love.—The author urges that the profession study calmly, tolerantly, and temperately the problems relating to stimulants of all kinds, but tobacco and alcohol in particular, and that they put themselves in best form for doing the best work along these lines and wielding their greatest influence for good, by themselves being exemplars of temperance, self-restraint, self-denial, and correct living.

The Results of the Surgical Treatment of Inflammation of the Mastoid Process. By Dr. Edward Bradford Dench.—The author particularly emphasizes the advisability of early operation in doubtful cases. Conducted in an aseptic manner, it is absolutely free from

danger. Regarding the practice of closing a portion of the superficial wound with sutures, in order to render the recovery more rapid, his own experience demonstrates that this procedure is scarcely advisable. Recovery is quite as rapid if the entire wound is treated by the open method, and any danger of pus retention is also completely avoided. In two hundred and seventy-three cases operated upon, in not a single instance could death be attributed to the operation. The author believes that it is a warrantable procedure as a diagnostic measure in doubtful cases.

Treatment of Chronic Otorrhœa. By Dr. Frank Allport.—The author, after describing the symptoms, says that a case presenting such a picture, or even a reasonable portion of it, even if absolutely unaccompanied by mastoid or other significant symptoms, would certainly lead most progressive surgeons to unhesitatingly advise either an ossiculectomy or a radical operation. Though this may be inevitable and proper, the author cautions us not to advance too hastily; let us rather err in the direction of conservatism.

Bony Defects and Fistulæ in the External Meatus. By Dr. H. Gradle.

Aphasia with Letter-blindness, without Word-blindness, with Right Hemiplegia and Pulmonary Tuberculosis. By Dr. Guy Hinsdale.

Combined Sclerosis of Lichtheim-Putnam-Dana Type Accompanying Pernicious Anæmia. By Dr. M. H. Brown, Dr. F. W. Langdon, and Dr. D. I. Wolfstein.

Croupous Pneumonia. By Dr. J. M. Allen.—The author summarizes the therapy of pneumonia. He administers a calomel and rhubarb purge at the beginning; afterwards the alimentary canal is to be kept open with castor oil and turpentine. Three hours after the purgative has been taken, the author begins with the sodium salicylate, from ten to fifteen grains. During the exacerbation of the fever Dover's powder is given. Digitalis, trophanthus, and strychnine are given in the middle of the second stage in small doses, increasing as the heart may demand. From the fourth to the sixth day the sodium salicylate is withdrawn and a mixture of tincture of perchloride of iron, potassium iodide, quinine, and nitroglycerin is substituted. The heart tonics and stimulants must be continued in full force. Oxygen inhalations have proved of value. The patient's diet should not be restricted, unless he is jaundiced by acute duodenitis, which is often associated with croupous pneumonia; then the diet should be restricted to milk and eggs.

Irrigation of the Colon as a Therapeutic Measure. By Dr. George J. Lochboehler.—As these irrigations act mechanically, in that the weight of the fluid draws upon the upper portion of the intestines, the author believes that they are of great value to relieve constrictions and incarcerated hernia, to remove fæcal matter, mucus, and epithelial remnants in chronic enteric catarrh and in dysentery; in fact, in all conditions where the system has been depleted or become vitiated by toxic self-infection. In these cases the normal saline solution has been given with the best results.

A Protest against the Use of Proprietary Remedies. By Dr. Daniel R. Brower.—The author expresses the hope that we may turn to a more conservative prescribing, and he protests against the impetuous rushing after new and untried remedies. He advocates the modification of the patent laws, so that the present system of triple patenting of products made for the healing of the people may no longer be possible.

Cultivation of the Æstivo-autumnal Malarial Parasite in the Mosquito—Anopheles Quadrimaculata. By Dr. Albert Woldert.

An Original Chart of the Neuronic Architecture of the Visual Apparatus. By Dr. Louis Stricker.

Address before the New York State Assembly Committee on Public Health, in the Discussion of the Bell Bill ("Christian Science Bill") Prohibiting the Practice of Medicine by Unlicensed Practitioners. By Dr. Robert T. Morris.

Anastomosis of the Ureters with the Intestine. A Historical and Experimental Research. By Dr. Reuben Peterson.

Lancet, February 16, 1901.

An Address on Craniology. By N. C. MacNamara, F. R. C. S.—The Hunterian Oration for 1901.

The Surgery of Pregnancy and Labor Complicated with Tumors. By J. Bland-Sutton, F. R. C. S.—Lecture II. In this article the author deals with the coexistence of fibroids and pregnancy. The dangers attending pregnancy, labor, and the puerperium complicated by uterine fibroids, are illustrated by a series of actual cases. From a broad survey of the subject the author concludes that, while ovarian tumors have given more trouble than fibroids to pregnant and parturient women, yet fibroids have been far more lethal, as they frequently destroy puerperal women from sepsis.

Remarks on Agglutination by Plague Blood. By Dr. E. Klein.—All agglutination experiments must start with a good emulsion of the microbes on which the agglutinating action of blood has to be tested. Such an emulsion is easily obtained in the case of the typhoid bacillus, but with the plague bacillus it is very difficult, as the latter organism, in growing, produces a sticky, interstitial substance which binds the bacilli together into clumps. Further, bouillon cannot be used as a medium, because it has a well-marked agglutinative action on the plague bacilli. The author has found that gelatin surface cultures of plague bacilli are less viscid and sticky than agar and serum cultures, and that a good emulsion is readily obtained by shaking up a particle of the gelatin growth with physiological salt solution. When normal blood was added to such an emulsion in the proportions of 1 in 20 and 1 in 40, no agglutination took place. The addition to such an emulsion of the blood of plague-infected rats in the proportions of 1 in 20 and 1 in 40 produced well-marked agglutination in ten minutes.

Why Are Both Legs of the Same Length? By G. E. Wherry, F. R. C. S.—The practical suggestions in this article are set forth in the belief that, with all the care taken to fix and set at rest the joints and limbs in cases of injury, it is easy to neglect stimulation and encouragement of growth when active treatment is needed. The period of growth in the human subject is so prolonged that a surgeon past middle age may not hope to live to see the results of his advice.

A Case of Subacute Glanders. By Dr. J. Fawcett and W. C. C. Pakes, M. R. C. S.—The authors report a case of subacute glanders of a month's duration which ended fatally, in a man aged forty-five years. Although the patient was very ill from the start, the local manifestations of the disease were slight. They were (1)

subcutaneous swellings, (2) a few small furuncles, (3) a small abscess in the left forearm, and (4) the presence of fluid in the left knee-joint. Pure cultures of the *Bacillus mallei* were obtained from the heart-blood, the spleen, and the fluid from the knee-joint. Had it not been for the bacteriological examination the case would not have been certainly diagnosticated as one of glanders.

Posterior Basic Meningitis. By Dr. H. Thursfield.—The author's article is based upon a series of seventeen cases of this affection, in twelve of which the diagnosis was verified by *post-mortem* examination. Of the remaining five, two recovered, two refused to be examined, and the fifth contracted diphtheria. In nine cases, the meningeal exudation was examined bacteriologically, and in eight an intracellular diplococcus was discovered. This diplococcus lives an average of three weeks, thus differing from Weichselbaum's diplococcus, whose vitality is of very short duration. Ten of the cases occurred in males and seven in females. Four of the patients were over three years old. Vomiting occurred first in nine cases, convulsions in four, and head retraction in three. This last is a cardinal symptom and appears sooner or later in all cases. Strabismus and nystagmus were fairly frequent and early symptoms. In thirteen cases the ophthalmoscope showed definite changes in the fundus. Vomiting and progressive emaciation were present in all cases. The diagnosis is easy in very young children; in older children the disease resembles very closely epidemic cerebro-spinal meningitis.

Primary Sarcoma of the Stomach. By Dr. W. S. Fenwick.—A diagnosis of round-celled sarcoma of the stomach may often be made by attention to the following facts: 1. The disease usually occurs before thirty-five years of age. 2. In many cases there is slight, but continuous, pyrexia accompanied by rapid and profound anæmia. Fever is absent in carcinoma. 3. Simple enlargement of the spleen is by no means infrequent; it is never met with in cancer. 4. The tonsils are apt to enlarge and the follicles upon the sides of the tongue may become swollen or ulcerated. 5. Secondary deposits in the skin occur in a notable proportion of cases. These can be excised and examined microscopically. 6. A large nodular tumor or a greatly enlarged liver is rarely met with. 7. Persistent albuminuria is common. 8. The discovery of pieces of morbid growth in the vomit renders the diagnosis certain.

The spindle-celled and myosarcomata are characterized by their slow growth, the smooth, firm, and movable tumor, the frequent absence of pain, vomiting and anorexia, and the tendency to repeated hæmorrhage. If one may judge from the morbid anatomy of the disease, the surgical treatment of sarcomata of the stomach will prove far more successful than can ever be expected in carcinomata.

Foreign Body in the Abdomen. By E. H. Ellison, M. R. C. S.—The author reports a case in which an artery forceps, accidently left in the abdomen during an operation for hernia eight years previously, gradually worked their way out, point foremost, through the abdominal wall in the neighborhood of the umbilicus.

A Case of Cephalhæmatoma. By H. H. Borland, M. B.

Primary Carcinoma of the Ampulla of Vater, with Report of a Case Presenting some Special Features of Interest. By Dr. H. D. Rolleston.—The author reports a case of this affection occurring in a man aged sixty-six years. Death took place from hæmorrhage into the dilated duct of Wirsung. Among the points of interest were: 1. The sudden onset of acute symptoms followed by death in eighteen hours. 2. The extremely fibrotic condition of the pancreas. 3. The absence of glycosuria or diabetes.

On the Uses of Formalin in Glycerin. By A. C. Jordan, M. B.—The author recommends the use of a forty-per-cent. solution of formic aldehyde in glycerin as an application to the throat, as a mouth-wash, as an application to the skin, and as a urethral injection. The pain produced by using watery solutions of formaldehyde is entirely avoided. Solutions of from one to four per cent. are used. In follicular amygdalitis it is a specific, and it is of great value in tonsillar diphtheria. In aphthous and parasitic stomatitis, a single thorough application often suffices to bring about a cure. Formaldehyde may be thus applied to the skin in all parasitic diseases, especially in ringworm. As a urethral injection, it causes too much pain and swelling to be recommended in all cases.

Maternal Impressions in Lower Animals. By A. Wilson, F. R. S.—The author cites the case of an antelope kid, killed in South Africa, which had an elephantine head and proboscis, while the tail was of the proboscidean, rather than of the antelope type. The author supposes the pregnant ewe to have been frightened by an elephant.

February 23, 1901.

A Quiet Effusion into the Knee-joint Occurring in Women and Young Girls. By W. H. Bennett, F. R. C. S.—The author calls attention to a condition of quiet, passive effusion into the knee-joint occurring in women and young girls, which is always associated with menstrual irregularity or uterine trouble. It rarely occurs in any other joint than the knee, and the joints of the opposite sides are usually involved at the same time but the effusion is, as a rule, much more marked on one side than on the other. There is rarely any pain unless some injury has been received. It occurs either at the time of puberty or at the climacteric. Although the joint may contain considerable fluid, it is never tense except after superadded injury. The common cause of the discovery of the condition is an injury, commonly very slight. Any error in diagnosis can usually be avoided by noticing the character of the swelling, the existence of effusion on both sides (that on the uninjured side being painless and without heat), and the coincidence of marked menstrual or uterine trouble. The primary treatment should be directed to the correction of the faulty uterine functions, with moderate exercise and massage, combined with the healthiest or outdoor lives. Treatment by splints and absolute rest should be vigorously avoided. In the absence of acute symptoms arising from injury, the condition of the knees need lead to no restriction in the exercise of an ordinary person. The author has seen some twenty cases of this affection; in no case did recovery occur while the uterine or catamenial irregularities continued and in every case their correction was followed by prompt improvement in the condition of the knee.

The Surgery of Pregnancy and Labor Complicated with Tumors. By J. Bland-Sutton, F. R. C. S.—This is the third and concluding lecture of the series, and deals with the following subjects: Pregnancy compli

cated by cancer of the neck of the uterus; tumors of the pelvis; misplaced viscera; sequestered and quick extra-uterine fœtuses.

The Diagnosis and Treatment of Abscess in Connection with the Vermiform Appendix. By R. Morison, F. R. C. S.—The conclusions reached by the author are as follows: 1. The early diagnosis of abscess in connection with the vermiform appendix is of great importance. 2. A dangerous abscess may be present without any of the ordinary symptoms or signs of pus formation. 3. The diagnosis is based upon the history of an acute attack of appendicular inflammation and the presence of a definite tender lump. 4. The position of the appendix and the relations of the abscess may be foretold by a careful study of the tumor. 5. The diagnosis of pelvic cases in women is attended by special difficulties. Bimanual examination may be of great service. 6. Spontaneous relief and possible cure may follow the discharge of pus into the adjacent bowel. 7. An abscess, though of appendicular origin, may be remote from the appendix and may be residual. 8. Early operation is the proper treatment, and, with few exceptions, the vermiform appendix should be removed at the time that the abscess is drained. 9. The abdominal opening should be large enough to permit perfect inspection of all manipulation and the abscess should be drained from behind.

Points in the Classification and Diagnosis of some Joint Affections. By Dr. G. A. Bannatyne.—The author classifies the commoner arthritic troubles as follows: 1. Bacterial or toxic arthropathies; (*a*) bacterial —rheumatism, rheumatoid arthritis, gonorrhœal and scarlatinal arthritis (and probably malarial arthritis); and (*b*) toxic—gout and pulmonary osteo-arthropathy. 2. Nerve degenerative arthropathies, such as occur in tabes, ataxic paraplegia, etc. 3. Senile degeneration arthropathies, such as senile arthritis or malum coxæ senilis.

Malarial arthritis may be classed provisionally as bacterial, for the malarial parasite may be regarded in its actions as to all intents and purposes a bacterium.

The author discusses at length the symptoms and diagnostic points of the different varieties of arthritis.

Muscular swellings are most often due to rheumatism, small subcutaneous nodules also to rheumatism, larger ones to rheumatoid arthritis, bursal enlargements to chronic gout, rheumatoid arthritis, or rheumatism, and bony nodes to chronic gout or chronic rheumatoid arthritis.

On Protective Inoculation and Serum-therapy. By Dr. J. L. Bunch.—This article is an excellent summary of the present status of our knowledge as to the nature of immunity, and the various means for its induction. The serum-therapy of typhoid fever, diphtheria, and plague is also discussed.

Persistent Metrorrhagia. By Dr. J. I. Parsons.—In many cases of persistent hæmorrhage from the uterus the author has been able permanently to stop the bleeding by the use of the constant current, and he wishes to advocate this method of treatment in preference to the risk and mutilation involved by hysterectomy. A clay pad is placed on the wall of the abdomen just above the pubes and connected with the negative pole, while the intra-uterine electrode is connected to the positive pole. At the first application only a mild current should be used, not more than fifty milliampères. This is kept on for from ten to fifteen minutes. The patient need not lie up during the treatment, and, except in extreme cases, may come to the doctor for treatment. The applications are made twice a week. An antiseptic vaginal douche should be used every day, morning and evening.

British Medical Journal, February 16, 1901.

Remarks on the Heart-index Interval in Aortic Regurgitation. By Dr. P. M. Chapman.—In cases of aortic regurgitation, where the aortic valves are permanently open and the ventricular cavity and the aorta are practically thrown into one, we should expect the radial pulse-wave to be synchronous with the cardiac systole. Yet Flint, Broadbent, and other observers have noted that the pulse-wave in such cases is frequently delayed—*i. e.,* the heart-index interval is prolonged. The author has succeeded in obtaining a sphygmogram from a case of aortic regurgitation which demonstrates this delay very clearly. He holds that the cardiac contraction is more of the nature of a steady push against a weight, and the resulting wave, not being created by impact, is a slowly propagated wave—that is, one of very much less velocity. Another factor is to be found in the large mass of muscle in a hypertrophied heart, which contracts more slowly, owing to the propagation of nervous impulse through its substance being more slow.

The Effects of Severe Muscular Exertion, Sudden and Prolonged, in Young Adolescents. By Dr. W. Collier.—The two commonest effects of severe muscular exertion are as follows: 1. A great strain is thrown on the air vesicles, leading to physiological emphysema, the physical signs of which are absence of the apex beat either on inspection or on palpation while at rest, absence of all superficial cardiac dulness, and a hyperresonant note on percussion above the clavicles and along the edges of the sternum. 2. A great strain is thrown upon the right side of the heart, on the right ventricle and right auricle, as passive congestion of the lung implies overdistention of the right ventricle.

Further, oft-repeated muscular effort produces hypertrophy of the left ventricle, which in turn is followed by distention of the aorta, producing incompetence of the aortic valves. The author points out how these dangers of severe muscular exertion may with a little care be avoided. He recommends the systematic examination of the hearts of all schoolboys engaged in athletic sports; that young boys should not be allowed to compete in the severer competitions at first; that the effort in every case should be preceded by a period of training and preparation; and that successful school athletes should make their athletic careers short ones. In cases of so-called "intermittent albuminuria," the author advises that all competitions involving great muscular exertion be given up.

Cases of Adult General Paralysis with Congenital Syphilis. By Dr. R. P. Smith.—The author reports two cases of adult general paralysis in which the factor of inherited syphilis outweighed in importance any other of the ordinarily accepted causes of the disease. The father of each of the patients had not only had syphilis, but had died of general paralysis, there being thus a direct inheritance of both diseases. In neither case was there any history of alcoholism or of sexual excess.

Wind Exposure and Phthisis. By Dr. C. A. Davies. —After careful investigations, covering a period of fif-

teen years, the author finds that the results obtained can in no way be considered to support the theory that strong winds are accountable for the peculiar distribution of phthisis in the Isle of Man, whatever may be the case elsewhere. When investigating the effects of wind exposure on phthisis, the sex-mortality should always be given.

Thyreoid Extract as a Remedy, with Illustrative Cases. By Dr. P. B. Smith.—The author reports three cases of various affections, where the administration of thyreoid extract was productive of great benefit. In the first case, one of inoperable carcinoma of the breast with widespread secondary infection, the administration of thyreoid extract brought about an almost complete disappearance of the carcinomatous nodules, and marked general improvement. The patient's condition grew worse again after about eight months, but she is still living, although two and a half years have elapsed since the thyreoid extract was first given. In the second case, one of general erythema of the skin, thyreoid extract brought about a cure where all other remedies had failed. In the third case, one of obesity, the patient's weight was reduced forty-two pounds within a few months by thyreoid extract. The remedy was given in the form of five-grain tablets, one three times a day.

Cerebellar Abscess Successfully Treated by Operation. With a Note on a Method of Counter-drainage Employed. By Dr. T. Barr and J. H. Nicoll, M. B.—The authors report a case of the above-mentioned affection and conclude that: (1) early operative interference in the way of discovering and subsequently draining the cavity offers the only chance of recovery in cases of intracranial pyogenic lesions; (2) the results in such cases of operative interference have been much more favorable in temporosphenoidal than in cerebellar abscess; (3) the cause of death in cerebellar abscess is, in a large majority of the cases, dropsical distention of the lateral ventricles (with œdema of the surrounding brain tissue). This ventricular dropsy appears to be the result of obstruction of the veins of Galen, produced by thrombosis originating in their lumina, or extending thence either from the superior cerebellar veins or from the straight sinus.

At the present date, two years and a half after operation, the patient remains well. For twenty-six months he has followed his occupation without the slightest return of any of his symptoms. He is still, however, deaf in the affected ear, and pulsations can be detected in the trephine area over the temporosphenoidal lobe.

Trephining in Intracranial Suppuration the Result of Fracture. By D. A. McCurdy, F. R. C. S.

A Report on Ten Cases of Poisoning by Arsenetted Hydrogen. By Dr. J. S. Clayton.—The author reports ten cases of poisoning by arsenetted hydrogen occurring in men engaged in the manufacture of zinc chloride from crude zinc oxide and hydrochloric acid. In all of the cases there was jaundice; in eight of them it was intense. In two only could it be described as slight. In nine, also, there was hæmaturia. Intense thirst and a burning pain in the chest characterized the onset and earlier stages in all the cases. Diarrhœa was troublesome in five, and all the patients suffered from profound anæmia in the later stages of the disease. The effect on the nervous system was severe in nine. In six of these the prostration and collapse of the earlier stage was very severe. One case proved fatal; there was suppression of urine toward the close, and death took place on the seventh day.

The Electrolytic Deposit of Sulphur from the Harrogate Sulphur Waters as a Therapeutic Agent. By Dr. F. W. Smith.—The conclusions reached by the author are as follows: 1. That nascent sulphur is deposited in the Harrogate sulphur water by electricity at the positive pole. 2. That the same thing takes place on the skin of patients in a sulphur electric bath under similar circumstances. 3. That in addition to the remedial effect of nascent sulphur, electricity stimulates the peripheral nerves all over the body in a sulphur bath, and thus renders the action of sulphur more rapid and efficacious in skin and gouty affections.

Amputation Mortality at the London Temperance Hospital. By Dr. W. J. Collins.—The author gives a table of 107 cases of amputation, with but two deaths. One fatal case of amputation at the hip was in a little girl in the last stages of morbus coxæ, and suffering from advanced amyloid degeneration. The other fatal case was that of a man with sarcoma of the liver and secondary growth in the ham, for which amputation at the thigh was performed. The latter was the only case in which alcohol in any form was ordered.

February 23, 1901.

Remarks on the Conclusions of the Report of the Anæsthetics Committee of the British Medical Association. By G. Eastes, M. B.—Among the conclusions reached by the above-mentioned committee are the following: Ether may be accepted as the safest routine anæsthetic, but certain circumstances may make the use of some other anæsthetic both safer and easier. No method of administration of chloroform is free from danger; this depends largely upon the administrator. Anæsthetics are more commonly associated with complications and dangers in males than in females. Excluding infancy, the dangers of anæsthesia increase *pari passu* with advancing age. Danger to life is especially likely to be incurred in early periods of the administration of anæsthetics, while the tendency to less grave complications increases directly with the duration of anæsthesia. Chloroform is most dangerous in early infancy and after thirty years of age; it is about twice as dangerous in males as in females. In conditions of good health, chloroform is the most dangerous anæsthetic; when danger occurs, in a large proportion of cases the symptoms observed are those of primary circulatory failure. Imperfect anæsthesia is the cause of many cases of danger under chloroform. Vomiting and struggling during anæsthesia, severe vomiting and circulatory depression, and grave and persistent respiratory complications, are more frequent with chloroform than with ether. Ether, where employed throughout, or preceded by nitrous oxide gas, is singularly free from danger in healthy patients. By far the most important factor in the safe administration of anæsthetics is the experience which has been acquired by the administrator.

A Criticism of the Report of the Anæsthetics Committee of the British Medical Association. By Dr. A. D. Waller.

A Preliminary Note on the Ætiological Agent in Vaccinia and Variola. By Dr. M. Funck.—The author claims to have proved experimentally the following facts: 1. Vaccinia is not a microbic disease. 2. It is caused by a protozoon easily found in all vaccine pustules and in all active vaccine. 3. The inoculation of the protozoon in a sterile emulsion reproduces in susceptib

animals all the classical symptoms of vaccinia. 4. This inoculation renders the animals refractory to subsequent inoculation with vaccine. 5. The variolous pustule contains a protozoon morphologically similar to that in the vaccine. 6. Variola and vaccinia are two identical affections; vaccinia is nothing more than an attenuated form of variola, and the immunity to small-pox which vaccination confers does not form an exception to the general laws of specific immunity.

A Preliminary Note on the Cultivation of the Microbes of Vaccinia and Variola. By Dr. S. M. Copeland.—The author has found that the microbe of vaccinia can be cultivated as follows: Collodion capsules, after being filled with beef broth and inoculated with a trace of glycerinated vaccine lymph free from extraneous microbes, are sealed up and placed within the peritoneal cavity of rabbits and dogs for one or two weeks. At the end of that time, the fluid in the capsules contains zooglœa masses of bodies resembling spores, representing the resting stage of the specific microbe. The fluid is, moreover, capable of producing a typical eruption of vaccinia in the calf. The contents of similar capsules incubated outside the body remain sterile.

Liverpool School of Tropical Medicine: Yellow Fever Expedition (Abstract of Interim Report). By H. E. Durham, F. R. C. S., and W. Myers, M. B.—The authors have found a fine, small bacillus in the organs of all fatal cases of yellow fever examined by them (fourteen in all). It was found in the kidneys, spleen, lymphatic glands, and in the contents of the lower intestine. It is probable that recognition has not been previously accorded to this bacillus by reason of the difficulty with which it takes up stains (especially methylene-blue), and by reason of the difficulty of establishing growths on artificial media. The best staining reagent is carbolic fuchsine, in which the specimens are to be immersed for several hours, followed by weak acetic acid. Ten or twelve hours' immersion is necessary. Pure cultures are obtained by placing whole mesenteric glands into broth under strict hydrogen atmosphere. The authors think the evidence in favor of the etiological importance of this fine, small bacillus is stronger than any that has yet been produced for any other pretended "yellow fever germ."

The Margin of Error in Bacteriological Diagnosis. By Dr. J. O. Symes.—The author calls attention to the danger of too much importance being attached to bacteriological procedures to the detriment of sound clinical observation. In cases of typhoid fever in which the clinical signs and symptoms are well marked, the absence of the agglutinative reaction does not negative a positive diagnosis. In diphtheria, the finding of the Klebs-Löffler bacillus is of value in cases presenting doubtful clinical symptoms, but is of less value when symptoms of disease are absent, or when the exact nature of the organism is doubtful. Failure to find the specific bacillus is only of value when confirmed by repeated examinations. In cases of general blood infection, a bacteriological examination is often of the greatest value for purposes both of diagnosis and prognosis. The presence of organisms in the blood is usually of the worst possible omen. In a case presenting the ordinary clinical features of phthisis, the author would require a large number of negative sputum examination reports to convince him of its nontuberculous nature.

The Protection of the Observers in Cases of Infectious Sore Throat. By E. Waggett, M. B.—The author recommends the use of a celluloid or mica screen, to be held before the face when examining the throat in cases of diphtheria, etc.

Two Cases of Typhoid Fever, with Abscesses of the Lung and Empyema. By Dr. S. Phillips.—The author reports two fatal cases of typhoid fever, occurring in brothers aged four years and a half, and three years, respectively, in both of which death was due to pneumonia with resultant pulmonary abscesses and empyema. The necropsies showed that both patients had almost recovered from the typhoid fever, but had succumbed to the effects of septic infection.

A Note on the Phenyl-hydrazine Test for Sugar. By G. L. Eastes, M. B.

A Note on the Phenyl-hydrazine Test for Sugar. By W. Hall, M. B.

Lyon médical, February 3, 1901.

Improved Method of Counting Red Blood Cells. By M. Mazet.

Treatment of Caries of Temporary Molars.—M. C. Martin advises the application of crowns to the children's molars which become carious, as it facilitates mastication and thus improves digestion and assimilation, besides freeing the children from pain and preventing further decay of the diseased tooth or teeth.

Presse médicale, February 2, 1901.

Varieties of Buccal Septicæmia.—M. Pierre Sebileau describes the varieties as follows: (1) lymphophlegmonous septicæmia of the cheek; (2) phlebophlegmonous septicæmia of the face, and (3) general septicæmia without specific anatomical location. This study is mainly a pathological one, although the author gives in detail the symptoms adhering to each form of inflammation of the buccal cavity.

Diabetic Coma and Intoxication by Nitrites. By M. E. Fiquet.

Gazette hebdomadaire de médecine et de chirurgie, February 3, 1901.

Symptomatology, Diagnosis, and Treatment of Aoute Cancer of the Breast.—M. U. Charbonnier, in his thesis, speaks of the foudroyant form of mammary cancer. He says there are three forms of the disease: The acute carcinomatous mastitis, characterized by immense enlargement of the whole breast, discoloration of the skin with the phenomena of venous stasis, absence of pain and ulceration, inconstant adenopathy. The disease runs its course in from six to ten months. The second form is subacute and is mainly characterized by the indolence of the process and the absence of inflammatory reaction. The third type is a transition form, beginning with a small, painful growth, axillary involvement, showing frequently a dense œdema radiating from the tumor toward the glands, and sometimes undergoing ulceration. Operative extirpation seems to be an insufficient therapeutic measure in these cases, as recurrence is usually very rapid and very fatal.

Centralblatt für Gynäkologie, February 2, 1901.

Extirpation of a Right-sided Ovarian Cyst through a Left Laparotomy Wound. By Dr. Leopold Reinprecht.

A Precipitate Birth.—Dr. Wilhelm Kunze reports a case in which the umbilical cord was torn by the fall

of the child. The retraction of the vessels prevented any bleeding, and the fact that the floor upon which the child fell was of wood probably prevented serious accident to it. The mother and child made a good recovery.

Treatment of Retroplaced, Pregnant, Incarcerated Uterus.—Dr. L. Seeligmann says that the first procedure is to elevate the uterus by carrying it through one of the oblique pelvic diameters, preferably the right oblique, so that the rectum will not interfere with the manœuvre. It is accomplished by pushing the cervix backward and gently raising the fundus. A colpeurynteur filled with fluid is then to be placed behind the uterus in the same diameter as that occupied by the uterus. The colpeurynteur is to be removed in from two to four hours. It may be reintroduced if necessary.

New Method of Supporting the Perinæum.—Dr. J. Hofbauer writes of a method of supporting the perinæum with which he has had most satisfactory results. When the perinæum is fully distended, it is carefully watched to await the appearance of the anterior fontanelle. As soon as the posterior edge of it appears, the head is seized and made to rotate to about 40°, so that it shall emerge from the vulva obliquely. By this means the perinæum is saved, particularly when it has been subjected to an especially severe strain. The same method may be employed when the forceps is used. It is important that in this "anticipated external rotation," the head be allowed to engage in the vulva in the anteroposterior diameter, and be rotated only after the anterior fontanelle has presented itself.

Vratch, January 13, 1901.

Concerning Collective Investigations on Cancer. By Dr. L. L. Levschine.—Almost all authors who treat of the statistics of cancer agree that this disease is growing more and more prevalent of late. In Moscow the number of cancer cases has doubled since 1880, and the mortality from cancer in the large cities of North America has almost doubled since 1870, according to Massey. According to Heymann, this mortality is now four times greater in Prussia than it was in 1877. The interesting question for the surgeon is: What percentage of operative successes may be expected in the various forms of cancer? The author advocates the establishment of asylums for incurable cases of malignant tumors, and has succeeded in collecting three hundred thousand roubles ($150,000) for such an institution in Moscow. The author also believes that a great deal of good may be accomplished by a collective investigation of cancer all over the world, and has worked out a series of questions to be answered by physicians for this purpose.

Cases of Poisoning with Cream Tarts in Charkoff. By Dr. P. N. Lastchenkoff.—The author discusses the subject of food poisoning in general, and describes particularly a series of cases in which the alarming symptoms were due to eating certain cream tarts purchased at a bakery in Charkoff. On September 17, 1899, two hundred persons who had eaten these tarts showed symptoms of poisoning, which, in many instances, resembled those of poisoning with arsenic or some other mineral irritant poison. Whole families, including the servants, fell victims to this poisoning, and in a girls' boarding school twenty-eight pupils were affected. From five to ten hours after eating these tarts, the patients were seized with nausea, vomiting, pain in the abdomen, and diarrhœa. In some cases there was only nausea and vomiting. In the majority of cases the symptoms were mild, and were considerably magnified by fear. When it was discovered that all persons who had eaten of the fatal cream-nut tarts had been attacked with these symptoms, an investigation was made by the health authorities. The chemical examination of samples of these tarts showed that there were no mineral poisons of any kind. (*To be continued.*)

Concerning the Determination of the Amount of Oxidizable Substances in Water by Means of Permanganate of Potassium. (*To be continued.*)

Concerning Writer's Cramp. By Dr. I. V. Zabloudovsky. (*Concluded.*)

American Gynæcological and Obstetrical Journal, December, 1900.

Vaginal versus Abdominal Hysterectomy for Cancer of the Uterus. By Dr. H. J. Boldt.

Drainage in Abdominal Surgery. By Dr. J. W. Long.

Treatment of Inflammatory Diseases of the Uterus by Irrigation. By Dr. Frank W. Talley.—Rhinologists and pharyngologists preface their treatment of the acute and chronic inflammations of their respective mucous membranes by the careful cleansing from altered secretions with alkaline solutions. Their theories are none the less applicable to the uterus. The solution used is water, to which is added sodium bicarbonate—about a drachm to the quart—and enough carbolic acid to render it mildly antiseptic. The temperature of the solution for beginning the irrigation should be about 110° F., and this should be increased by cautiously adding hot water to the reservoir until the patient's degree of tolerance has been reached. The author has never been able to increase the temperature above 123° F. The treatment should be continued for about twelve minutes, using about one gallon of water. The effect of the application of heat and moisture is primarily to cause a vasomotor dilatation and congestion of the part. If the irrigation is persisted in, however, the dilatation of the capillaries gives way to constriction and the part becomes blanched and shriveled. The cases amenable to this form of treatment are those in which the cervical canal is patulous and readily admits of the passage of the cannula. For the last few years the results in the treatment of metritis and subinvolution by irrigation alone have been so gratifying that the author now depends upon it to the exclusion of intrauterine medication. The treatment by irrigation is preferably carried out at intervals of seventy-two hours.

Some Life-saving Measures in Obstetric Work. By Dr. R. R. Kime.—Leaving out of the discussion instrumental deliveries, Cæsarean section, symphysiotomies, etc., the author considers the most important life-saving measures: (1) Saline infusions; (2) medicinal remedies; (3) serum treatment; (4) hydrotherapy; (5) drainage. Strychnine and digitalin are well-tried remedies, to sustain life and stimulate the vital energies. The serum treatment gives promise of utility where streptococci have been demonstrated to be present. The author urges against the common practice of curetting and tamponing the uterus in cases of septic infection following labor at full term. In draining the uterus, apply the same principles as are used in abscesses and septic infections in other parts of the body. Uterine drainage in puerperal infection is doubly imperative, Nature having established the precedent in normal cases to eliminate effete material, which process is often checked by the infection. Vaginal drainage is a life-saving procedure under two conditions: First, where we have pus accumu

lation in the pelvis, threatening the life of the patient, that cannot be safely removed by abdominal section; second, in cases of infection where the inflammatory process continues to spread in spite of uterine drainage and other remedies. A few illustrative cases follow.

Left Lumbar Nephrofixation and Abdominal Myomectomy in One Sitting, with Report of Case. By Dr. Andrew J. Downes.

Proctorrhaphy: The Suspension of the Rectum for the Cure of Intractable Prolapse and Inversion of that Organ. By Dr. Charles P. Noble.

Montreal Medical Journal, December, 1900.

A Case of Conservative Cæsarean Section. By Dr. William Gardner, and Dr. David J. Evans.—If, as the authors assert, this is the first conservative Cæsarean section in Montreal, if not in the Dominion, the fact speaks volumes for the rarity of those conditions of impaired nutrition which bring about contracted pelves. The authors believe that the sum total of suffering was much less than in normal labor in a normal condition of the birth canal.

A Case of Porro-Cæsarean Section in which Both Mother and Child were Saved. By Dr. F. A. L. Lockhart.

Cholecystitis Complicating Typhoid Fever. By Dr. W. F. Hamilton.—In the four cases reported, the diagnosis of typhoid fever was undoubted, the Widal reaction being obtained, and the ordinary clinical features determining the correctness of the diagnosis. In the matter of cholecystitis as a complication: A decided and sudden change in the temperature curve without much change in the pulse, more or less nausea and vomiting, fairly well localized abdominal pain and tenderness, icterus and the development of a tumor in the right hypochondrium, compose the clinical picture. Such features cannot fail to indicate that the gall bladder or bile ducts are involved. As Keen points out, however, many biliary complications may be wholly latent. This complication should always be regarded as a grave one; in the reported cases the mortality is twenty-five per cent.

Some Cases of Stomach Surgery—Gastrotomies, Two Cases; Gastro-enterostomies, Three Cases; Pylorectomy. By Dr. A. E. Garrow.

A Case of Carcinoma of the Pharynx with marked Involvement of the Cervical Glands in a Boy of Fourteen Years of Age. By Dr. J. M. Elder.—One would expect to find in this region either a sarcoma [of the adenoid type] or an epithelioma, but carcinoma is rare, and more especially so when the age of the patient is taken into account. But given a carcinoma, it explains the glandular involvement, together with the absence of an ulcerative condition in the primary focus.

Note on a Case of Accessory Pancreas. By Dr. Albert G. Nicholls.—The practical importance, from a pathological point of view, is that these misplaced pancreatic "rests," like other embryonic inclusions, are capable of independent growth, and thus may subsequently develop into tumors, either adenomata or carcinomata. Certain cancers of the stomach are thus not improbably due to these fœtal implantations. The analogy is close with suprarenal "rests" found in the kidney.

Unusual Cases of Hernia. By Dr. A. E. Garrow.

A Case of Ichthyosis Hystrix. By Dr. John A. Hutchinson.

Report of a Fatal Case of Hernia Through the Fossa Duodeno-jejunalis. By Dr. F. G. Finley, and Dr. D. D. Mac Taggart.—The fatal termination of the case in fifteen hours is most unusual in intestinal obstruction. The anatomical conditions described show the case to have been one of complete retroperitoneal hernia of the whole of the small intestine, with the exception of the duodenum. The obstruction, as is usually the case, was due to twisting of the bowel at the neck of the sac.

Notes from Practice in the Argentine Republic—Suprapubic Lithotomy with Suture of Bladder—No Drainage. By Dr. F. G. Corbin.

Notes on the Therapeutic Uses of Hot Air. By Dr. C. F. Martin, and Dr. D. B. Gillies.—Attention is particularly directed to the rapid relief of pain attending the hot-air treatment in sciatica, a relief that persists, and enables the patient, while taking the necessary rest in bed, to enjoy comfort and freedom from suffering.

Book Notices.

Psychopathia Sexualis, with Special Reference to Antipathic Sexual Instinct. A Medico-forensic Study. By Dr. R. v. Krafft-Ebing, o. o. Professor für Psichiatrie und Nervenkrankheiten an der K. K. Universität, Wien. The only Authorized English Translation of the Tenth German Edition. Pp. xv-585. Chicago: W. T. Keener & Company, 1900.

Studies in the Psychology of Sex: The Evolution of Modesty; The Phenomena of Sexual Periodicity; Auto-erotism. By Havelock Ellis. Philadelphia, New York, Chicago: The F. A. Davis Company, Publishers, 1900.

We have considered these two books together, because they deal only with two sides of one subject, the normal and the abnormal phases of the sexual instinct. To the medicolegal expert, whether lawyer or physician, a knowledge of the motive force underlying normal and abnormal sexual manifestations, and of the relation of the sexual emotion to other emotional states and impulses, with a study of all facts known concerning it and of the laws deducible from these facts, is an absolute necessity. To the general physician and family practitioner, for therapeutic and advisory purposes, this knowledge is also necessary. Properly applied, it will in coming ages prevent many a suicide, many a tragedy of a ruined brilliant career, such as that of one who at one time gave promise of becoming a literary genius of his age, but whose career was cut short by the morbid misdirection of his faculties, ending in a shameful imprisonment, followed but recently by death in exile, impoverished, disgraced, and abandoned.

Signs of awaking public interest in the settlement of sexual problems are, moreover, to be found in the increasing number of people in all civilized countries, who are groping for light whereby to settle questions so important to the welfare of the race, as prostitution, the transmission of venereal disease, and the regulation of marriage. These problems are not susceptible of settlement offhand, either by an intuition of Nature or by any dogmatic utterances of the religions on the one hand, or of the systems of philosophy on the other. The law of gravitation and the knowledge of electricity were not so apprehended; neither can this subject be. Such knowledge must be sought in the same way as any other branch of science, and the profound and earnest pioneers in that study deserve to have their work received with

the same consideration and respect as is awarded to the pioneer investigators in any other branch of knowledge. It is not essential that their work should have an immediately practical bearing; but it is essential that all those who are engaged in trying to grapple with the various sexual problems from a practical point of view should be imbued with the knowledge of all attainable facts—however isolated and unimportant they may appear to be—from which principles may ultimately be educed, to place action upon a sound and philosophic basis.

At the same time, it is true that, as with the study of other regions of the morbid, so more especially with the study of this, the unequipped mind of the average layman, wanting the training to endow such studies with a proper sense of proportion, is best left undirected to them. As the limited distribution and the high price of medical works do not prevent the lay mind from dabbling widely into questions of ordinary disease, neither, we fear, will it be possible to keep it from peering into studies on the psychology of sex, and the morbid perversions of its manifestation. So long, however, as such means as can be taken are taken to lessen the danger of too free dissemination of an incomplete and prurient insight into the fields of knowledge covered in the two works under consideration, that is all that can be expected or hoped for. We are glad to note that, in the case of each book, it is stated that the sale of it is to be confined to members of the medical and legal professions. It is to be hoped that this restriction will be maintained with all the watchfulness possible. We would include even medical students in the embargo, for we hold that the general should come before the special, and that not until the student has fully equipped himself by a breadth of view and a sense of proportion as applied to the study of deviations from the line of health should he enter upon the study of their more subtle and less clearly defined forms.

With these words of cautious reserve, we wish to express our firm belief in the vast possibilities for good that underlie the careful study, by the proper persons, of the conscientious and prodigious labors of these two authors, for we consider the two works of correlative importance. Professor von Krafft-Ebing's book is, as its title implies, a pathological treatise. The fact that it has already passed through nine editions and the great importance laid upon its teachings by eminent jurists and physicians in many lands are evidence of its appreciation by those best competent to judge of its value. But little need be said specially concerning it, therefore, save to point out that the present (tenth German) edition has been considerably enlarged, mainly rewritten, and furnished with an increased number of clinical histories, which in this, as in most other fields of pathology, are most enlightening subjects of study.

While it may seem to some that there is a superfluity of such clinical histories, it must be remembered that, in such a subject as that with which Professor von Krafft-Ebing's book deals, the greater their number, the fewer are the occasions of fallacy in the deductions therefrom. In ordinary clinical histories, the wise physician, as a rule, regards subjective symptoms as comparatively untrustworthy, regarding them as side lights either to confirm or negative the results arrived at from objective examination, or to elucidate some otherwise obscure points. But the kind of clinical histories afforded by the investigation of the subject before us are necessarily almost entirely subjective, and consequently liable to the most erroneous interpretation from the presence of the ever-varying and indefinite personal equation. It is obvious, therefore, that it is only by the collation of an enormous number of such histories that the factors which can be found in them all can be so clearly recognized as to be separable from the probably fallacious products of the personal equation.

Mr. Havelock Ellis's work, on the other hand, is in its first edition, and the subject matter is new to the student. Mr. Ellis has already done admirable work on kindred lines, and we were quite prepared, therefore, to find the conspicuous merit evidenced in the present work. The author states that pictures of gross clinical perversity (such as are collected in the book we have just been considering) "are only really instructive when they are seen in their proper perspective as the rare and ultimate extremes of a chain of phenomena which we may more profitably study nearer home." In other words, that which is normal, and the course of its evolution, should be first studied and known, before we can profitably devote attention to those deviations from the normal that we term disease.

Mr. Ellis's work is divided into three separate studies, dealing respectively with the Evolution of Modesty, the Phenomena of Sexual Periodicity, and Auto-erotism, a study of the Spontaneous Manifestations of Sexual Impulse. Of these sections the author says that "the first sketches the main outlines of a complex emotional state which is of fundamental importance in sexual psychology; the second, by bringing together evidence from widely different regions, suggests a tentative explanation of facts that are still imperfectly known; the third attempts to show that even in fields where we assume our knowledge to be adequate, a broader view of the phenomena teaches us to suspend judgment and to adopt a more cautious attitude."

In the section on the Evolution of Modesty, the author amasses a quantity of facts, covering widely different localities, races, and ages, and tending to show that what we term modesty has its roots largely in the fear of arousing disgust, and thus of lessening sexual attractiveness. This section is a treasure house of information concerning racial characteristics. It has, moreover, a wider bearing than the two others, and might be read with profit by all concerned in the study of social questions, and especially by the more advanced of our public teachers, to whom it would probably give a breadth of view that would replace the faddism and prejudice that militate against many much-needed social reforms. For this reason, we should be glad to see this essay republished separately in pamphlet form, for a less restricted circulation than it is desirable to maintain for the others.

The chapters on Sexual Periodicity tend to show that, in man as well as woman, the sexual impulse is rhythmical, though the author does not appear to think this conclusion at present demonstrable, in which we agree with him. Many correlated cycles, such as the insanity curves and those of suicide, the birth rate, etc., receive interesting consideration in this connection.

In the section on Auto-erotism, Mr. Ellis deals with the various spontaneous excitations of erotic impulse, as distinguished from those initiated by sexual attraction. The subject of masturbation is handled in a sound and practical manner, cleanly and decent, and the absurd exaggerations with which quackery and ignorance have incrusted it are brushed away. Much wholesome suggestion for counsel may be found herein.

The book further contains three appendices on The Influence of Menstruation on the Position of Women; Sexual Periodicity in Men (a remarkably frank, careful, and valuable personal study, by Mr. F. H. Perry-Coste, B. Sc.); and the Auto-erotic Factor in Religion, respectively. The last-named contains much suggestive material.

The mechanical part of the books leaves little to be desired in either case. We have no doubt, notwithstanding Mr. Ellis's misgivings in regard to the reception of his own book, that it will meet with wide and favorable recognition from the scientific world, while the work of Professor von Krafft-Ebing is already a classic.

BOOKS, ETC., RECEIVED.

International Clinics. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pædiatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia. Volume IV. Tenth Series. Pp. vii-312. Philadelphia: J. B. Lippincott Company, 1901.

A Text-book on Practical Obstetrics. By Egbert H. Grandin, M. D., Gynæcologist to the Columbus Hospital, etc. With the Collaboration of George W. Jarman, M. D., Instructor in Gynæcology in the Medical Department of Columbia University, etc. Third Edition, Revised and Enlarged. Illustrated with Fifty-two Full-page Photographic Plates and One Hundred and Five Illustrations in the Text. Pp. xiv-511. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1901. [Price, $4.]

Uterine Tumors: Their Pathology and Treatment. By W. Roger Williams, Fellow of the Royal College of Surgeons. Pp. xvi-359. New York: William Wood & Company, 1901.

Proceedings of the American Medico-Psychological Association at the Fifty-sixth Annual Meeting, held in Richmond, Virginia, on May 23, 24, and 25, 1900.

A System of Practical Therapeutics. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc. Second Edition, Revised and largely Rewritten. Volume I. With Illustrations. Pp. 3 to 856. Philadelphia and New York: Lea Brothers & Company, 1901.

Inorganic, General, Medical, and Pharmaceutical Chemistry. Theoretical and Practical. A Text-book and Laboratory Manual containing Theoretical, Descriptive, and Technological Chemistry; Class Exercises in Chemical Equations and Mathematics; and Practical Manufacturing Processes for Five Hundred Chemical Preparations, with Explanatory Notes. By Oscar Oldberg, Pharm. D., Professor of Pharmacy, Northwestern University, Chicago, etc. In Two Volumes. Volume I, pp. xii-522. Volume II, pp. viii-655. Chicago: Chicago Medical Book Company, 1901.

Obstetric and Gynæcologic Nursing. By Edward P. Davis, A. M., M. D., Professor of Obstetrics in the Jefferson Medical College of Philadelphia, etc. Illustrated. Pp. 3 to 402. Philadelphia: W. B. Saunders & Company, 1901.

An Introduction to Physiology. By William Townsend Porter, M. D., Associate Professor of Physiology in the Harvard Medical School. Pp. xvi-314. Cambridge, Massachusetts: The University Press.

The Johns Hopkins Hospital Reports. Volume VIII, Nos. 3 to 9. Baltimore: The Johns Hopkins Press, 1900.

Transactions of the Mississippi Valley Medical Association. Twenty-sixth Annual Session, held in Asheville, N. C., October 9, 10, and 11, 1900. Volume II.

The Ninth Annual Report of the Sheppard and Enoch Pratt Hospital for Mental and Nervous Diseases, Baltimore.

Anatomisch-klinische Vorträge aus dem Gebiete der Nervenpathologie. Von Dr. Karl Schaffer, a. o. Professor der Nervenpathologie an der Universität zu Budapest, etc. Ueber Tabes und Paralyse. Mit 5 Tafeln und 63 Abbildungen im Text. Pp. xii-296. Jena: Gustav Fischer, 1901.

Uber die vom Processus vermiformis ausgehende diffuse eitrige Peritonitis und ihre chirurgische Behandlung. Von Dr. Ali Krogius, Dozenten der Chirurgie an der Universität Helsingfors (Finland). Mit 43 Kurven im Text. Pp. 240. Jena: Gustav Fischer, 1901.

Ueber Migräne. Von Dr. Alexander Spitzer, in Wien. Pp. 119. Jena: Gustav Fischer, 1901.

Moloko i Bakterii. By Dr. Stanislaw Sernowsky. Pp. 128. Warsaw: K. Kovalevsky, 1900.

Ferite Addominali e Moderno Trattamento. Pel Professor Prospero Guidone, Libero Docenti di Medicina Operatoria nella R. Università di Napoli, etc. Parte I. Pp. 133. Napoli: C. G. Salvati, 1900.

New Inventions, etc.

A URETHRAL DILATOR.

By C. JOHNSTONE IMPERATORI, M. D.,
NEW YORK.

This instrument suggested itself from the consideration that its spiral groove might be turned in an abnormal constriction of the urethra. By the increasing diameter of the instrument as the groove ascends, dilatation of the constriction is accomplished. The set is composed of four instruments of varying sizes. They are all seven inches long, from olive point to handle, but not including it. A description of one of the instruments will suffice.

The general shape of the instrument is that of a grooved cone, increasing regularly in size from the tip to the handle.

Each instrument increases in diameter three millimetres to the inch, and every three eighths of an inch there is a complete turn of the groove.

The olive point is tunneled so that in cases of stricture of small calibre the instrument may be turned on a filiform.

Uses.—1. As a meatus dilator.

2. As a dilator to the urethra, preliminarily to passing the regular curved sound. This instrument, through its conical shape, gradually dilates the anterior portion of the urethra, thus making it easier to pass the regular curved sound.

3. As a dilator to those strictures of the anterior portion of the urethra situated a few inches inside the meatus.

4. In small strictures—those of a size from six to fifteen, French gauge, situated at the bulbomembranous

junction. This instrument may be used as a dilator before passing the regular curved sound, and in cases of very small constrictions it may be turned on a filiform.

After introducing it within the meatus for an inch or so, by simply holding the penis perpendicularly to the

DR. IMPERATORI'S NEW INVENTION.

body, with the patient in the recumbent position, the instrument insinuates itself by turning on its long axis. The different sizes of the instruments are appended:

No. I.—At olive point, 6 French; at handle, 24 French.

No. II.—At olive point, 9 French; at handle, 27 French.

No. III.—At olive point, 12 French; at handle, 30 French.

No. IV.—At olive point, 15 French; at handle, 33 French.

Although the straight sound may be used somewhat to the same extent, yet this instrument has a greater variety of uses than the former. Two of these instruments will suffice to do the same work that a set of straight sounds will do, and they can be used in places where the latter cannot.

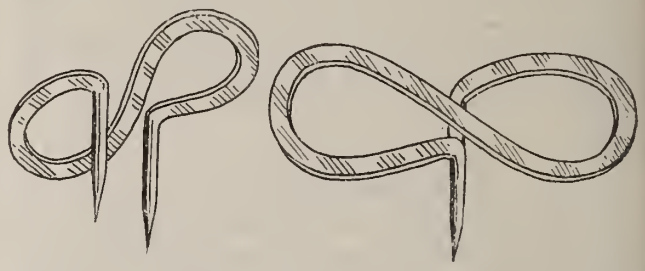
28 OLIVER STREET.

A SIMPLE DEVICE FOR SECURING BANDAGES.

BY the courtesy of the editor of the *Journal of the American Medical Association,* we are enabled to reproduce an illustration and description of the following simple device for securing bandages, invented, and first described in the issue of that journal for February 16th, by Dr. George D. McLean, of Nashville, Tenn.

Dr. McLean describes the invention as follows:

"A figure-of-eight piece of wire having two ends turned at right angles to the plane of base and the ends sharpened. The base is flattened and the two prongs extend one half to five eighths of an inch up from the base, perpendicular to it and parallel to each other. These two are about one fourth of an inch apart. In applying a bandage, say a recurrent of the scalp, after making one turn around the head to fix the bandage



place one pin on the inion and one just above the siniput; this will enable the surgeon, by pressing the bandage down over the extending prongs and returning over them, to apply this bandage alone and with a single-headed roller bandage. After enough has been put on, separate the prongs and turn down against the head, making, if desired, one turn around to hold them down and protect the points. This pin will work in any spica, figure-of-eight, or recurrent, as of a stump, absolutely preventing slipping at the point of application."

Miscellany.

Fæcal Impaction.—Dr. Samuel G. Gant (*Post-Graduate,* January), in a paper read before the New York Post-Graduate Clinical Society, said that of fæcal accumulations sixty per cent. would be found in the rectum, fifteen per cent. in the sigmoid, ten per cent. in the cæcum, and the remainder in other portions of the colon. Impaction occurred more frequently in women than in men, and the older the persons the more likely were they to suffer from this affection. No age was exempt, cases having been recorded from infancy to seventy years and more. This condition might properly be divided into *acute* and *chronic.*

The most frequent causes of coprostasis were intestinal atony, paralytic affections (locomotor ataxia), large enemata, mineral drugs showing a tendency to accumulate, painful ailments about the anus (fissure), and irregular habits. In children it might result from congenital narrowing of the anus or rectum, and in adults from adhesions following a surgical operation or typhoid fever, stricture, carcinoma, or tumor in a neighboring organ. The quantity and quality of the food taken sometimes became an ætiologic factor in impaction. This was thoroughly demonstrated during the Irish famine in 1846, when fæcal accumulations were frequently caused by eating the husks of potatoes. Again, it had been shown by Monro that the people of Scotland were frequently and similarly affected as a result of eating large quantities of coarse oatmeal. A mass might have for its starting point a plum, cherry, or gall-stone, around which the fæces collect like the snow on a snowball. Houston's valves, when large, thickened, and rigid, might cause impaction.

The symptoms varied, depending upon the cause,

size, consistence, and location of the impacted mass. In the beginning, there was constipation; later, constipation alternating with diarrhœa, and finally a diarrhœa of the most annoying and persistent kind. Because liquid fæces were being discharged around or through the fæcal tumor, the patient's real ailment was frequently not suspected by patient or physician. In some cases the movements had a vile odor. These sufferers were nervous, despondent, and restless, had a muddy complexion, disagreeable breath, indigestion, barking cough, morning vomiting, cold feet, night-sweats (Allingham), thirst, loss of appetite, dizziness, sometimes jaundice, albuminuria, seminal emissions, varicocele, frequent micturition, sphincteric spasm, nipple-shaped anus (Allingham), and inflamed rectal mucosa. The pain from a fæcal impaction was local and interrupted when small, but became continuous and disseminated as it grew larger. The mass produced a sensation of weight and fulness in the rectum, frequent and prolonged straining and bearing-down pains similar to those experienced during labor. Pain was not confined to the anal region, being frequently reflected to the abdomen, back, neighboring organs, and down the limbs, caused by pressure on the sciatic nerves. In persons suffering from impaction and fæcal toxæmia the temperature was irregular, the pulse small and weak, and respiration difficult. They had a troubled expression, were anæmic, and occasionally completely collapsed from exhaustion. There might be local or general peritonitis, ulceration, perforation, and fæcal vomiting in extreme cases, due to pressure and occlusion.

The length of time one could live without defæcation had long been the subject of debate, and still remained in doubt. Cases had been recorded where complete occlusion from coprostasis had existed for from one week to more than six months. The author has treated several cases due to stricture in persons who had not had an evacuation in from two weeks to two and three months, and yet some of them were fairly comfortable and did not seem to worry.

Coprostasis was the most frequent cause of *paralytic ileus;* the collected fæces prevented the downward peristaltic action, interfered with proper nutrition and the nervous supply of the intestine, and resulted in contraction of the bowel below the obstruction. Another serious and frequent sequela of large fæcal accumulations was *dilatation* of the *colon.* The bowel sometimes assumed enormous proportions. Chrónic constipation accompanied by impaction was always an important ætiologic factor in *chlorosis.* The anæmic condition of the blood was brought about as a result of a general *fæcal toxæmia.* Hence the importance of teaching young girls to be regular in going to stool. This toxæmia produced a depressing effect upon the mind, and many of these sufferers did not take any interest in business, sought seclusion, and not a few had suicidal tendencies. In extreme cases, it had been known to produce temporary *mania,* and in young children symptoms simulating *cerebrospinal meningitis.* Self-infection from fæcal accumulation had induced hyperæmia and œdema of the brain, congestion of the lungs and acute parenchymatous degeneration of the heart, kidneys, and lungs (Von Sölder).

Fæcal impaction was less difficult to diagnosticate than other varieties of intestinal occlusion, yet the task was not always an easy one. When a hard, large fæcal mass uncovered by mucous membrane was situated in the lower rectum, a digital examination quickly revealed its nature, but when it was partially covered by the mucosa, or located in the sigmoid flexure or colon, it was often perplexing to make a positive diagnosis. It must be borne in mind that tumors of the intestine, bladder, vagina, uterus, tubes, ovaries, and prostate sometimes caused intestinal occlusion and a long train of symptoms similar to those caused by coprostasis. When the accumulation was in the rectum it was frequently mistaken by the experienced finger for carcinoma, because the mass pushed the mucous membrane down in front of it, giving to the touch a sensation similar to that of submucous cancer. The following points should be observed when distinguishing between these two conditions:

	FÆCAL IMPACTION.	CARCINOMA.
1.	Single, large, firm and globular in shape; or numerous, small, hard and nodular.	Two or more dense, rounded tumors.
2.	Usually not covered by mucous membrane.	Covered by a mucous membrane except when ulcerated.
3.	Occupies lumen of the bowel.	Projects into the calibre of the intestine.
4.	Of doughy consistence and indentable.	Hard and non-indentable.
5.	Not attached.	Attached.
6.	Movable.	Non-movable or slightly so.
7.	Occurs at any age.	In middle life and old age.
8.	No cachexia.	Cachexia.
9.	Odorless.	Offensive odor.
10.	Comes on suddenly.	Slowly.
11.	No previous history of pain or hæmorrhages.	Pain always, hæmorrhages frequently.
12.	Not accompanied by discharge of mucous or jelly-like stools.	Free discharge of mucus and sometimes of jelly-like evacuations.

Symptoms common to both impaction and carcinoma were constipation in the beginning, diarrhœa later, straining frequent micturition, tumor, and reflected pains.

Fæcal impaction could be distinguished from gallstone, enterolith, and pancreatic obstruction by the doughy feel and the large size of the tumor. When a tumor presented in the sigmoid or colon, causing dangerous symptoms of occlusion, and its nature was not apparent after getting the history and making a thorough examination by means of palpation and the colon tubes, the abdomen, intestine, or both, should be opened without delay, when an accurate diagnosis could be made. The rectum and vagina should be examined in all cases of constipation and obstipation in search for an impaction.

As to treatment, when the accumulation was small, not too dense, and was located in the lower rectum, it could always be softened and evacuated by frequent copious enemata of warm soap suds containing oil and glycerin. The following was a very satisfactory combination:

℞ Soap suds. . . . . 1 pint;
Castor oil. . . . . 1 ounce;
Glycerin. . . . . 2 ounces.
M.

Inject into the rectum every two hours, to be retained as long as possible.

If the mass had been in the rectum for some time, was large, round, or hard and nodular, more radical measures were indicated, for in such cases the tumor was covered with a slimy mucus, and water could not permeate it. It was necessary to break up the accumulation into small particles, when irrigation would enable the patient to evacuate them. This could be done with the fingers, a spoon handle, or with rectal forceps. When the mass had been present a considerable time, causing dangerous symptoms of occlusion, the sphincter muscle should be divulsed under general anæsthesia, and

the tumor delivered at once, whole or in sections. When located in the sigmoid and colon, a copious injection of the formula previously named should be thrown high into the bowel by means of the long rubber colon tube. Massage was a valuable agent in obstinate cases, and when practised in an intelligent manner, fæcal tumors in any part of the intestine might be dislodged, broken up, and pushed downward until they could be removed with the finger or washed out with enemata. Now and then all palliative measures failed and it became necessary to open the abdomen and do a sigmoidotomy or a colotomy, and deliver the mass when possible. When the impaction was caused by a stricture or tumor which could not be removed, a permanent artificial anus should be established, adhesions should be broken up, and the wounds in both the intestine and abdomen should be closed immediately. Purgatives were always contra-indicated in these cases because the obstruction is purely mechanical.

The author publishes a tabular analysis of forty-six cases that had come under his own care.

The Death Rate of New York State.—The number of deaths from all causes reported for the year to the New York State Board of Health is 128,468. This exceeds the mortality of 1899 by 6,647 and the average of the past five years by 8,000. Besides these reported deaths, there were 1,600 returned too late for report, making the death rate for the year 18.5. The infant mortality was 4,000 greater than last year, but the percentage of deaths under five years is the average of past years. Typhoid fever was unusually prevalent in the autumn, causing 1,948 deaths, 350 above the average. Measles prevailed to excess in all parts of the State, the 1,333 deaths being 300 above the average. Scarlet fever was less than usually prevalent. Diphtheria had a mortality 500 below the average. Small-pox was brought from outside to seventeen places during the first half of the year, without spread. From August to November the State was free from it; then a traveling minstrel troupe left it at three localities in the eastern part of the State, whence it spread. Of fourteen deaths, four have occurred outside New York City. The grippe epidemic of the year was unusually severe, and probably added 1,500 to the number of deaths.

Milk Food Forbidden in China.—The *Indian Lancet* for January 21st gives the following condensation of a proclamation in the *Loo Chow Herald:*

"Man should not rob animals of their own proper food; and, of all animals, the cow is the most valuable to man. The sellers of milk blacken their souls for gain; but those who drink milk do so in the foolish belief that it is good for them. Before taking any medicine, we should carefully investigate its properties, and who does so in the case of milk? Milk is the natural food of babes and of young animals; but when adults drink it, do they not thereby endanger the life of the suckling calf, and arouse bitter resentment in the souls of the calf and its mother? Beasts have not the power of speech, and so cannot tell men that by drinking cow's milk they will become like quadrupeds. If men must have a strengthening draught, there are a thousand better things than milk, so why select that? Besides, the term of life is fore-ordained and it cannot be prolonged by drinking milk. Everyone who reads this warning is especially enjoined to abstain from milk in the future. Children whose parents will not allow them to drink milk will not be stunted in growth, but will have their lives prolonged and be immune in epidemics. So it is proclaimed in the Hall of Good Counsel."

Nerium Oleander.—In reference to our Therapeutical Note on *Nerium oleander* in our issue for February 23d, attention is called to a case of poisoning by this drug, upon which we commented in our issue for July 28, 1898.

A Wise Bishop.—*Merck's Archives* for January, citing the *Carlisle Journal* (England), says that at the annual meeting of the branch of the Royal Society for the Prevention of Cruelty to Animals, held at Carlisle recently under the presidency of the Bishop of Barrow, Miss Lumsden, late warden of University Hall, St. Andrews, who, it is understood, attended the meeting as the representative of the parent society, made an attack on the employment of experiments on animals in medical research. After alluding to such practices as the docking of horses' tails and the cutting of dogs' ears, she stated that vivisection was the darkest cruelty of all, and was proceeding to give at large her views on vivisection when she was interrupted by the chairman. Bishop Ware, in interposing, said great benefits had been done to mankind through experiments properly conducted. The society was not a society formed to take proceedings in regard to properly conducted scientific experiments, but to stop needless cruelty to animals. He held such a strong feeling in regard to the benefits to mankind due to vivisection properly conducted that he could not take the chair at a meeting where views were expounded such as they had now heard.

Twins Born in Different States.—Twins are always setting both Nature and conventionality at defiance. Only recently we told of twins who managed to be born in different centuries; now the *Union and Advertiser,* of Rochester, N. Y., tells us that while a lady of Portland, Ore., was traveling on a train toward Spokane, Wash., the other day, she gave birth to twins. The elder, a boy, was born in Oregon, and the other, a girl, in the State of Washington an hour later.

Freckling and Tuberculosis.—The *Medical Age* for January 10th cites *The Polyclinic* for December, 1900, as drawing attention to the fact that it is well recognized that different persons are liable to freckle with very different degrees of severity, and it has been suspected that a remarkable proneness to freckle is often coincident with tendency to scrofula or tuberculosis. It is most certain that such proneness is associated with the temperament of the individual as shown by color of eyes and hair. Freckles are, as a rule, conspicuous only in the clear skins of children and young persons. In adults they are either not often present or are comparatively inconspicuous. An observation of some interest has, however, recently been made, that they are liable to return in senile periods and to assume infective characters.

The Effect of a Grazing Bullet Wound.—Mr. A. Horman, M. R. C. S. (*Intercolonial Medical Journal,* December 20, 1900), in an article on Surgical Experiences in South Africa, says:

"It may be of some interest, from a medico-legal point, to notice the effect of a grazing wound. They give an appearance as if the skin had been burnt by a hot iron rod laid upon the skin; this is due to the removal of the superficial epidermis, exposing the true skin, which becomes brown after a few hours."

Original Communications.

CONGENITAL DISLOCATION OF THE SHOULDER, WITH REPORT OF TWO CASES OF DISLOCATION POSTERIORLY.*

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The recent publication of a few contributions upon the pathology and diagnosis of congenital dislocation of the shoulder is an interesting phase of modern orthopædic surgery. Very few writers in all of the many text-books and elaborate systems of surgery have mentioned this subject, or, if they have done so, they have, with the exception of Stimson's latest edition, passed lightly over the important points of ætiology and treatment.

Every surgeon is familiar with *old and irreducible* dislocations of this joint, and much has been written about the treatment for such cases. Regarding the congenital variety, however, it is altogether different, for, although R. W. Smith had, as early as 1839, written briefly of the pathology of this condition, the first detailed report of an operation for the relief of this deformity was published only five years ago, and then by Phelps, of New York. Küster had operated once previously, but had written nothing of the operation, and so had Post, who had likewise neglected to record what was done in the operation. In 1890 Scudder reported two cases without operation, and, since 1895, a few other surgeons, as Eve, Stimson, Schede, Souchon, and Stone, have reported cases, but the literature is still very meagre, and exhaustive research fails to find hardly more than brief mention of this interesting deformity.

My interest in the subject was first aroused when an opportunity to make some personal observations offered itself in two cases referred to me at the orthopædic department of the New York Post-graduate Medical School and Hospital, quite recently, by my colleague, Dr. Hendle, of Alexander Avenue, New York.

Smith's descriptions of the conditions found in his cases have often been quoted, but are now, in view of recent operative experiences, considered erroneous and misleading. In his case of double subcoracoid dislocation, he says: "There existed on the left side scarcely any trace of an articulating surface in the situation which the glenoid cavity occupies in the normal state; but there had been formed upon the costal surface of the scapula a socket of a glenoid shape measuring about an inch and a half in its vertical direction, and an inch and a quarter transversely. It reached upward to the under surface of the coracoid process, from which the head of the humerus was merely separated by the capsular ligament."

"The head of the humerus was of an oval shape, its long axis corresponding with the shaft of the bone. The oval shape was principally due to the deficiency of its posterior part, and there existed between the greater tubercle and the margin of the head of the bone where the investing cartilage terminated a broad, shallow depression, corresponding to the edge which separated the normal from the abnormal portion of the glenoid cavity.

Fig. 1.—One of Scudder's cases, showing the aspect posteriorly of the deformed shoulder.

Fig. 2.—One of Scudder's cases. Note the almost exact similarity of position of the affected arm in this case and in those of Phelps and Marston.

Fig. 3.—One of Scudder's cases, in which he believes the deformity was due to non-development.

*Read before the Medical Society of New York, January 29, 1901.

FIG. 4.—One of the author's cases before operation.

The shaft of the humerus was small and seemingly atrophied."

Stimson has written that this deformity is occasioned by irregular development of the joint, and, secondly, may be the late result of a paralysis antedating birth or caused during delivery. Scudder reports three cases and agrees in the main with Smith. He lays stress upon the fact that in each of his cases the clavicle and scapula on the affected side were undeveloped. It is largely on this that he bases his belief that these cases are congenital misplacements of the head of the humerus, due to congenital arrest of development. He admits that in certain exceptional cases pathological changes in some other constituent of the joint may be a factor in causing a dislocation, or there may be present a mechanical factor acting *in utero*. It is noteworthy in this connection that these views of non-development as an important ætiological factor in these cases were, with the exception of R. W. Smith's *post-mortem* work, based entirely upon merely ante-operative examinations of the subject, and were not confirmed by exploratory incision. Directly opposed to these theories is the description of the pathological condition given by Phelps in the report of his first case, operated upon in 1895, and in subsequent reports of others since then, in which he has thoroughly explored the joint and obtained excellent functional results following operation.

In Phelps's first case the patient was eight years old. The deformity had existed since birth. It was impossible for him to put his hand to his mouth, and the arm was rotated inward, turning the palm of the hand backward. The operation was performed at the private sanitarium of Dr. A. Palmer Dudley, on Madison Avenue, Dr. Dudley and Dr. Plimpton assisting. In examining the glenoid cavity with his finger in the wound, Phelps found the posterior border of the cavity had been broken away and the detached fragment was attached to the capsule. Phelps has, moreover, found the fragment of the glenoid cavity in two of his other cases operated upon.

Certainly the old adage that "seeing is believing" should hold good in careful intra-articular examination of joints.

Ordinary manipulation and outward appearances of the joint do not in these cases give sufficient evidence on which to decide whether the dislocation is due to

FIG. 5.—One of Marston's cases. Note the position of the right arm, as described in the text.

FIG. 6.—One of the author's cases before operation.

traumatism or to non-development. To my mind, the fact that in three of his cases Phelps has found the fragment of the posterior border of the acetabulum imbedded in the capsule is conclusive that, in the cases under consideration at least, the deformity was undeniably caused by traumatism.

Particularly interesting at this point is reference to the similarity in attitude between Scudder's cases, which were not operated upon, and those of Phelps, in which he found the fractured border of the glenoid cavity. The position of the shoulders is so nearly identical as to show conclusively that nothing less than an accurate radiograph or an intra-articular examination could suffice to establish a diagnosis.

It is in view of these considerations, and all that I can find in the literature, that I advocate the belief of Phelps, that these dislocations, subcoracoid, or subspinous, are due:

I. To traumatism, either at birth or *in utero.*

II. To some prenatal diseased condition of the joint, *e. g.*, tuberculosis or osteomyelitis *in utero.*

The majority of these cases can be traced to a difficult delivery, and more than a few of the heretofore supposed cases of obstetrical paralysis are undoubtedly instances of traumatic dislocation at birth, with the paralysis as a coincident complication due to the same causes as produced the dislocation; the finger of the accoucheur in the axilla, or the too forcible use of the vectis, for example. The paralysis, I contend, is not a primary ætiological factor of the dislocation. Were this the case, as many assert, the dislocation would more often be anterior, rather than subspinous, for the contraction of the pectoral muscles, which are the stronger set, would certainly draw the humeral head downward and forward. *The theory of non-development is further confuted by the six autopsies of Stone, of Boston, performed on infants with this deformity, in which he found no evidences of faulty development in any case.*

The diagnosis in this deformity is easily made. Careful manipulation and palpation enable the examiner to discover the head of the bone. If it is in proper articulation with the glenoid cavity no dislocation exists, and any paralysis present is usually a true obstetrical paralysis. If the head of the humerus can be distinctly rotated in the axilla, or outside of the glenoid surface, the

FIG. 7.—Notice the similarity of the attitude in this (Marston's) case and in one of the cases (of Phelps's) in which a fragment of the glenoid border was found attached to the capsule.

diagnosis of dislocation is positive. Scudder aptly remarks that in cases due to maldevelopment there is likely to be a difference of development between all the bones of that extremity and its normal mate.

The symptoms of the condition in my own two cases

FIG. 8.—Compare the position of the right arm with the picture of the same case made prior to the operation.

are unmistakable. The position of the arms is in each case characteristic. The affected arm hangs at the side of the body, well rotated inward. The elbow is a little flexed. The forearm is pronated, so that the palm faces backward and outward and the wrist and fingers are flexed. The flexion and abduction of the arm are probably occasioned by the impinging of the head of the humerus beneath and against the spinous process of the scapula in the glenoid cavity. The rotation of the whole arm inward is due to habitual use of the limb in this unnatural position; to the anatomical relations of the parts, and to the contraction of the pectoralis major muscle.

In the treatment of these shoulders it should be the aim of the surgeon to reduce the deformity and to secure a useful joint. The means employed may be mechanical and operative. In one of the series treated by Phelps, assisted by Plimpton, the dislocation, which was in an infant three months of age, was reduced by manipulation. Gaillard, quoted by Stimson, reports a similar case. "Four times in the course of a week he made horizontal traction on the arm by means of a weight of sixteen pounds, continued for fifteen or twenty minutes, and reinforced occasionally by traction with his hands. On the last occasion, the head moved an inch and a half along the scapula to the edge of the glenoid cavity and was then thrown into it by a movement of leverage.

"It almost immediately came out again. The next

FIG. 9.—Position of the arm before the operation in one of the cases in which Phelps found a fragment of the glenoid border attached to the capsule. Compare the attitude of the limb with Marston's cases.

day it was reduced and kept in place for an hour. Ten days later it was again reduced and the arm fixed by a bandage. This time reduction persisted. Two years later the limb was found to have gained half an inch in length; the patient could move it inward, outward, for-

ward and backward, could lace her clothes behind her back and play on a guitar.

Manual reduction should be attempted in each case when the patient is under three years of age. Failing in this, operation along the lines laid down by Phelps is clearly indicated. The technique of the method, which he recommended in his paper read in Boston before the American Orthopædic Association in 1898, was "make the incision along the posterior border of the deltoid muscle, curving it downward. This gives a flap which readily exposes the head of the bone. The capsule is then incised. The head of the bone will be found under the spine of the scapula. It will be necessary to cut away two thirds of the head of the bone, or down to the epiphysial line. The bone should be rounded off, like the original head, and then slipped into the glenoid cavity. The entire new articulation, which has been formed by the head of the bone, is next excised with a chisel or sharp spoon. The redundant capsule is then cut away and the capsule stitched with catgut." All of this series of cases were dressed with the elbow well back. This is a mistake, for none of the cases has been able to raise the arm quite to the perpendicular. In subsequent cases the arm will be dressed with the elbow well back and with the arm at a right angle with the body, so as to secure this motion, which is the only one that these patients have missed. In his third case, Dr. Phelps encountered sepsis, due to improperly prepared suture material. This produced an abscess, which was incised on the anterior aspect of the shoulder. Thorough drainage was maintained, and it is worth relating that this complication did not detract from the almost perfect functional result of the operation.

Fig. 10.—Functional result following Phelps's operation.

(To be concluded.)

Honors for the Late Queen Victoria's Physician.—Sir James Reid, Bart., K. C. B., has been appointed a Knight Grand Cross of the Royal Victoria Order.

THE REPRESENTATION OF BILIARY CALCULI BY THE RONTGEN RAYS.*

By CARL BECK, M. D.,

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I SHOWED the first undisputed skiagraphs of cholelithiasis in living patients, presenting them at the same time, in this hall, before the New York County Medical Association, on October 16, 1899 (published in the *New York Medical Journal* for January 20, 1900). I then believed that my example would encourage surgeons as well as internists, not only to follow it, but to improve on my technics at the same time. But it seems that the fact that so many before had disputed the possibility of depicting biliary calculi induced others to assume that my skiagraphic interpretations were, to say the least, erroneous.

A few others, less skeptical, who believed in the successful representation as well as the correct interpretation, thought that such success was possible under extraordinary circumstances only, and that, as a method, skiagraphy of biliary calculi could not be relied upon. Within a few months my views have been sustained in this country by Nicholas Senn, and by Naunyn

*Demonstrated at the New York Academy of Medicine, January 17, 1901.

n Germany; and Alessandri and Dalla Vedova in Italy have also very recently corroborated them.

The frequent opportunities I have had since to reproduce biliary calculi on the photographic plate have taught me several points which have made me somewhat modify the principles then set forth. The correctness of the obvious maxim, pronounced in my first publication, that, just as in renal or vesical calculi, the skiagraphic result in cholelithiasis greatly depends upon the chemical composition of the calculi, was verified to some extent only. This maxim was based upon my examining the different types of biliary calculi by skiagraphs in order to obtain a visual comparison of their permeability.

But since then I have also succeeded in fixing the common biliary calculi, which I had formerly found permeable to the rays, a light shade only, as a rule, being produced by them. Now, even if they are as small as the head of a pin, they can be distinctly seen. More than this, even calculi of the hepatic ducts are shown. Of course, the mixed bilirubin calculi, which, besides bilirubin-calcium, contain traces of copper and iron, are less permeable to the rays than all the other varieties, and, consequently, a very distinct shade can be expected. The same applies to the pure bilirubin-calcium calculi. Calculi composed of pure cholesterin show as well as, or even a little better than, the common biliary calculi, while the stratified cholesterin calculi, on account of their admixture of calcium, show less permeability to the rays. In consequence, their outlines can be nearly as distinctly shown as those of the bilirubin and the pure bilirubin-calcium calculi. These results, which could formerly hardly be hoped for, I attribute mainly to the excellent qualities of my tubes and their careful selection. They must be carefully studied, individualized, so to speak, as different patients are to be judged differently, although suffering from the same disease.

The condition *sine qua non* for skiagraphic success in such delicate work is a strongly built and powerful tube, which will bear a fifteen-inch spark for about five minutes without becoming too hot.

Another and important requirement of such tubes is that they be of medium hardness, so as to permit of the permeation of the soft tissues without penetrating the dense tissues, like bones or calculi. A tube useful for that purpose can best be tested by the operator's own hand. In fact, the hand is a better indicator than any artificial skiameter, as it contains many types of bones, from the massive carpal end of the radius to the delicate third phalanx of the little finger.

If the bones of the operator's wrist, especially the lower radial epiphysis, appear grayish-black, but still as well-defined structures, while the soft tissues show but lightly, the tube is fit for a fair reproduction of biliary calculi. If a tube shows the bones of the operator light-gray and translucent, the contrast will be insignificant, and so it will be only fit for the representation of metallic bodies, but not of biliary calculi.

On the other hand, if the tube is too soft, it will show the outlines of the operator's wrist intensely black. This indicates that such a tube will produce excellent skiagraphs of the bones of the hand and forearm; but it will not be powerful enough to permeate the soft tissues of the abdomen with sufficient clearness to show the contrast between them and the biliary calculi.

It is my experience that the tubes which I used for the reproduction of biliary calculi display their energy only so long as they are comparatively new. Later on they show less contrast, just like the very hard tubes, even if provided with an attachment for regeneration. If the tube works well from the beginning, the time of exposure should be about five minutes in thin individuals and about seven in stout ones, provided a Carbutt's or Schleussner's plate is chosen.

The position of the patient while being skiagraphed is also an important factor. He should lie on his abdomen with about three pillows underneath his clavicles, as the elevation produced by them permits of the protrusion of the gall-bladder, thus bringing the calculi nearer to the photographic plate. The approximation is increased by turning the body slightly to the right and raising the left side.

Another point of importance is that the rays should not penetrate the abdomen in a vertical direction, but from the side, so that the thick and less transparent tissue of the liver is not permeated in its whole diameter. The direction of the rays should be such that they form an angle of about 70° with the plate. The tube should be as near the abdomen as possible; the nearer, the more distinct is the picture. As only a small area shows distinctly on the plate, great care must be taken to place the tube in the proper direction. A pencil mark made at the back should correspond to the site of the gall-bladder in front.

The disadvantage of oblique irradiation is that the calculi appear larger than their natural size. When a protrusion palpable in the region of the gall-bladder indicates that it projects from the liver, direct irradiation is to be preferred. In order to exclude any possible source of error from intestinal contents, the bowels must be thoroughly evacuated before irradiation.

By employing this method, not only can the size, shape, and diameter of the gall-stones be determined in suitable cases, but they can also be localized. How important it is to know whether there are also calculi in the liver besides those present in the gall-bladder needs no discussion.

As can be realized by the illustration, which represents the calculi of a man thirty-two years of age, who had fourteen severe colicky attacks during the last sixteen months, even very small sizes can be recognized. In this case the attacks as well as the presence of a painful swelling in the region of the gall-bladder had pointed

to the presence of cholelithiasis before skiagraphy had been resorted to. The presence of numerous calculi in the liver tissue in this case shows that cholelithiasis is often only partially cured by cholecystostomy. They are not so distinct as the calculi in the gall-bladder; still, they are recognizable.

Such facts explain why sometimes calculi have surprised the surgeon, who had evacuated the gall-bladder thoroughly, by their appearance a few days after cholecystostomy. That in cholelithiasis sometimes hundreds of calculi are contained by the hepatic ducts is a well-known experience, but the latter has heretofore been gained only from the autopsy-table.

It is evident that a positive skiagraph renders exploratory laparotomy for suspected cholelithiasis unnecessary. If surgical treatment is declined, it can be ascertained by subsequent exposures whether any calculi have been dislodged or whether some have escaped. If they are of very large size, their removal by any other than a surgical way could, of course, not be expected. So the question of whether or not an operation is advisable in cholelithiasis may be settled by the Röntgen rays. When only small stones are present, there is a chance for medical treatment. When stones are found too large to pass the common duct, medical treatment can only be of a palliative character, and cholecystostomy should be performed as soon as the calculi prove to be a source of irritation.

The old lady whose calculi I had skiagraphed eighteen months ago (see illustrations in my article On the Detection of Calculi in the Liver and Gall-bladder, *New York Medical Journal,* January 20, 1900) was reexamined by me recently. Three skiagraphs, taken at different times and in different positions, showed a negative result. The patient, now more than seventy-three years of age, had submitted to diet and the regular administration of Karlsbad Mühlbrunn for more than a year, and the result was that the tumor in the region of the gall-bladder had disappeared. Her general condition had also improved accordingly, and no colicky attacks were noted during the last eighteen months. So I feel justified in believing that the negative skiagraphs confirmed the impression that the stones had passed away.

I appreciate perfectly that the method I have advised and modified is incomplete and needs further modification and improvement, as there are many delicate technical details upon the correct appreciation of which success depends to a great extent. Skiagraphy of biliary calculi is not so perfect a method as the representation of renal, ureteral, and vesical calculi. While a negative result in the case of suspected renal calculi can now pretty safely be taken as the evidence of the absence of calculi, the same cannot yet be said of biliary calculi with certainty. But, on the other hand, it can safely be asserted that even a faint skiagraphic reproduction of biliary calculi proves their presence to the expert reader. I am confident that with our increased knowledge and improved technics the skiagraphic reproduction of biliary calculi will soon prove to have become a reliable method.

SUBSTITUTE FEEDING OF INFANTS UPON MILK MODIFIED ACCORDING TO PRESCRIPTION IN LABORATORIES.*

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FEEDINGS to fit is the pædiatrist's problem. The growing child has ever-changing needs; it is not the same child more than two weeks. A mother's milk may or may not fit the requirements of her own offspring. A failing milk is usually a poor milk. A wet-nurse's milk may or may not be a fit one. Incidentally, if it is so, her personality may be in the household a hopeless misfit; she may be an impossible thing. For one reason or another, to him who makes the growing child his special charge the same problem forever recurs—feedings to fit.

In substitute feeding we may assume that we all agree that cow's milk is the basis for all beginnings; that the sanitary supervision of the production and the care of milk, its cleanliness and its freshness, and the accurate modification of an infant's milk, are essential. At the outset I may be allowed to say that my paper is to be founded on a rather extensive experience with the system of which our distinguished guest, Dr. Rotch, was the originator and perfecter.

What is required of a modern, well-equipped milk laboratory? Milk of good quality for the feeding of infants and invalids. A good milk is a mixed milk, from herds of native breeds, healthy in the locality in which they live. Such herds should be properly housed, scientifically fed, tuberculin-tested, and constantly under trained, intelligent oversight. The reasonable requirements for the production of good milk must be here fulfilled. In the abstract, to secure the ideal results, the farm, herd, and laboratory should be under the same ownership; the superintendent, the veterinary surgeon, the bacteriologist, and the chemist should be under the supervision of a medical commission of men who are, before all others, interested in the best possible milk product, viz., baby-feeders and fever-feeders. All these conditions are fulfilled in the system which owes its origin to Dr. Rotch.

The modern milk laboratories produce clean milk, milk that has been gathered, stored, and distributed under the best attainable hygienic conditions; milk is not

*Read before the New York Academy of Medicine, October 18, 1900.

clean when it contains dirt, which, from our standpoint as physicians, means living bacteria, whether growing and multiplying at the time or only capable of such growth and multiplication when the conditions shall become favoring; milk is also not clean if the bacterial growth has been arrested after a considerable time—in other words, when the growth and multiplication of the bacteria have developed their product—toxine. It is not improbable that the nursling swallows many bacteria when sucking its food from a perfectly normal breast, but never, under like conditions, does it swallow toxines. In other words, it takes a few bacteria in fresh milk, but what does it escape? It escapes stale milk with multiplied bacteria, and, quite as important, it escapes the toxic products of bacterial growth.

Clean milk, then, means, practically, milk which has been allowed to suffer but the least possible bacterial contamination. Clean milk also means milk in which no bacterial growth has been allowed to go on to the production of toxines. Bacteria infect a baby, toxines poison it. It is impossible to collect milk in large quantities bacteria-free. In many dairies a limit has been set to the unavoidable bacterial contents. Care in milking diminishes bacterial contamination. How can avoidance of toxines be attained? When cooled below 40° F. most bacteria cannot grow in even so good a culture medium as milk. The milk supply of which I speak is cooled to 40° F. within ten minutes of the milking. A car passes constantly back and forth taking milk from the pails to the cooling tank. Note, then—no dirt, no bacteria, no growth of bacteria, no toxines; 40° F. is the bacterial deadline. If one hundred bacteria fall into the milker's pail, they, for the most varieties, must remain one hundred if the thermometer remains below 40° F. Clean milk also means milk that has been protected from the contamination of contagious and infectious diseases in the persons of the milkers and milk-handlers—scarlet fever, diphtheria, typhoid fever, tuberculosis, etc.

Much of the milk delivered in New York is forty-eight hours old. Milk gathered from many separate dairies suffers much more contamination than milk from one dairy, and a long journey in ordinary freight cars, in the case of contaminated milk, is conducive to bacterial growth. The milk supply of which I am speaking is delivered in New York by express, so that the morning's milk is delivered for modification in the afternoon and delivered to patients early the next morning. The aim is to get good milk, clean milk, fresh milk, and, having procured such, to hasten it to New York by express, so that it shall have good care and a short journey and shall remain continuously cool.

Modification of Milk.—The well-equipped modern milk laboratory, furthermore, stands for accurate and clean modification of milk. Granting, then, that we have a milk that is approved—that is, a milk from one herd, milk that is clean, of good quality, fresh—how is it to be prepared for the baby? Average cow's milk contains, approximately: Fat, four per cent.; sugar, four per cent.; proteids, four per cent. Woman's milk contains: Fat, four per cent.; sugar, seven per cent.; proteids, two per cent. (high average), or, fat, three per cent.; sugar, six per cent.; proteids, one per cent. (low average). How are the proportions to be readjusted? Without entering into the details of modification, it may be said that the cream is first removed from all the milk by centrifugation, the remaining separated (skimmed) milk diluted, and the cream restored to the milk in the required quantity. Discussion will here arise as to the respective values of gravity and centrifugated cream. To me this seems a purely academic discussion; in my experience there has never arisen any accident or incident to raise an objection to centrifugated cream. The all-important freshness of centrifugated cream is an argument difficult to overturn. Centrifugated cream may be taken from the freshest milk; gravity cream requires from six to twelve hours' standing.

Modification of milk consists in the transformation of the proportions of cow's milk to the proportions of woman's milk, and in transforming a slightly acid milk to one of slightly alkaline reaction, in preserving it from bacterial and toxic contamination, in holding it ready in divided quantities for the periodical requirements of the infant; in short, in making a substitute feeding as nearly as possible like a mother's milk.

Advantages and Disadvantages.—The only argument against milk thus modified is its expensiveness. Milk modified in a laboratory must necessarily cost much. Express charges, expert labor, responsible superintendents, chemists, and bacteriologists necessarily increase the price of the product as delivered at the home. I have never allowed this argument to go unexplained. Certainly in no place should economy begin so late as in the nursery.

Having laid so much stress on the proper cleanliness and freshness of the milk, and said that this milk now requires to be modified, the following questions arise: Where can this be done? Can it be done at home by the nurse or by the mother? Must it be done in a laboratory, or can it be better done in a laboratory?

There is a human tendency to change feedings from the order of the doctor. I have on one occasion even known a mother to put chicken broth into the bottles of laboratory modified milk. I would limit the home modification to the cases of children already well started and thriving, to those which are not to be considered as delicate or in a critical state. Really difficult cases, critical cases, in which there is risk in trying different things, in which it is necessary to find the right feeding at once, in which the condition of the child is such that it is important not to risk any time, I have no hesitancy in saying there is no feeding so reliable and so good as the modified milk. The physician cannot take time to teach mothers all that is in his mind in the words clean, fresh,

accurately modified milk, properly divided, sanitarily handled.

When one considers the importance of the result, the time necessary to teach properly the details of the modification of milk for a delicate infant, and the fact that half-knowledge may lead to poor results, it may be said to constitute an objection to the method. Home modification of milk quite as much requires clean, fresh milk, intelligently handled, accurately modified, and in sanitary surroundings. In my experience home modification has been difficult to accomplish, uncertain in results, and often a failure. Carelessness and ignorance of the first principles of bacteriological cleanliness, and more often the over-anxiety to make the infant gain weight, have led to modification of the milk according to the individual wishes of the mother or nurse.

There are also duties on the part of the family physician which must be borne in mind. He must realize that modified milk is not any one thing capable of being ordered, any more than drugs are such. If he sends word to the laboratory to send "feedings proper to a child of such and such an age," he trusts to the clerks of the laboratory to prescribe for the infant which they have not even seen. If the doctor would send word to the drug clerk to provide drugs proper for a case of typhoid fever in the third week, or would tell the friends of the patient recovering from typhoid fever to feed that patient with feedings proper for a person recovering from an exhausting disease—if he would do these things, then I have nothing to say of his prescribing in this scattering way for babies whose requirements change every fortnight and whose growth is of such importance. The doctor should know first what the baby requires in the different periods of its life and development. If he does not know this, I question his ability in these days to do the best for any child. If he is willing to treat the eye or a mastoid abscess himself, without the aid of special knowledge or expert advice from another, then he is willing to feed a growing infant in slipshod ways, and ask the laboratory clerks to prescribe for the babies. Baby-feeding has become a specialty. The time will come when our milk supplies will be much improved. The object lesson set by the work of Dr. Rotch will be followed by marked improvement in all the commercial milk firms about New York. So the time will come when babies will be fed by experts, men whose minds are reflecting on the subject of the feeding of babies. Surgical removal of Meckel's ganglion is a noble work, but it does not prepare one for the proper feeding of the new-born infant. Indeed, it happens that men most skilful in attending the mother in her confinement have very little confidence in their ability to guide the infant through its devious paths in the embarrassments of teething and feeding. It needs to be remembered that cow's milk is, approximately, four per cent. of fat, four per cent. of sugar, and four per cent. of proteids. There are, then, three formulæ necessary to remember: 1. Feedings for the new-born (proper for the majority)—two per cent. of fat, five per cent. of sugar, 0.75 per cent. of proteids. 2. "Low-average breast milk"—three per cent. of fat, six per cent. of sugar, one per cent. of proteids. 3. "High-average breast milk"—four per cent. of fat, seven per cent. of sugar, two per cent. of proteids. These modifications should be changed gradually and frequently by small fractions from one to another. At the age of from eight months to a year, it is time to make the proportions approximate those of whole cow's milk—in other words, wean the child. The feedings should be all milk for the first year, mostly milk for the second year.

In closing, I wish to say that a long and full experience with laboratory-prepared substitute feedings of milk, constrains me to say that I regard the modern well-equipped laboratory as one of the greatest additions that have come to the use of the pædiatrist in the time of my practice of medicine, and that it deserves to rank with diphtheria antitoxine and intubation. For the care of most difficult, critical cases, in which no time must be lost, I prefer to trust to modified milk in preference to the wet-nurse or any of the substitute feedings. I personally feel a deep sense of gratitude to Dr. Rotch for his work in the interests of the profession and humanity. Let us grant to the guest of this evening our full expressions of appreciation; let us say that this is his monument; let him wish no other.

57 EAST SEVENTY-NINTH STREET.

THE SPECIFIC TREATMENT OF ACUTE DYSENTERY.

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(Concluded from page 407.)

We come now to the consideration of that branch of this morbid condition which is the real object of this paper, viz., its treatment. The suggestion that teachers of clinical medicine persist in the advocacy of useless and pernicious drugs in the treatment of this disease may occasion some surprise. Nevertheless, an examination of the subject will show that in the minds of a great number of the most modern writers its treatment is largely empirical. Even Sodré, to whom we are indebted for many original pathological and bacteriological suggestions, fails to acquaint his readers with the best therapeutic results obtained. We are all familiar with the various methods of treatment of acute dysentery which have been suggested by the different text-books. The variety of drugs which have been used in the effort to find some remedial agent which will give uniform results is very great; and this fact will become doubly interesting if we find the solution of the problem to be in the use of a simple purgative. Certain it is

that we find many eminent, and even some of the most recent, authorities, opposing this view. For example, no less an authority than Osler takes the position that purgatives are objectionable, and further expresses the opinion that the profession has largely given up their use. It is true that he, like others, suggests a saline purgative early in the disease, and says that it may be repeated if scybala are present, but beyond this he does not go. Conclusions similar to Osler's, regarding the use of so-called purgation in this disease, are traditionally orthodox, the majority of writers subscribing to them. Nevertheless, these conclusions have no real foundation in fact, and are absolutely controverted by recent and careful clinical observation. By a well-defined use of a certain medicine which is commonly called a purgative, we obtain in this disease a depletion of the inflamed tissue which, when compared with purgation *per se,* differs very materially; and I am convinced that a lack of appreciation of this suggestion has resulted in the sacrifice of human life which otherwise might have been saved. I cannot describe the chaotic condition of the text-books on this subject better than to quote the words of Dr. Westlake, who officially observed an epidemic of acute dysentery in California, and who reports his experience in the *Occidental Medical Times* of 1889. "How we reveled in materia medica!" he says. "What volumes of therapeutics we ransacked; what vast storehouses of concentrated and diffused wisdom we read in the immortal works of Flint, Watson, Aitken, Bartholow, von Ziemssen, Tanner, and Niemeyer; and what a humiliating corollary from this vast storehouse of epidemic dysentery literature, when we had to fall back on plain, old-fashioned Epsom salts!" Even in this instance Dr. Westlake was governed almost entirely by the older writers in the treatment of his cases, using his sulphate of magnesium for the purpose only of removing fæcal matter from the intestines. If the early morbid changes and the bacteriology of a disease *ever* suggested a rational plan of treatment, it is certainly suggested here; and I have been led to form the opinion, based necessarily, however, on the personal observation of a limited number of cases, that we have in the sulphate of magnesium, when properly administered in acute dysentery, a remedy which approaches as nearly to a specific as does quinine in the treatment of true malarial infection, or mercury and iodide of potassium in syphilis; and I think I may safely add that I am borne out in this opinion by the most recent clinical observers. It is agreed that we have in this difficulty to deal with various grades of inflammation involving the mucous and submucous membranes of the large intestine, caused by the introduction into the intestinal tissues of a micro-organism. There is no disputing the fact that this inflammation differs not materially from other inflammatory and necrotic processes of like character, except that it has for its origin the *Amœba dysenteriæ,* or admittedly, for the sake of argument, some other germ. The inflammatory process begins with the customary and consequent arrest of normal secretion, and is followed by the usual pathological changes, viz., hyperæmia, œdema, softening, infiltration, necrotic changes, rupture of blood-vessels, abnormal secretion, and, finally, complete ulceration. To this mischievous condition we have added the specific infection, together with other pathogenic micro-organisms. Now, if we would effectually remedy this morbid process, we must first eliminate the cause, disinfect the mucous and submucous tissues, and restore the normal glandular secretion; hence the great necessity of attacking the disease early in its inception. The sulphate of magnesium, if properly administered, will, I think, accomplish this result. In all cases of acute dysentery, from the beginning of the attack until there is a subsidence of all the symptoms, it should be administered in drachm doses every three hours, dissolved in one or two ounces of distilled water, to which may be added ten drops of the dilute sulphuric, or aromatic sulphuric, acid. Experience has proved conclusively the unprecedented results which may be obtained from the use of this drug in the manner described. The beneficial effects are shown in a very few hours after the commencement of its use, and in from twenty-four to forty-eight hours the patient's condition shows marked general improvement; the pain becomes less, the tormina and tenesmus rapidly subside, and there are diminution of the pulse rate and lowering of temperature. If tympanites is present, it is rapidly reduced; the stools become less painful and less frequent, the blood and mucus disappearing. At the end of forty-eight hours, in the vast majority of cases, the stools take on a biliary character. The treatment must now be continued steadily until the stools become nearly normal. When this result is obtained, the medicine may be gradually withdrawn; the average time required for the establishment of convalescence being from three to six days from the commencement of the attack. The disease occurring in children should also be treated in this manner, the dose of the sulphate of magnesium and sulphuric acid being governed by the age of the child. Not the least interesting point in this plan of treatment is its *modus operandi,* and this branch of the subject involves many interesting suggestions.

The hypothesis which seems to me to be the most reasonable is the following: By stimulating the naturally sluggish hepatic organ to greater activity, the sulphate of magnesium increases biliary secretion, and in this way acts somewhat antiseptically. In making the statement that the bile acts in any sense as an antiseptic, I fully realize the fact that I am dealing with a mooted question, as has been thoroughly proved to me by recent investigation of the opinions expressed on this subject by physiologists. Nevertheless, careful physiological experimentation leaves the question still unsettled, diametrically opposite views being expressed by equally

eminent writers, some of them holding that the bile is utterly lacking in antiputrefactive qualities, while others claim that it diminishes putrefaction in the large intestine. Notwithstanding this conflict of opinion, I feel constrained to the belief that the bile, either directly or indirectly, exerts some antiputrefactive action in this disease. To be sure, my observations are essentially clinical and necessarily of a practical character. The manner in which the sulphate of magnesium produces other beneficial results obtained from its use in this disease, seems to me to be reasonably simple. Undoubtedly it abstracts water from the surrounding tissues, and by endosmosis pours it through the mucous and submucous tissues into the cavity of the intestines, eliminating the infection from the submucosa, depleting the mucous membrane, and thereby reducing the inflammatory process, washing out the contents of the intestine and thus ridding the canal of the infectious material. As a depletent, under circumstances where it is indicated, the sulphate of magnesium has, in my opinion, no equal. By its antiphlogistic action, in acute dysentery, it lessens the tormina and tenesmus, reduces the bodily temperature, relieves the pain, depletes the blood-vessels, and in this way removes the congestion and restores the normal secretion. The physiological action of this drug has for years been thoroughly recognized by the gynæcologist, and also by the general surgeon, who use it to great advantage as a depletent in acute and chronic morbid conditions involving the pelvic organs and abdominal viscera. Many therapeutists and teachers of medicine, who have extolled its depleting qualities in other similar pathological conditions, have neglected, strangely enough, to apply the principle to the treatment of this disease. They have insisted, and continue to insist, upon administering astringents and other medicines, which can have no other effect than to lock up the secretions, when, as a matter of fact, the only rational indication, it seems to me, is to increase elimination, and, in a proper manner, restore the already diminished glandular functions. Even so recent and so eminent an authority as Loomis went so far as to recommend in this disease the use of opium to the point of narcosis. This suggestion seems to me to be in direct opposition to all the indications for the rational treatment of any such pathological condition, and must be productive of much harm when applied to the disease under consideration. To treat acute dysentery by the administration of opium to the point of narcosis is suggestive of the action of the ostrich, which buries its head in the sand in the firm belief that because it cannot see its enemies it cannot be seen by them. Is it possible that by narcotizing the patient with opium, and thereby locking up his eliminative forces, we are ridding him of his dysentery? Are we not in this way doing just the reverse? Does not every dose of opium which we administer in acute dysentery tend to deceive us by masking the enemy and paralyzing Nature's method of ridding herself of him? Does not the dysentery still exist even though the patient is narcotized? Do we accomplish anything more by the use of opium in this disease than the temporary relief of pain by which we are ourselves lulled into a feeling of false security? Is not the explanation of the almost universal use of opium in acute dysentery to be found in traditional errors in the ætiological conception of the disease, together with blind and empirical attempts to control its symptoms?

Previously to the excellent paper on this subject which was contributed by the late Dr. W. H. Thayer and read before the Medical Society of the County of Kings, my own experience had led me to the conclusion that the rational treatment of acute dysentery should be along the lines herein suggested. I was led to this belief from the following single experience: A number of years ago, I was called upon to attend a young lady who was suffering from a severe attack of acute dysentery. All the symptoms of the disease were well marked, including tenesmus and tormina, frequent and bloody stools. I treated her after the orthodox fashion, alternating the administration of sulphate of magnesium with opium. I observed that when the sulphate of magnesium was given to her, all the symptoms were relieved and her general condition had rapidly improved. But, fearful to diverge too much from the plan of treatment which was then in vogue, and which was laid down in the text-books, I did not have the courage to persist, and after moving the bowels thoroughly with the sulphate of magnesium, I had recourse to opium combined with bismuth. The administration of these drugs was invariably followed by a return of all the dysenteric symptoms, including increased frequency of the bloody stools. Eminent counsel who saw the patient with me advised a continuance of the plan of treatment which I had inaugurated, with the result that the disease terminated fatally on the fourteenth day of the patient's illness.

My experience with this case taught me a lesson which I have never forgotten; and I then concluded that many of the suggestions for the treatment of acute dysentery which were to be found in the text-books were useless, if not absolutely harmful. Since then I have treated all the cases of acute dysentery which have come under my observation in the manner above described, with uniformly good results. About ten years ago I was called to see a gentleman who had recently arrived from Havana, and who was suffering from suppurative hepatitis which followed an attack of acute dysentery contracted in Cuba. The inflammatory process extended from the hepatic organ through the diaphragm, perforating a bronchus and resulting in a fatal septic pneumonia. The patient was seen at my request by Professor McCorkle, who corroborated my diagnosis. An autopsy revealed the conditions which have been described. Shortly after the man's death, his mother and grandmother, who had nursed him during his ill-

ness, were suddenly seized with acute dysentery; his mother was sixty years of age, and his grandmother was eighty-three years of age. The cases were both severe, the grandmother having from thirty to forty stools containing blood and mucus during the first twenty-four hours of the disease. In fact, she passed blood and slime almost constantly; tenesmus and tormina were also prominent symptoms. Both these patients recovered under the administration of sulphate of magnesium in the manner described, after an illness of five and seven days, respectively. These two cases are also interesting, owing to the bearing they both have on the question of contagion. Other similar cases occurring in my own experience might be cited, but I prefer, and ask permission, to refer you to the clinical reports of more competent observers. Dr. F. Wyatt Smith, in the *British Medical Journal* for January 29, 1898, published his experience in the treatment of acute dysentery. He says: "In the British hospital at Buenos Aires and Montevideo, I had charge of a number of cases of acute tropical dysentery in the persons of sailors from ships in these ports, and from Rosario, Santos, and Rio Janeiro. I treated the first few cases with powdered ipecacuanha, in classical fashion, but, in spite of all precautions in administration, I could get nothing greater than a homœopathic, useless, dose retained, and in most cases the first dose was the last the patients would submit to taking at all, so nauseous did they find it. The type of disease, as I saw it, was doubtless severe, for all my patients died long before the arrival of the eighth day brought any hope of natural recovery." The author further says that, on the advice of some local medical friends, he tried the administration of opium; the result was, if possible, even worse than under the ipecacuanha treatment. "In despair," says Dr. Smith, "I turned to the administration of sulphate of magnesium at frequent intervals, and it acted like magic. In fact, thereafter I lost only one case, and that is the most instructive of all. It occurred in the person of an able-bodied seaman from one of Her Majesty's ships, who was brought in collapsed, delirious, and passing blood and slime in large quantities almost constantly; he was being treated with opium, and grew rapidly worse; in fact, he was sent ashore to die. Magnesium sulphate in large and frequent doses was substituted for the opium, and the patient began to improve rapidly, when, twenty-four hours later, he was seen by a consultant, who insisted upon a return to the opium, in spite of the fact that the discharges were made less frequent and contained less blood and the patient rational and able to sleep quietly." Dr. Smith's urgent and earnest entreaty that the plan of treatment which he had adopted should be carried out, was disregarded, and he was compelled to administer opium in half-grain doses every three hours. Blood almost immediately reappeared in the stools, and, shortly after the beginning of the administration of the opium, the man died. Dr. Smith concludes his account in these words: "But this case confirms the conclusion to which the uniform experience of a large number of cases of acute tropical dysentery had brought me, namely, that *ipecac is useless, if not worse; that opium is positively pernicious in these cases; that the treatment of dysentery is essentially purgative, and that magnesium sulphate is practically a specific.*" Surgeon-Captain Johnson, of Her Majesty's service, in following up the suggestions made by Dr. Wyatt Smith, published his conclusions as the result of *six years of treatment of acute dysentery with magnesium sulphate.* These conclusions were published in the *British Medical Journal* of April 16, 1898. He says: "I came to the same conclusion as described by Wyatt Smith, that the treatment of tropical dysentery, or acute dysentery of any kind, with ipecac, is not what it is reputed to be, so I treated it with Glauber's salt in small doses. This I shortly rejected, as the results were not encouraging, and in 1891 I began treatment with magnesium sulphate in small doses, since which time I have had excellent results." "Magnesium sulphate in this form," continues Johnson, "appears to me, from its physical action, to be the drug *par excellence* for counteracting the pathology of dysentery." Dr. Johnson further says that from his experience in India he has been led to the conclusion that ipecac has not the effect with which it was formerly credited, and he strongly recommends the use of magnesium sulphate. *He says that patients may come into the hospital passing fifteen stools per diem, containing blood and slime, and that when treated in the following manner the average duration of the attack is only two or three days, even for those on field service.* "The patient is at once put on a purely milk diet, and is given two drachms of magnesium sulphate every four hours, combined with aromatic sulphuric acid, five minims, to counteract any severe griping that may be caused, till the flow of bile is well established, as seen in the stools."

Dr. J. L. Dickey, medical officer of one of the Bengal railways, in the *British Medical Journal* of June 9, 1900, speaks in the highest praise of the sulphate of magnesium in this connection, saying: "I find the treatment of the greatest value in cases of acute dysentery, both in natives of India and in Europe." Dr. Dickey recorded a large number of cases which he treated by giving one drachm of a saturated solution of magnesium sulphate, to which was added ten drops of dilute sulphuric acid every two hours until the motions became copious, fæculent, and free from blood and mucus. "Unfortunately," says Dr. Dickey, "all complete records of these cases were destroyed in the earthquake of 1897."

But the most interesting of all reports is that of Surgeon-Major W. J. Buchanan, which is to be found in the *British Medical Journal* of February 10, 1900. Dr. Buchanan reports *102 consecutive cases* which were treated with small and frequent doses of saturated solution of sulphate of magnesium, *with one death,* and four hundred and fifty-three cases treated with the sul-

phate of sodium in about the same manner. All of these cases occurred in the Central Prison of Bhagalpur, Bengal, and Dr. Buchanan says, "the cases were all types and forms just as they occurred from day to day." *In all, there were 555 cases, with six deaths.* The first 102 cases were treated with sulphate of magnesium, the sulphate of sodium being substituted for the magnesium salt in the treatment of the remaining 453 cases, owing to the fact that Dr. Buchanan ran short of the former. In the vast majority of cases, the treatment was continued for from eight to twelve days. It would be interesting in this connection if we had some definite information concerning the medical treatment which our soldiers and sailors, who suffered from this disease, received during the Spanish-American war. No such knowledge is at my command, except some incidental remarks of Flexner, which are to be found included in the reports of his autopsies. These remarks, however, would lead us to the conclusion that such drugs as ipecac, bismuth, and quinine were used to a very considerable extent, the use of no other drugs being mentioned.

Before leaving the consideration of the subject of the treatment of this disease, I desire to add a word regarding the question of protective inoculation and serum therapy, as it has been applied by Shiga, an account of which is to be found in Professor Flexner's article, to which I have before referred. "Larger animals, such as the goat," says Flexner, "when treated first with the dead and afterward with the living cultures, develop a gradually increasing resistance to the inoculations; their blood serum assumes highly agglutinating qualities for the bacillus, and, coincidentally, acquires protective and healing qualities. Shiga has tested this serum upon human cases, and Dr. Eldridge reports the results up to November 1, 1899. In 1898, sixty-five cases were treated, with a death rate of nine per cent. In 1899, ninety-one laboratory cases were treated, with a death rate of eight per cent., and 110 hospital cases were treated, with a death rate of twelve per cent. During the same period of 1899 there were under ordinary treatment at Tokio, at Hirowa hospital, 116 cases, with a death rate of 37.9 per cent.; and in private houses, 1,119 cases, with a death rate of 28.5 per cent."

These results speak for themselves, as do also the results obtained in Bengal by Buchanan, with the use of sulphate of magnesium, *the death rate in his cases being one and eight tenths per cent.*

Are we, then, justified in waiting for the bacteriological confirmation of the ætiology of this disease before adopting a plan of treatment which is actually thrust upon us by every investigation of its pathology—a plan of treatment which is not only rational in theory, but which has really demonstrated its ability to reduce the death rate of acute tropical dysentery from twenty-five per cent. to a practical one per cent.? Has the clinician gained anything for the actual treatment of malarial infection, resulting from the discovery of the plasmodium? Have we not for years successfully treated syphilis without definite knowledge as to its specific ætiological factor? Would the discovery of its specific micro-organism aid us materially in the treatment of its morbid phenomena, and should we, as rational therapeutists, reject the best means at our command for controlling its mortality, simply because we must confess ignorance regarding its specific ætiology? In the light of our present knowledge, is the clinician, into whose hands the victim of acute dysentery necessarily falls, further justified in the sacrifice of human life on the altar of traditional empiricism while the bacteriologist continues his technical search for the establishment of specific theories regarding the ætiology of the disease?

Finally, I beg to submit for your consideration the following conclusions:

1. That dysentery is a disease of great gravity.
2. That it is both contagious and infectious.
3. That it is caused by the introduction into the system through food and drink, also through the air, of a specific micro-organism, the identity of which seems to be still in doubt.
4. That dysentery is one disease, in whatever latitude it may be found, and the only varieties which have any foundation in fact are those which may be based on the intensity of the morbid process.
5. That the majority of the therapeutic agents which have been suggested for the treatment of acute dysentery are useless, and in many cases harmful.
6. That sulphate of magnesium, properly administered, in the acute form of this disease, acts as a specific.

102 FORT GREENE PLACE.

THE PATHOLOGY OF INTRA-UTERINE DEATH.

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(Continued from page 410.)

DISEASES OF THE FŒTAL APPENDAGES.—The local pathological conditions that may interfere with the nutrition of the fœtus and cause its death and expulsion are exceedingly important to the physician. It is only by having a clear and distinct understanding of this subject that we can intelligently meet the emergencies which may arise. For this reason I now proceed to enumerate the various causes of intra-uterine death which may be directly attributable to pathological conditions of the fœtal envelopes and fœtal appendages. Because the decidual membrane is the earliest in point of formation, its numerous faulty conditions will be considered first. It consists of the mucous membrane lining the uterus, thickened and developed so as to fulfil the necessary requirements of a uterine envelope. At each menstrual period this mucous membrane becomes

swollen and of a velvety appearance, and then separates from the underlying structure, and may be considered an immature decidua. It becomes disintegrated and is thrown off in the menstrual discharge. On microscopical examination, this discharge is found to be composed of the superficial lining of the uterus, as well as of the deep, spongy layer adjacent to the muscular wall of the uterus. There is but a difference of degree only between the menstrual decidua and the deciduæ of pregnancy. When a vitalized ovum appears in the cavity of the womb while the decidua of menstruation is forming, the formative elements will take on greater activity, and it will develop into a fœtal envelope to which the ovum may become attached. The mucous membrane then grows around the ovum so as to envelop it in a distinct sac. That part which is reflected around it is known as the *decidua reflexa*. That which remains covering the uterine cavity is called the *decidual vera*, and that part to which the ovum is attached becomes the *decidua serotina*. From this serotina the uterine part of the placenta is afterward formed. Normally, the mucous membrane of the uterus is covered by ciliated epithelium, but toward the end of the first month of pregnancy this epithelium disappears, and shortly afterward the uterine glands are lost. About the middle of pregnancy the space between the decidua vera and the decidua reflexa is obliterated and the two membranes become welded together. Sometimes a well-formed membrane, and one which in minute structure and appearance bears a striking resemblance to the decidua of pregnancy, is expelled from the unimpregnated uterus during a catamenial period. It usually gives rise to a great deal of pain and is known as membranous dysmenorrhœa. It is probably due to reflex irritation in some part of the uterine machinery, deluding the latent cells and fibres of the mucous membrane into great activity, under the belief that a fertilized ovum is in the uterus. It must not be understood, therefore, when such a membrane is expelled, that an abortion has taken place. When, however, in married women, such membranes are persistently thrown off, they are probably the result of pregnancy. This conclusion is arrived at, not from any distinct evidence of finding an ovum in the meshes of the discharge, but from the fact that, usually, when sexual relations are held in abeyance, the expulsion of such membranes ceases until the renewal of these relations. An additional piece of evidence in favor of the belief that they are due to conception in such cases is the fact that the catamenial period is generally missed for some time before their expulsion. Sometimes these membranes come away entire and are then of triangular form and represent the shape of the uterine cavity. An antecedent endometritis is generally traced in these cases. When the impregnated ovule engrafts itself upon this inflamed mucous membrane the attachment is not sufficiently strong for the decidua to properly maintain itself. When such a membrane is examined the cavity is usually found empty. The ovum cannot be found. It has either missed getting into the uterine cavity, or, as is more probable, has not had sufficient inherent vitality to attach itself into the decidual tissue. In such instances the fault is likely to lie in some defect in the spermatozooids. The fecundating fluid may be deficient from any of the various reasons already given. These membranes are not always thrown off in one piece. Generally they are seen in shreds or detached pieces. Part of the membrane may be retained and be cast off at a subsequent date. These deciduæ may sometimes be found covered with blood, and, in the cavity, an organized clot can frequently be seen. In the very early periods of pregnancy it is almost impossible to distinguish the presence of any of the elements of conception without the aid of the microscope. A peculiar condition of the decidua, and one somewhat similar to this, was first recognized and described by the late Matthews Duncan. It is a deficiency of development in that part of the decidua that normally grows around the ovum. Instead of the ovum attaching itself firmly against the uterine decidua, only a limited part comes in contact with this surface. The consequence is a more or less pedunculated attachment. Sooner or later, the ovum in such instances perishes and is cast off. From its frail adhesion, any unusual exertion or fall may be sufficient to cause its expulsion. When it is not thrown off in this manner, the embryo will eventually suffer for the want of nourishment and gradually wither away. This is probably only one of many defects of development of the decidua in the early stages of gestation. Rarely the ovum fails to get inside the decidual cavity. It then lies between the outer wall of the decidua and the uterine wall. It forms an attachment to the surrounding structures very similar to the manner in which an ovum forms its adhesion in tubal pregnancy. Such attachments, however, are deficient and lacking in the necessary elements for the proper nourishment and development of the ovum, which forms a sort of pretense at growth, but eventually all such perish. All varieties and degrees of insertion of the ovum into the decidua have been described by various authors. A very frequent cause of death of the fœtus is an arrest of development of the decidua reflexa. The ovum, in such a case, is not sufficiently sustained, and generally sags down and becomes pedunculated. The only covering it has is that furnished by the chorion. Such attachments are extremely slender, and any unusual exertion or violent exercise may be sufficient to cause its detachment and expulsion. It is very seldom that pregnancy progresses for any length of time under such circumstances. Besides the several anomalies of insertion of the ovum, and the great liability to abortion following, there are frequent occasions when the decidua may be greatly hypertrophied, so as to produce many alterations of the chorionic villi with which it is in contact. Again, the decidua may be too thin and scanty, and the serotina

so defective in development that the placenta which it forms will be altogether too small for the needs of the embryo. After the fertilized ovum has become successfully implanted into the swollen and velvety surface of the decidua and normal development has begun, there are many opportunities for deviations and a great tendency for some women to miscarry. The decidua is abundantly supplied with blood-vessels that are constantly undergoing changes and modifications of size and distribution, in order to meet the requirements of the growing ovum. Because of this excessive vascularity of this membrane, and for the further reason that it is composed of unstable, lax tissue, extravasations of blood between the membrane itself and the uterine wall are extremely prone to occur, especially in frail, delicate women. In some women any sudden shaking, stumble, or fall may be sufficient to cause a part of the decidua to separate from the wall of the uterus and a certain amount of hæmorrhage to occur. According to the extent of the detachment will be the degree of extravasation. Small, circumscribed patches frequently separate the decidua from the walls of the uterus, and are followed by slight hæmorrhages without producing any serious consequences. The rupture of a blood-vessel occasionally takes place in the meshes of the decidua, or there may be a rupture separating the decidua from the uterus and then perforating into the substance of the decidua as well. It can readily be understood that according to the location and extent of these extravasations will be the degree of danger to the embryo. When they take place toward the fundus, and when they are circumscribed in extent, they need not interrupt the progress of pregnancy. When, however, they are more extensive, and separate a large portion of the decidua, they interfere with the nutrition of the embryo and eventually cause its death and expulsion. Many of the vague cases of hæmorrhage that are seen during the progress of pregnancy, and are exceedingly puzzling to the physician, are cases of this character. When the separation takes place high up in the uterus there will be no external manifestation of hæmorrhage, but only vague and uncertain symptoms which cannot be well defined. Occasionally the hæmorrhage burrows downward to the cervix by separating the decidua from the uterine wall, and may be followed by an extensive hæmorrhage. These cases are nearly always followed by abortion. It is not an unusual occurrence in the early stages of gestation for hæmorrhage to take place into the decidual cavity and to fill it with coagula. This presses so upon the embryo as to destroy its vitality. The clots may be so extensive as to entirely obliterate all semblance of an ovum. Generally they can be found wrapped up in the budding folds of the chorion floating about in the fluid part of the blood in the decidual cavity. Along toward the third month of gestation the decidua reflexa is fully developed, and the chorionic villi have by this time embedded themselves in its substance. By this time, too, the young placenta is beginning to form and to send out delicate anastomotic loops toward the villi of the chorion. While these tender structures are undergoing these incessant changes, hæmorrhages are most liable to take place, but they are of a different character to the hæmorrhage that takes place between the decidua and the uterine wall. It will be remembered that, during the progress of development, the villi of the chorion gradually approach the decidua, and when they have reached its surface they insinuate and push the villi into its substance. Small anastomotic loops from the decidua surround these villus-like webs. These small blood-vessels eventually form part of the placenta. From this period the decidua becomes a highly vascular structure, particularly at that part that becomes the future placenta; the blood-vessels which appear in its substance as small capillaries increase in size rapidly and, as necessity requires, eventually form sinuses, which are constantly filled with maternal blood and into which the fœtal villi are suspended; here it is that the future embryo receives all its nourishment. It should surprise no one, therefore, to learn that during this wonderful and unique adjustment of such frail and delicate structures hæmorrhage should take place from the breaking down of some of these loops. Hæmorrhage occurring here is more dangerous to the embryo than is that which takes place between the decidua and the uterine wall. In this, the blood may become extravasated between the decidua reflexa and decidua vera, and may be so extensive as to fill up the whole cavity, or it may occur between the decidua reflexa and serotina and the chorion, and may be so extensive as to quickly cause the death of the embryo from compression. All gradations of hæmorrhages may take place in these delicate structures. They may be so slight as to give rise to no symptoms whatever, and to do no injury to the embryo; or they may be so extensive as to interrupt the normal circulation and nutrition of the fœtus. There may not be sufficient interference to cause the death of the fœtus, but yet enough to gradually impair its normal development. Its growth is, as a consequence, more or less stunted, and, should it survive to the period of normal birth, it will probably be so frail and shriveled as to be unable to prolong life. It may be that, when such interference with the proper nutrition of the fœtus takes place, it may not be general. Part of the embryo may be properly nourished while the other part is not, and as a consequence there may follow a disproportion in different parts of the fœtus. It is quite probable that certain congenital defects and malformations may thus be accounted for.

Hæmorrhages between the chorion and the decidua form one of the most frequent local causes of death of the embryo during the early stages of gestation. This condition constitutes the apoplexy of the ovum so frequently mentioned and described by various authors. It is found in all degrees of form, and a variety of causes

has been given for its occurrence. There is no doubt that defects of early development may produce it, as well as unusual exertions, as falls and stumbles. These are without question the direct causes of many of these hæmorrhages, but they are only contributory. The far-back commencement and the indirect influences leading up to these hæmorrhages are to be found in many instances in certain general constitutional defects. One of the prominent morbid conditions of the decidua is that of intense engorgement. On minute investigation of the blood-vessels of the decidual membrane, it is found that they are much larger in calibre, and somewhat more tortuous, than in normal conditions. This state of congestion can be followed into the sinuses and farther back into the substance of the uterus. All diseases accompanied by passive congestion have a tendency in this direction. Under this head may be mentioned valvular disease of the heart, chronic Bright's disease, cirrhosis of the liver, and certain disorders of the portal circulation. Plethoric women frequently are prone to apoplexy of the ovum. This bears out the theory advanced in a previous paragraph on this subject, where we maintained that the reason that very obese women were difficult to impregnate, and when they did become impregnated that pregnancy seldom advanced to the full term of gestation, was that in such conditions the endometrium was in a constant state of congestion, and it was with difficulty that an ovum could become attached to the engorged uterine wall. Much will depend upon the amount and degree of the engorgement. Hyperæmia and congestion are sufficiently adequate to bring on a rupture of these frail blood-vessels and cause such extravasations between the membranes. Frequently without extravasation the death and the expulsion of the ovum can be brought about simply by the irritation that may be induced. In certain women there is such a disposition to miscarriage that almost any indiscretion will precipitate abortion. In many instances no such constitutional reasons can be found for these early hæmorrhages. It is then obvious that the separation of such ova is clearly traceable to violence. The structures show no evidence of morbid transformation, and the extruded embryo indicates that they have torn away from the uterine wall in shreds, due no doubt to some traumatic cause. There can be little doubt that embryonic death in the early stages of pregnancy is much more common than is generally believed. There is no accurate means at our disposal of learning the comparative frequency of such conditions, because in the first few weeks they are frequently extruded unobserved.

These extruded ova, on minute examination, frequently show evidences of fatty degeneration. Distinct oil-particles, granule-cells, and broken-down connective tissue can be found in the parenchyma of the decidua and penetrating into the interior of their cells. The blood-vessels, which are so numerous throughout this membrane, and which form anastomotic loops on the surface of the villi, undergo a similar change. A study of this degenerative process as affecting the decidua is singularly interesting. In my earlier investigations on the subject the conclusion that had forced itself upon my labors was, that this condition was to be accounted for by after-changes taking place in consequence of extravasations of blood produced by general or local causes. Upon further and more careful investigation, it was found that, in quite a number of instances, this fatty degeneration was present in placentæ when there had been no blood-clots, and in others the clots were so far distant from the degenerative process as to exclude it entirely as a predisposing cause. In normal conditions the parietal decidua does not participate in the formation of the placenta, but just so soon as its function ceases on the formation of the placenta, there takes place a gradual destruction of some of the protoplasm and a veritable fatty degeneration sets in. This degeneration should not, however, extend farther than the limits of the placenta, but the two are so intimately associated that it would not require much perversion of this process to extend beyond the limits and then to invade the placental decidua and impair its function. Ercolandi, whose researches into this subject are well recognized, concluded that hæmorrhages and the formation of blood-clots of various sizes between the decidua and the chorion were brought about by a fatty degeneration of the decidua serotina at a time when the young placenta should be forming. This breaking down of the tissues immediately surrounding the blood-vessels of the parts necessarily removes a certain amount of pressure and support, and favors rupture. When such hæmorrhage takes place in the tissue of the serotina, its anatomical structure will permit it to burrow from one cotyledon to another until the sinuses are more or less choked with maternal blood. This may take place suddenly or slowly, according to the extent of the degenerative process and the proximity of this process to the vessel walls. As a consequence, there will be almost complete cessation of nutriment to the young embryo, and it inevitably perishes and is cast off. Some authorities maintain that the rupture of blood-vessels of the decidua, where its structures take part in the formation of the lacunæ, accounts for many of these hæmorrhages.

(To be continued.)

A Higher Death Rate in Boston.—The statistics of the Boston board of health for 1900, which have just been made public, show the death rate last year to have been 20.82 per 1,000 inhabitants, as against 20.12 in 1899 and 20.09 in 1898. The latter figure is the lowest death rate recorded since 1865, the highest being 30.43 per 1,000, in 1872. Consumption, as heretofore, leads as the cause of death, 1,247 deaths having been ascribed to this disease.

ANGEIOMA CYSTICUM OF THE NOSE.*

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In rhinopathology we have not yet a distinct classification of the different varieties of cysts. It has been my aim for some time past to study these new growths. To-day I shall describe to you only one class of cysts, the angeioma cysticum, of which I have observed but two cases in the last fourteen years.

This form of cyst differs from others not only from a histological (regarding its structure), but also from a chemical point of view (referring to its contents); it is rare and has been observed, according to their description, only by a few others (Potter, Lublinski, *et al.*), who named it cystoma, or retention cyst.

My own cases were observed and studied in a boy nine years old and in a woman twenty-eight years old. Both presented practically the same conditions, and I shall give you, therefore, only a brief *résumé* of the analytical results obtained.

The larger of the black round dots represent erythrocytes. The smaller ones are nuclei of the connective tissue. The erythrocytes are slightly exaggerated as regards their diameter, in order that a distinction may be made between them and the nuclei. The black solid spaces are blood-clots. The fine dots in the squamous epithelium represent shading of the tissue: the larger ones represent the nuclei. *a*, interior of the cyst; *b*, cavernous sinus; *c*, beginning of squamous epithelium; *d*, ciliated columnar epithelium; *e*, connective tissue; *f*, fibrous tissue; *g*, vein.

Macroscopical.—The nasal passages present no other pathological condition than a single bluish-gray tumor

* Read before the American Laryngological Association at its Twenty-second Annual Congress.

obstructing the entire posterior portion of one side of the nose and protruding somewhat into the nasopharyngeal vault. The touch with a probe—one of the most valuable instruments for rhinodiagnostic purposes—is very characteristic; this tumor shows a greater elasticity of its outer walls than any other found within these limits, such as an ordinary myxoma or myxofibroma. It is very movable and attached to a small base apparently a little distance below the foramen sphenopalatinum, where the sphenopalatine artery and vein enter the nasal cavity.

During and after extirpation of the tumor a light brownish fluid escaped, leaving a very thin collapsed sac of a sausage form; the fluid was collected for chemical analysis. If the seat of the cyst is not thoroughly destroyed, as by the galvanocautery, it will very rapidly form again. Owing to this, I had the good opportunity in one case of gathering a sufficient amount of this cyst fluid for chemical research.

Microscopical.—In the sections of the cyst walls diametrically cut (see drawing) we observe a ciliated columnar epithelium covering nearly the whole external part of the growth, with the exception of a certain portion, which consists of squamous epithelium (produced either by pressure or by continuation of the mother-stratum). No glands are to be found in any of the sections, but a large number of venous blood-vessels, some of them enlarged, running parallel with the sac; also some large venous sinuses are seen. As the venous blood-vessels and cavernous sinuses constitute the principal elements of this cyst wall, I have therefore termed this growth *angeioma cysticum.*

Chemical Analysis of the Cyst Fluid.—The specific gravity is somewhat lower than that of blood serum and has an alkaline reaction; the brown color is partly due to lutein (lipochrom) and partly to a derivative of hæmoglobin. Serum albumin was found in larger quantities in comparison with metaglobulin and paraglobulin, which were present only in small quantities. Neither mucin, paramucin, albumoses, peptones, leucocytes, nor cholesterin crystals were found; only a few red blood-corpuscles were detected, which caused in a very short time, when exposed to the air, a coagulation of the whole fluid. This cyst fluid represents a blood transudate, and we might therefore name this tumor also a *serous cyst* (from a physiologicochemical point of view).

A SIMPLE APPARATUS FOR MODIFYING COW'S MILK.*

By CHARLES HERRMAN, M. D.,

NEW YORK.

A METHOD for the modification of cow's milk for the purpose of infant feeding should meet three important requirements: It should be fairly accurate; not too complicated; and it should admit of a number of changes of formulæ.

Of the methods suggested, those which are simple allow a very small number of changes in the percentage of the various ingredients, and those which admit of a larger number of changes usually require the use of more or less complicated formulæ or tables.

In the construction of this apparatus I have made use of the data given in Dr. Holt's paper, recently published.*

Average cow's milk from a trustworthy dealer is taken as containing 3.5 per cent. of proteids, 4 per cent. of fat, and 4.5 per cent. of sugar. If such milk is allowed

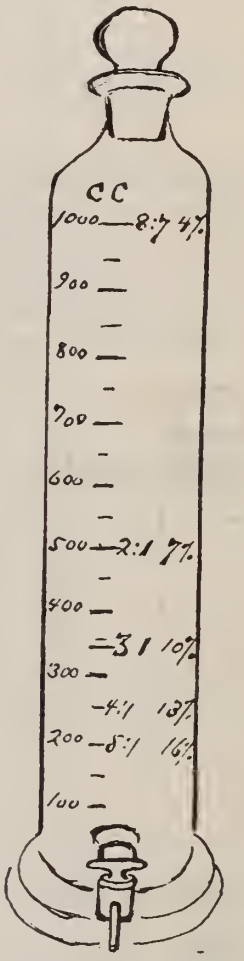

FIG. 1.

to stand for four hours (a longer time is not necessary) in a cool place, the cream separates, and we have:

Upper half: approximately, 7 per cent. fat, with fat to proteids as 2 : 1.

Upper one third: 10 per cent. fat—fat to proteids, 3 : 1.
Upper one fourth: 13 " " " " " " 4 : 1.
Upper one fifth: 16 " " " " " " 5 : 1.

The apparatus (Fig. 1) consists of a glass cylinder graduated to 1,000 cubic centimetres. (It is not necessary to remember the equivalents of drachms and ounces in the metric system.) The use of 1,000 cubic centimetres greatly simplifies the calculation. At the bottom

*Presented to the Pædiatric Section, New York Academy of Medicine, February 14, 1900.

*New York Medical Journal, January 12, 1901.

there is a stop-cock, so that the milk may be allowed to flow off from below, instead of dipping or siphoning from the top. This has the advantage that the separation can be made more rapidly and accurately, and the upper layer is not disturbed. The cylinder is graduated from below upward, so that it shows the amount of milk remaining in the vessel. At 1,000 cubic centimetres it is marked 8 : 7, 4 per cent., that is to say, fat to proteids, 8 : 7, 4 per cent. fat; at 500 cubic centimetres,

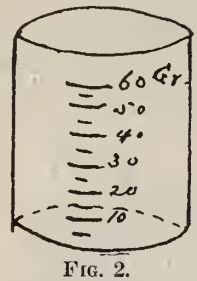

FIG. 2.

2 : 1, 7 per cent.; at 333 cubic centimetres, 3 : 1, 10 per cent.; at 250 cubic centimetres, 4 : 1, 13 per cent.; at 200 cubic centimetres, 5 : 1, 16 per cent.

The apparatus is used as follows: If a mixture containing fat to proteids as 3 : 1 is desired, after the cream has separated, the lower portion of the milk is allowed

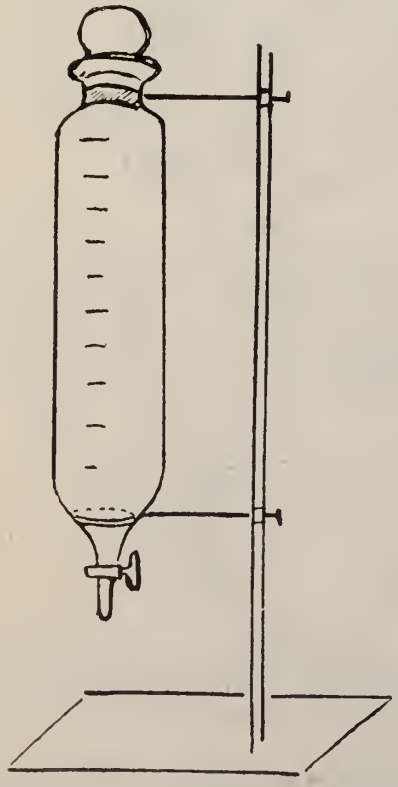

FIG. 3.

to flow out, until the milk remaining in the vessel has reached the point 3 : 1, 10 per cent. It is then mixed. This gives a mixture containing fat to proteids 3 : 1 fat, 10 per cent.

To determine the number of cubic centimetres of this mixture to be used, divide percentage of fat desired by percentage of fat in the mixture, and express the result in hundreds. For example, if 2 per cent. fat is desired, we have:

10) 2. ; if 2.5 per cent., 10) 2.5 etc.

200 c. c. 250 c. c.

In this case the divisor being 10, no calculation is required; the desired percentage expressed in hundreds is taken. If we wish to add 5 per cent. of lime water, add five divisions (each division represents 1 per cent.). Then fill to 1,000 cubic centimetres with the diluent, boiled water, barley water, or gruel, whichever is chosen.

If a mixture containing fat to proteids as 2 : 1 is desired, after the cream has separated, the lower portion is allowed to flow off until the point marked 2 : 1, 7 per cent., is reached. The milk is then mixed as before. We have then a mixture containing fat to proteids as 2 : 1, 7 per cent. fat. As before, to determine the number of cubic centimetres to be used, divide the percentage of fat desired by the percentage of fat in the mixture, and express in hundreds. For example, if 3 per cent. of fat is desired, we have:

7) 3.

428 c. c.

The same method is used for the fats to proteids, as 8 : 7, 4 : 1, and 5 : 1, the divisor in these cases being 4, 13, and 16, respectively.

In this way it is possible to obtain any number of changes in the amount of fat and proteids, in the relations of 8 : 7, 2 : 1, 3 : 1, 4 : 1, 5 : 1, without remembering or referring to any formula. The only number needed, the divisor, 4, 7, 10, 13, 16, is marked on the vessel.

With regard to the percentage of sugar, by referring to Table I it will be seen that the sugar is to the proteids

TABLE I.

Fat to proteid,	5 :1=	fat,	16	per cent.;	proteids,	3.20;	sugar,	4.05
" " "	4 :1=	"	13	" "	"	3.25	"	4.15
" " "	3 :1=	"	10	" "	"	3.30	"	4.30
" " "	2 :1=	"	7	" "	"	3.40	"	4.40
" " "	8 :7=	"	4	" "	"	3.50	"	4.50

in a nearly constant ratio of 1.3 : 1. Therefore, to take a simple example, if any of the above mixtures contains 1 per cent. of proteids, it will contain 1.3 per cent. of sugar. If we wish 5 per cent. of sugar, 3.7 per cent. must be added, *i. e.*, 37 grammes for 1,000 cubic centimetres; if 6 per cent. of sugar is desired, 4.7 per cent., or 47 grammes. For measuring the desired amount of sugar, a small graduated glass (Fig. 2) is used.

Incidentally the apparatus may be used for testing the quality of the milk used. The specific gravity of a specimen of the whole milk is taken. After standing, the percentage of cream may be read off directly, as each space represents one per cent. Then the specific gravity of a portion of the lower milk, which has been allowed to flow off, is taken. The specific gravity of the whole

milk from a herd ranges from 1,029 to 1,033 at 60° F. The specific gravity of the lower milk should be from 2.5 to 3.5 greater than that of the whole milk, and the percentage of cream from 15 to 18.

A somewhat different form of the same apparatus is shown in Fig. 3. Here a separatory funnel is used. The graduations and method of using are the same.

27 West One Hundred and Fifteenth Street.

Therapeutical Notes.

Rhus Glabra in Enuresis.—Dr. J. J. Cassidy (*Canadian Journal of Medicine and Surgery,* February) reports three cases of nocturnal enuresis in boys of from twelve to fourteen years of age, in which other treatment had proved unavailing, successfully treated as follows:

℞ Citrate of iron.....160 grains;
Syrup of lactophosphate of lime, } of each. 2 ounces.
Aromatic syrup of cascara, }
M.
A teaspoonful after dinner (noon).
℞ Fluid extract of rhus glabra....320 minims;
Syrup.....to 2 ounces.
M.
A teaspoonful at bedtime.

This treatment was continued for four months. The incontinence disappeared and has not since recurred. The author says that rhus glabra produced more than a temporary effect, and adds:

"My explanation is that this remedy was given regularly for four months, and the cure resulted largely from the continued action of the vegetable astringent on the vesical mucosa, and particularly the fibres of the sphincter vesicæ. The use of iron as an adjuvant to rhus is important; but, the mineral being incompatible with a vegetable astringent, it was given in a separate prescription. Aromatic syrup of cascara was combined with it to overcome its constipating action.

"The syrup of the lactophosphate of lime is useful in relieving atonic and irritative dyspepsia, which in some cases of enuresis may be responsible for a disordered and irritating condition of the urine, such as lithæmia and oxaluria. The restoration of the urinary secretion to a normal condition tends to make the bladder more tolerant, and thus by lessening irritation of the vesical mucosa promotes the cure of enuresis. All the authorities say that rhus should be given three times a day, and iron is usually given as often. Each of the mixtures I ordered was given once a day, so that in my cases the results were as favorable as they could have been if they had been used more frequently."

A Prescription for Mumps.—Dr. Floyd M. Crandall, in Vol. ii of the second edition of Hare's *System of Practical Therapeutics,* says of the following mixture that it is palatable and renders good service during the febrile stage:

℞ Spirit of nitrous ether..... 2 fluid drachms;
Solution of ammonium acetate.... ½ fluid ounce;
Glycerin..... ½ " "
Cinnamon water, enough to make.. 3 fluid ounces.
M. A teaspoonful every two hours for a child five years old.

A Lotion for Painful Dentition.—The *Medicinisch-chirurgisches Central-Blatt* for February 8th credits the following formula to the *Correspondenz-Blatt für schweizer Aerzte,* 1900, No. 23:

℞ Citric acid, } each..... ¾ of a grain;
Distilled water, }
Cocaine hydrochloride..... 1½ grain;
Syrup..... 5 drachms;
Tincture of vanilla.....10 drops.
M. To be rubbed on the gums.

Methyl Salicylate in the Painful Nocturnal Erections of Gonorrhœa.—Baratier (*Deutsche Aerzte-Zeitung,* 1900, No. 23; *Medicinisch-chirurgisches Central-Blatt,* February 8th) advises warm baths, copious draughts of vichy water, and anointing the penis with the following ointment:

℞ Methyl salicylate..... 1 part;
Petrolatum.....10 parts.
M. After the inunction a thin layer of wadding should be applied to the member, and the whole covered with adhesive taffeta.

An Enema for Eclampsia.—Popescul (*Semaine médicale,* 1900, No. 49; *Fortschritte der Medicin,* February 13th) recommends the following formula as particularly efficient:

℞ Potassium bromide, } each.....120 parts;
Chloral (hydrate?), }
Extract of hyoscyamus, } each. 1 part;
Extract of cannabis indica, }
Distilled water.....360 parts.
M. A tablespoonful to be injected into the rectum before or during the paroxysm.

A Powder for Anorexia.—*Progrès médical* for January 19th credits Kalb with the following formula:

℞ Crystallized quassine..... $\frac{3}{100}$ of a grain;
Powdered nux vomica..... $\frac{3}{10}$ " " "
Powdered rhubarb..... 2¼ grains.
M. Such a powder, in a wafer, to be taken before each meal.

An Ointment for Chapped Hands.—Steffen is credited with the following formula in the *Journal de médecine de Paris* for January 20th:

℞ Menthol..... 3 parts;
Salol, } each..... 4 "
Olive oil, }
Lanolin.....100 "
M. S. To be applied twice a day. It is said that the pain disappears, the skin softens, and the fissures heal promptly.

A Palliative for the Pain of Gastric Cancer.—The *Klinisch-therapeutische Wochenschrift* for February 10th gives the following formula as emanating from Dieulafoy, of Paris:

℞ Cocaine hydrochloride.... $\frac{3}{1500}$ of a grain;
Morphine hydrochloride.. $\frac{1}{1500}$ " " "
Lime water..... 3 fluid ounces.
M. S. A coffeespoonful in a tablespoonful of ice-cold milk every hour. At the same time an ice bag should be applied to the epigastrium. After the second day the dose may be diminished gradually.

To Soften Wax in the Ears the following has been found generally useful:

℞ Sodium biborate..... 2 grains;
Glycerin..... ½ a drachm;
Water to..... 2 drachms.
M.

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NEW YORK, SATURDAY, MARCH 16, 1901.

THERAPEUTICAL INJECTIONS OF SOLIDIFYING FATS.

NOT long ago, when the endomeningeal employment of cocaine for purposes of anæsthetization was making a stir, we called attention to the fact that, fifteen years before, Dr. J. Leonard Corning had fully described the procedure in our columns. We regard it as not a little remarkable that we should so soon have fresh occasion to allude to an ingenious device of Dr. Corning's that had passed unnoticed. In our issue for April 14, 1894, Dr. Corning described what he termed elæomyenchysis, which he had practised successfully for the relief of obstinate painful spasm affecting one of the large muscles of the neck, the splenius. It consisted in injecting into the substance of the muscle a melted mixture of hard paraffin and cacao butter in such a way that, when the fat cooled, a number of solid transverse bars would be formed in the muscle, considerably restricting its power to contract. The idea was certainly worthy of imitation, but, though it had effected the purpose in Dr. Corning's case, it appears to have met with no imitators until quite recently.

Now, however, some of our Austrian colleagues have been resorting to injections of fat, but for a far different purpose, that of mitigating incontinence of urine in women. At a meeting of the Kaiserliche königliche Gesellschaft der Aerzte in Wien, held on February 15th (*Wiener klinische Wochenschrift,* February 21st), Kapsammer reported three cases in which he and von Frisch had cured incontinence by a procedure which he attributed to Gersuny. We do not know when Gersuny's work in this direction was done or where the original account of it is to be found. The injections were made into the tissue between the anterior vaginal wall and the neck of the bladder, "white vaseline" (probably hard paraffin) being used. In two of the cases von Frisch injected six cubic centimetres of the fat twice, at intervals of a week; in the third case Kapsammer made only one injection, using eight cubic centimetres. In one of von Frisch's cases the patient complained of tenesmus and of the sensation of a foreign body in the rectum immediately after the injection, and her temperature rose to between 100° and 101° F. The other patient had a chill, headache, dyspnœa, an irritative cough, and a rise of temperature to 100.56° F. At the same time she complained of a severe stabbing pain a little to the left of the apex of the heart. All these symptoms, however, soon subsided. In Kapsammer's own case there were no untoward symptoms, and he attributes their absence to the fact that he injected the entire amount of the paraffin at one point. The theory of the operation is that the paraffin, as it hardens, forms a mechanical support which assists the vesical sphincter somewhat as the enlarged median lobe of the prostate impedes micturition in the male subject. Whether or not this theory is well founded, the efficiency of the procedure is beyond doubt.

There is a danger connected with this mode of treatment, and it is that of giving rise to pulmonary embolism, which actually occurred in a case of Pfannenstiel's, though, fortunately, not with a fatal result. Kapsammer thinks the danger is proportionate to the number of punctures made, but Gersuny, in the discussion, gave it as his belief that it was in direct proportion to the melting point of the fat employed. We have no doubt that Gersuny is right in this. Corning, too, had the danger of pulmonary embolism in mind, and he guarded against it by securing the immediate solidification of the fat by chilling the part with a spray of ether. The failure of the Austrian operators to take a similar precaution seems to show that they were unacquainted with Corning's original procedure. In vaginal work an ice-bag might be applied over the seat of puncture, but we fancy that limiting the spread of the injection by compression of the surroundings parts would prove more convenient.

THE MEDICOLEGAL VALUE OF FLORENCE'S TEST FOR SPERMINE.

THE medicolegal value of Florence's reaction for spermine, like that of all reagents, depends, of course, upon its conclusiveness. Florence's reaction, as we chronicled in our issue for July 16, 1898, consists in the fact that, if to some fluid supposed to be spermatic fluid, or to some supposed spermatic stains upon linen, etc., previously moistened with water, a few drops of the

following reagent are applied, there immediately ensues the formation of dusky-brown microscopic crystals, partly long rhombic tables and partly fine needles. These crystals closely resemble hæmin crystals.

The reagent, called potassium triiodide, is prepared by dissolving in 30 parts of water 1.65 parts of potassium iodide and 2.54 parts of iodine (previously washed). Now, it is certain that this reaction is, on the whole, fairly constant in the presence of spermatic fluid; but much more than this is requisite before it can be permitted to assume any definite scope in medicolegal investigations. This test has been re-examined separately by Gumprecht, Richter, Lecco, and others; now comes Dr. Duquenne with an investigation carried on under the direction of Professor Corin in the Institute of Legal Medicine of the University of Liége, and published in the *Annales de la Société de médecine légale de Belgique,* xii année, No. 3. The questions which Dr. Duquenne proposed to himself were: 1. Do seminal stains, after submission to certain manipulations, still continue to give Florence's reaction? 2. Is the reaction specifically confined to sperm stains, or is it also presented by other substances? 3. Is the action specific to human spermine, or, better still, only to ejaculated human spermine; or may it also be determined by the sperm and testicular products of other animals? 4. Does the reaction actually possess in the presence of human spermine the value assigned to it by Florence, viz., that it serves to separate spermatic from nonspermatic stains, so that, when obtained prior to the search for spermatozooids themselves, if the crystals appear, the search for spermatozooids may be prosecuted with almost a certainty of finding them; while, on the contrary, if the crystals do not appear, it will be vain to search for spermatozooids which are certainly absent? 5. Finally, what is the principle in the seminal fluid which determines the production of the crystals in the presence of potassium triiodide?

To answer these questions, the author made a series of experiments. In regard to the first, he soaked for two months rags containing sperm stains, after previously satisfying himself of the presence of spermatozooids and of Florence's crystals, in alcohol at 40°, sulphuric ether, water, and water with potash soap and with hydrochloric acid respectively, chloroform, and petroleum ether. All traces of Florence's reaction disappeared except in the case of the last two.

He further found that crystals, either identical with, or closely resembling, those of Florence's reaction, were obtained by the reagent from a great number of substances—*e. g.*, sulphate of atropine, tincture of cantharides, pyridine, iodide of N methyl pyridine, picoline, ecgonine, glycocol, and Pochl's spermine; but piperidine, methyl piperidine, piperazine, and glandular secretions from the vagina, uterus, and nasal cavity gave no reaction. Preparations of the testicle and prostate treated by Brieger's method and then submitted to the triiodide test did not give distinct crystals when recent; but after standing for some twenty-four hours crystals were obtained. From this and the last series of experiments, it follows that the formation of the crystals is not characteristic of spermine.

The author further found that certain stains on the linen of both men and women, while clearly giving evidence of spermatozooids, failed to form crystals with the triiodide, though the same solution was shown to be active with other specimens. This failure is, however, admitted to be exceedingly rare and its determining causes unknown.

The investigations into the nature of the substance in the sperm which determines the production of crystals were fruitless, though the author considers that the idea that the crystals are due to something in the reagent itself may be discarded.

From all these considerations it seems clear that but little reliance can be placed upon this test save as confirmatory evidence, and that, until more definite results can be obtained, it cannot with safety be relied on for medicolegal purposes.

INTERNATIONAL RECIPROCITY IN TEACHING.

The brilliant clinical demonstrations given in various European cities many years ago by the late Dr. J. Marion Sims, the work of the late Dr. Brown-Séquard and Mr. Lawson Tait in New York, and Sir Michael Foster's more recent lectures in San Francisco, all raise the thought that something done more systematically in this direction would prove powerfully conducive to a most desirable diffusion, not so much of actual knowledge, as of breadth of view, among the medical men of various countries. To a considerable extent, the international medical congresses work to this purpose, but, so far as the element of personal intercourse is concerned—and that is the particular element that we have in mind—they reach only physicians whose ideas have already been more or less irrevocably formed, those who have reached mature years. What is perhaps of greater importance is that a like influence should be brought to

bear upon those whose minds have not yet emerged from the formative stage—that is to say, upon undergraduates.

As regards the actual increment constantly going on in the knowledge of medicine, it is continually diffused over the world by the periodicals, as everybody knows, but book knowledge of what has been accomplished by certain men and of what investigations they are at work upon does not rank with the appreciation that comes from hearing a man talk, even in a foreign language, noting his mannerisms, and witnessing his manipulations. Who can doubt that the element of personal "magnetism" counts for much more than the written word? Certainly nobody who has worked under the late Mr. Lawson Tait. It is no disparagement to Mr. Tait's writings to say that they fall far short of his personal teaching. Doubtless the same may be said of Trousseau's work and of that of Sir Thomas Watson, charming as their writings are. Moreover, there are men of great influence on contemporary thought who do little or no writing. A conspicuous example was the late Dr. Alonzo Clark. From such facts as these proceeds the great value of the didactic lecture. If, once a year, each of our leading medical colleges could afford to its students a course of lectures by some commanding thinker from another city, how would the young men's grasp of the actual status and the potentialities of medicine be strengthened!

Some of our leading universities appear to have made a beginning in the work of providing for special courses of lectures by distinguished men who are not members of the faculty, and our impression is that the example set by one of the medical schools of San Francisco will not only be kept up by that particular institution, but also spur on other schools to a similar course. First one country and then another produces a man of towering eminence as a teacher; his usefulness should not be confined to his own land, and still less should it be restricted to a particular institution.

THE DESTRUCTION OF THE ORANGE (N. J.) ISOLATION HOSPITAL.

It is difficult to imagine anything more discreditable and reprehensible to all concerned than the work of the mob that demolished the isolation hospital in Orange, N. J., on March 11th. But, apart from the fact that recourse to mob law is a stigma of barbarism, one would think that rational people in any community would see that a hospital for infectious disease is far less dangerous to its environment than even one sporadic case of such disease in a private house. In the former case, knowledge, methods, appliances, etc., are all at hand, and are used under strict regulations, for minimizing the dangers of the disease and preventing its spread; while in the latter instance, in some cases all, in all cases some, of these things are inevitably lacking. We commend this consideration to the notice of the Orange Common Council, upon which, as we understand, may devolve the duty of authorizing a new hospital.

OXYURIDES IN A MEDICOLEGAL ASPECT.

A curious case appears in a recent number of *L'Indépendance médicale,* culled from a report by Professor Lacassagne in the *Archives de l'anthropologie criminelle.* A woman had been murdered, and in her bed was found some fæcal matter deposited by one of the presumed murderers. Examination of this matter showed the presence of some twenty female oxyurides. It so happened that of six persons arrested on suspicion, four of them accused a particular one as the murderer, and volunteered the information that he had also defæcated in the victim's bed. M. Lacassagne, therefore, made a careful examination of the rectal contents of the six suspects, repeated several times at intervals, with a negative result in the case of the five; but in that of the one accused by his fellow suspects, the examination showed him to be affected with oxyurides, thus confirming the testimony of the others. The moral of this Sherlock-Holmes-like story is that no detail, however trivial, should escape consideration in criminal medicolegal investigations.

IS THE OCCURRENCE OF HERNIA AN ACCIDENT?

We do not know how the accident insurance companies answer this question, but we hope that an answer in the negative is not likely to be sustained by the courts, although it was recently upheld by Butruille at a meeting of the Central Society of Medicine of the Department of the North (*Indépendance médicale,* January 2d), who defined an accident as an injury due to an external cause, involuntary and instantaneous—meaning, we presume, that the exertion was involuntary. He was speaking particularly of the occurrence of a hernia.

THE DANGER OF CERTIFYING ON HEARSAY.

A doctor's good nature occasionally leads him to trust, to his detriment, in the word of another, but rarely, we imagine, to the extent that occurred recently in the case of a French physician who, according to the *Temps* (cited in *Progrès médical* for February 9th), certified that a certain woman was insane without ever having seen her. This he did on the strength of statements made to him by the woman's nephew, who was also her debtor. The aunt was put into an asylum, but her sanity was soon established, and the doctor was fined $400 for his part in the affair.

News Items.

Society Meetings for the Coming Week:

MONDAY, *March 18th:* New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, *March 19th:* New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, *March 20th:* Medico-legal Society, New York; Northwestern Medical and Surgical Society, New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, *March 21st:* New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, *March 22d:* New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, *March 23d:* New York Medical and Surgical Society (private).

Marine-Hospital Service Health Reports:

The following cases of smallpox and yellow fever were reported to the surgeon-general during the week ending March 9, 1901:

Smallpox—United States.

Mobile, Alabama	Feb. 23-Mar. 2.		1 death.
San Francisco, California	Feb. 18	8 cases.	
Washington, District of Columbia	Feb. 23-Mar. 2.	7 cases.	
Jacksonville, Florida	Feb. 23-Mar. 2.	3 cases.	
Cairo, Illinois	Feb. 16-23	6 cases.	
Ottumwa, Iowa	Feb. 2-9	1 case.	
Lawrence, Kansas	Feb. 23-Mar. 2.	2 cases.	
Wichita, Kansas	Feb. 23-Mar. 2.	12 cases.	
Lexington, Kentucky	Feb. 23-Mar. 2.	2 cases.	
New Orleans, Louisiana	Feb. 23-Mar. 2.	7 cases.	2 deaths.
West Bay City, Michigan	Feb. 22-Mar. 2..	5 cases.	
Winona, Minnesota	Feb. 23-Mar. 2.	12 cases.	
Omaha, Nebraska	Feb. 22-Mar. 1..	5 cases.	
Manchester, New Hampshire	Feb. 23-Mar. 2.	27 cases.	
Elmira, New York	Feb. 23-Mar. 2.	1 case.	
New York, New York	Feb. 23-Mar. 2.	64 cases.	11 deaths.
Yonkers, New York	Feb. 22-Mar. 1..	1 case.	
Charlotte, North Carolina	Feb. 1-28	16 cases.	
Ashtabula, Ohio	Feb. 23-Mar. 2.	2 cases.	
Cincinnati, Ohio	Feb. 22-Mar. 1..	2 cases.	
Toledo, Ohio	Feb. 23-Mar. 2..	8 cases.	
Youngstown, Ohio	Feb. 23-Mar. 2.	2 cases.	
Allegheny, Pennsylvania	Feb. 23-Mar. 2.		2 deaths.
Philadelphia, Pennsylvania	Feb. 23-Mar. 2.	1 case.	
Pittsburgh, Pennsylvania	Feb. 23-Mar. 2.	4 cases.	
Memphis, Tennessee	Feb. 23-Mar. 2.	16 cases.	
Nashville, Tennessee	Feb. 23-Mar. 2.	17 cases.	
Salt Lake City, Utah	Feb. 23-Mar. 2.	31 cases.	
Huntington, West Virginia	Feb. 23-Mar. 3.	1 case.	

Smallpox—Foreign and Insular.

Hong Kong, China	Jan. 15-22	1 case.	
Liverpool, England	Feb. 8-16	2 cases.	
London, England	Feb. 8-16	1 case.	
Dundee, Scotland	Feb. 8-16	6 cases.	
Glasgow, Scotland	Feb. 15-22		20 deaths.
Vera Cruz, Mexico	Feb. 19	300 cases.	
Yucatan, Mexico	Feb. 20	Epidemic.	
St Petersburg, Russia	Feb. 2-9	4 cases.	1 death.
Warsaw, Russia	Jan. 26-Feb. 2..		8 deaths.
Jaffa, Turkey in Asia	Jan. 1-15	Epidemic.	

Yellow Fever.

Havana, Cuba	Feb. 17-24		3 deaths.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending March 7, 1901:

BERRY, T. D. Assistant Surgeon. Detailed as quarantine officer at the port of Cienfuegos, Cuba.

BROWN, B. W., Passed Assistant Surgeon. Directed to report at Washington, for special temporary duty.

CLARK, TALIAFERRO, Assistant Surgeon. Granted seven days' extension of sick leave from March 8th.

GOODMAN, F. S., Hospital Steward. Relieved from duty at Havana, Cuba, and directed to proceed to Washington and await orders.

LONG, J. D., Assistant Surgeon. Relieved from duty in the Hygienic Laboratory, Washington, and directed to proceed to New York, and report to Surgeon L. L. WILLIAMS, Immigration Depot, for duty.

MACDOWELL, W. F., Hospital Steward. Granted leave of absence for thirty days from March 20th.

NEWBERN, WALTER, JR., Hospital Steward. Granted leave of absence for thirty days from March 5th.

NYDEGGER, J. A., Passed Assistant Surgeon. To assume temporary command of the Cape Charles Quarantine Station during the absence of Assistant Surgeon C. W. WILLE.

PERRY, T. B., Passed Assistant Surgeon. Granted leave of absence for thirty days from March 12th.

TROTTER, F. E. Assistant Surgeon. Relieved from duty as quarantine officer at the port of Cienfuegos, Cuba.

WILLE, C. W., Assistant Surgeon. Granted leave of absence for seven days from March 4th.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending March 9, 1901:

DISEASES.	Week end'g Mar. 2.		Week end'g Mar. 9.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	23	11	22	12
Scarlet Fever	541	30	562	32
Cerebro-spinal meningitis	0	0	0	0
Measles	167	8	274	8
Diphtheria and croup	293	36	261	44
Small-pox	64	11	54	10
Tuberculosis	267	161	320	170

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for Two Weeks ending March 9, 1901:

EAKINS, O. M., Assistant Surgeon. Detached from the *Ajax*, when put out of commission, and ordered home to await orders.

HUNTINGTON, E. O., Assistant Surgeon. Detached from the *Bennington* and ordered to the *Newark*.

KENNEDY, R. M., Passed Assistant Surgeon. Detached from the *Newark* and ordered to the *Bennington*.

PAYNE, J. H. JR., Assistant Surgeon. Detached from duty at Pollock, P. I., and ordered to the *Isla de Cuba*.

SNYDER, J. J. Assistant Surgeon. Detached from the *Isla de Cuba*, and ordered to Pollock, P. I., with marines.

SPEAR, R., Passed Assistant Surgeon. Detached from the *Buffalo* and ordered to the *Isla de Luzon*.

STONE, M. V., Assistant Surgeon. Detached from the *Isla de Luzon* and ordered to the *Buffalo*.

Indiana Objects to Christian Scientist Practices.—The Indiana legislature has passed a bill requiring all persons practising medicine or the art of healing to take examinations and be licensed. This is aimed at the Christian Scientists.

Chicago's Lowest Death Rate for any February on record was that recorded for the past month, of a little over fourteen per thousand. The even, though low, temperature of the month is assigned as the probable cause of the improved health of the community.

New Yellow Fever Serum.—Dr. Las Casas, of Santos, Brazil, who has discovered a serum which he believes will cure yellow fever, is about to begin experiments to test it. The Medical Association of Rio Janeiro has appointed a commission to assist in the tests.

Fire in a Hospital.—About midnight on March 8th fire was discovered in the top floor of the Eastern District Hospital of Brooklyn, but through the prompt and

efficient work of the nurses and attendants with buckets the fire was held in check until the arrival of a chemical engine, when it was extinguished.

The Jenner Medical College.—Dr. Gustavus M. Blech has been appointed professor of casualty surgery in this college. This is the first institution in the West to establish a chair for this branch of practical surgery and medicine.

Dr. Busey's Will.—The will of Dr. Samuel C. Busey has been filed for probate at Washington, D. C. To the executor of his will is left his medical library, instruments, etc., in trust, to be presented to some public hospital or medical association in the District.

A Lady Physician Decorated by King Edward VII.—The *Lancet* for February 23d states that Miss Lillie Emma Vahine-é-tua Saville, L. S. A. Lond., M. D. Brussels, of the London Mission, has received from the king the decoration of the Royal Red Cross in recognition of services at the International Hospital during the siege of the legations at Pekin.

American Charity on the Riviera.—Mrs. Pierre Lorillard, Jr., is planning to build an immense sanatorium on the Riviera for consumptive American women of small means. It is said that, under the guidance of Mme. Severine, Mrs. Lorillard has adopted socialistic views, and will devote her wealth and influence to promoting the cause among society women.

Site for Sanitarium Purchased.—Dr. J. B. H. Janeway, of New York City, has purchased a block of thirty-seven building lots at Burns Point, Conn. He intends to erect a large sanitarium. The land bought overlooks Long Island Sound. It is about a furlong in width and half a mile in length. Dr. Janeway says that he will erect a dozen cottages besides the main building. The land cost Dr. Janeway about $20,000.

New York's Quarantine against Cuba.—Dr. A. H. Doty, health officer of the port of New York, has been in Washington, D. C., in direct consultation with Surgeon-General Wyman, of the Marine-Hospital Service, regarding the quarantine laws for the coming summer. The general plan of last year will be followed. It is said that a quarantine against Cuba will be declared next month.

The College of Medicine of the University of Iowa Burned.—The College of Medicine and literary buildings at the University of Iowa were destroyed by fire on March 10th. The loss is not less than $250,000. Both buildings were burned in two hours. A severe blow was struck to the university on account of the loss of recitation rooms. The College of Medicine will close in three weeks and arrangements have been made to carry on the work.

Philadelphia Declares Consumption Contagious.—Consumption has been placed on the list of contagious diseases by the Philadelphia board of health. Physicians must now report to the health officer all cases and deaths. It is not the intention of the board to isolate victims of the disease. The work is to be purely educational. It will consist in offering advice in regard to precautionary methods. Medicines and disinfectants will be supplied to worthy poor patients.

Health of the Army in the Philippines.—A report from Colonel Greenleaf, chief surgeon of the Division of the Philippines, dated January 15th, which has just been received at Washington, shows that at that time the strength of the command was 67,415, and the percentage of sick was 7.49. The consolidated weekly report of hospitals in Manila and the military hospitals in the Division shows 2,400 sick. There were 83 deaths among the troops during the month ended January 15th.

Medical Library News.—The will of Dr. Abbott Hodgman, recently filed for probate in the office of the surrogate, leaves his library to the Academy of Medicine of New York city.——The medical and surgical library of the late Dr. William Pierson, of Orange, N. J., numbering 2,000 volumes, has been presented by Mrs. Pierson to the physicians of the Oranges, and they have decided to organize the William Pierson Medical Library Association.

Lecture by Mr. Reginald Harrison.—Mr. Reginald Harrison, F. R. C. S., the well-known authority on genito-urinary diseases, delivered an address on Some Retrospects and Prospects of Genito-urinary Surgery at the Cornell University Medical School, in this city, on Wednesday afternoon, March 13th. The audience was a large one, including many leading practitioners, and the speaker was very cordially received. The address will be printed in full in an early issue of the *New York Medical Journal.*

The University Medical Magazine.—The title of this periodical has been changed with the March issue to *University of Pennsylvania Medical Bulletin,* and changes have also been effected in the make-up. It is now printed in double instead of single column, and advertising matter has been excluded. No change, however, it is said, is to take place in the policy and scope of the journal, which continues to be the official organ of the medical department of the University of Pennsylvania.

Bellevue Hospital Nurses to be Tried.—The trial of Clinton L. Marshall and Edward O. Dean, the Bellevue Hospital nurses accused of causing the death of Louis H. Hilliard, the Frenchman, in the insane pavilion of the hospital, has been set down for March 19th. The motion pushing the trial of Marshall and Dean after Davis, the other nurse implicated, was acquitted, was a surprise, but it was said by a representative of the district attorney's office that there was some strong testimony which was not utilized at the Davis trial and which would be used against the other two nurses.

Hawaii Objects to Seekers after Health.—The authorities of Honolulu and the Hawaiian Islands have determined that the great increase in the death rate from tuberculosis during the past year is due to the importation of the disease. A bill has been prepared and will be brought before the territorial legislature prohibiting the landing at any port in the Hawaiian Islands of any person suffering from consumption or other form of tuberculosis, or other contagious or infectious disease. Since the annexation of the islands there has been an exodus of patients from the mainland. Any person who advises such persons to settle in the island, or who aids or abets their landing there, will be considered guilty of a misdemeanor.

Poisoned by External Application of Mercuric Iodide.—A coroner's jury in Allegan, Mich, has found a verdict that a young man, nineteen years of age, came to his death from the effects of poisoning by red iodide of mercury applied to his body in the form of an ointment. The poisonous ointment was prescribed by a physician and put up under his personal supervision.

A Minnesota Health Board Resigns.—The members of the board of health of Anoka, Minn., recently tendered their resignations. The trouble arose over the city council refusing to pay bills contracted by them. The health board claims the right, by law, to furnish necessaries to persons under quarantine, who are unable to aid themselves, but the council thinks differently. Hence the trouble.

New York State Civil Service Examinations will be held about March 23d at twenty-eight different points in the State, full particulars of which may be obtained by applying to the chief examiner of the State civil service commission, Albany, N. Y. Among the vacancies to be filled are those of physician, junior grade, the usual salary being $900 annually, with maintenance, and optical surgeon, with a salary of $25 to $40 per month.

Unna's Prize for 1900 was not awarded, no worthy thesis having been submitted. For this reason the sum to be awarded in 1901 has been increased to 600 marks. This sum will be awarded for the most meritorious original investigation submitted to Voss, the Hamburg publisher, by December 1, 1901, upon the subject of the minute structure of primary epithelial carcinoma, and more particularly that of the relation between epithelial proliferation and the resistance of the connective tissue.

To Deprive Pasteur Institute of State Appropriation.—Assemblyman R. Gardiner, of Monroe county, has introduced a bill into the New York State legislature which deprives the Pasteur Institute of its annual State appropriation of $6,000, and hereafter levies the expense of the maintenance of patients sent thither by the overseers of the poor of counties on these various counties. Under the provisions of the measure, it is said, the scope of the institution will be considerably lessened.

New Jersey Anatomy Students Must Have Two Years at College.—A bill has been presented in the New Jersey legislature by Assemblyman Lewis prohibiting any institution that gives instruction in human anatomy from graduating pupils in less than two years. The bill is aimed at the Mechano-Neural Therapy School, conducted at Trenton. The managers of this institution advertise to teach their system of curing without drugs in ten months, and because they do not prescribe drugs in any way the school is exempt from examination by the State board of medical examiners.

Medical Legislation in Missouri.—The lower house of the Missouri legislature, after an almost all-day discussion, has passed the Hall bill, regulating the practice of medicine, and which has been construed as affecting the Christian Scientists, by a vote of 82 yeas to 42 nays. It provides that all practitioners of medicine, surgery and midwifery, all who claim to heal diseases, shall stand an examination before the State Board of Health as to their qualifications, irrespective of diplomas, and obtain from the board a certificate to practise. The law is not applicable to those now engaged in practice.

A Physicians' Orphan Home Association has been organized with a view to founding a home for the indigent orphan children of physicians. An option has been obtained on a suitable building at Bristol, Tenn., with eighty-five rooms, and the committee state that if they can obtain subscriptions to the amount of $35,000 the institution can be opened at once. The officers are: President, Dr. G. M. Pravlee, Bristol, Tenn.; vice-president, Dr. N. H. Reeve, Bristol, Tenn.; treasurer, Dr. John Anderson, Holston Bridge, Va., and secretary, Dr. John S. Harris, Minor Hill, Tenn.

Boston Health Officers Visit New York.—Edwin W. Pilsbury, health commissioner of Boston, accompanied by Dr. Jordan, chief sanitary inspector, and by Dr. Alexander Burr, chief veterinary surgeon of the Boston health department, spent several days inspecting the sanitary aspects of different districts in this city recently. The tour of inspection, which was carried out under the guidance of Dr. Feeney, chief sanitary inspector of the health department of this city, embraced the lodging-houses, Bellevue Hospital, the morgue, the tenement houses of the lower East Side, the markets, and the new tunnel, with a view to learning what arrangements had been made as to interrupted sewer connections, etc.

Typhoid in Brooklyn.—An unusually large number of cases of typhoid fever have been reported in the Williamsburg district of Brooklyn recently. In two rooms of a tenement house seven members of one Russian family were found ill with the disease.

Vaccination Notes.—About 500 persons per day are being vaccinated in Denver, Col., and practically no opposition has developed.——The annual report of the chief health officer of Pittsburgh shows that during the year ending January 31st he vaccinated 1,901 persons and issued 2,302 vaccination certificates. Most of the cases of small-pox treated occurred among, or were traceable to, negroes coming from the South.——Thirty doctors vaccinated 2,000 persons in four hours in Greenpoint, Brooklyn, recently.

Small-pox.—Following the discovery of eleven cases in two rows of houses in a tenement district in Brooklyn came discoveries of a similar nature in other parts of the borough. The spread of the disease in this city has been very rapid and the increase in the number of cases in the past month has been over double that of the preceding month. Not only is this true, but the type of the disease is more virulent than it was in the beginning. Other recently infected places are Toronto, Ont., and Kansas City, Mo.

The Plague.—Up to November 17th, according to the *British Medical Journal,* fourteen cases of plague and five deaths have been reported in Cape Town. The returns for all India for the week preceding January 1st show 3,396 deaths as compared with 3,277 for the previous week. Sporadic outbreaks have occurred in the province of Astrakan, while several cases have been reported near Smyrna and one death has been recently reported at Constantinople. Fourteen fresh cases of plague and ten deaths were reported in Mauritius during the week ending February 14th.

San Francisco's Bubonic Plague.—A conference held at Washington, D. C., on March 9th, between California commissioners and Secretary Gage, Assistant Secretary Spaulding, and Supervising Surgeon-General Wyman, of the Marine-Hospital Service, relative to the alleged existence of bubonic plague in San Francisco, has resulted in a definite plan of procedure. The clash between the State authorities and the Federal government has virtually been settled, and Secretary Gage insists that Surgeon-General White, of the hospital service, who is now in San Francisco, shall have charge of the measures taken to stamp out the plague. The Federal authorities believe that for the present a rigid individual isolation of the cases of suspected plague in Chinatown will be sufficient. Neither the State nor the whole city will be quarantined unless conditions change for the worse.

The Richmond Academy of Medicine and Surgery.—At the last regular meeting, on Tuesday evening, the 12th inst., the subject for discussion was a paper on Cyclic Albuminuria, by Dr. W. A. Deas.

The Foundation of Jenner Societies to combat the influence of the anti-vaccination societies has been proposed by Dr. C. A. Young, secretary of the Maryland State Board of Health, in a letter to the health commissioner of the city of Baltimore.

The Kentucky State Medical Society will hold its forty-sixth annual session in the city of Louisville on May 22d, 23d and 24th. Full information regarding the meeting may be obtained from the chairman of the committee of arrangements, Dr. Louis Frank, Louisville.

The Banquet of the Austin Flint Medical Society.—The Austin Flint Medical Society of Pittsburgh had its tenth annual banquet recently. Dr. J. C. Stein acted as toastmaster, and responses were made by Dr. M. C. Cameron, Dr. W. H. Snively, Dr. Stewart Patterson and Dr. J. C. Dunn.

The Sherbrooke Medical Society.—At the annual meeting of the Sherbrooke Medical Society, at Sherbrooke, Quebec, the following officers were elected: President, Dr. F. J. Austin; vice-president, Dr. J. O. Camirand; secretary-treasurer, Dr. E. J. Williams; council, Dr. W. D. Smith, Dr. L. C. Bachand and Dr. J. A. M. Elie.

The Louisiana State Medical Society will hold its next annual meeting at the medical department of Tulane University on April 18th, 19th, and 20th. The committee of arrangements have issued a preliminary programme, a copy of which may be obtained by applying to the corresponding secretary, Dr. A. G. Friedrichs, New Orleans, La.

The Annual Meeting of the Western Ophthalmologic and Oto-laryngologic Association will take place in Cincinnati on April 11th and 12th. Dr. C. R. Holmes, of Cincinnati, is chairman of the local committee of arrangements. Dr. M. A. Goldstein, of St. Louis, is the president, and Dr. W. L. Ballenger, of Chicago, is the secretary of the association.

The Queens-Nassau Medical Society.—The midwinter meeting of the Queens-Nassau Medical Society was held recently at Long Island City, when a paper was read by Dr. George Donohue, of Northport, on The Advantage of Immediate Repairs on Lacerated Cervices, and one by Dr. C. G. J. Finn, of Hempstead, on Fæcal Fistulæ following Appendectomy. A general discussion followed upon the management of typhoid fever.

The Northeastern Ohio Union Medical Association held its one hundred and eighteenth quarterly meeting in Akron, O., on February 12th, and the following officers were elected for the year: President, Dr. G. L. Starr, of Hudson; first vice-president, Dr. George S. Peck, of Youngstown; second vice-president, Dr. A. E. Foltz, of Akron; recording secretary, Dr. J. H. Seiler, of Akron; corresponding secretary, Dr. C. W. Milliken, of Akron; treasurer, Dr. H. H. Jacobs, of Akron. The next meeting will be held in Canton.

The Banquet of the Alpha Chapter of the Phi Chi Southern Medical Fraternity.—The third annual banquet of the Alpha chapter of the Phi Chi Southern Medical Fraternity took place at Baltimore on March 11th. Responses to toasts were made by Dr. J. T. McCarty, Dr. W. A. B. Sellman, Professor Melvin, Professor Theodore Cooke, Jr., Professor Fred C. Jewett, Professor E. Miller Reid, Professor H. H. Biedler, Mr. Daniel A. Shay, Professor J. W. C. Cuddy, Mr. William J. Bauman, Dr. William D. Bacon, Professor Z. K. Wiley, Dr. Frank J. Powers, Professor Benjamin A. Hayden, Mr. William J. Kavanagh, and Mr. Walter J. Cathrall.

Cincinnati Academy of Medicine Election.—The annual election for officers of the Academy of Medicine of Cincinnati, O., was held recently. Dr. N. P. Dandridge was elected president, defeating Dr. George B. Orr, the West End Medical Society's candidate. Following is the result of the contest: Dr. N. P. Dandridge, president; Dr. A. B. Isham, first vice-president; Dr. Horace J. Whitacre, second vice-president; Dr. Stephen Cone, secretary; Dr. A. Carson, librarian; Dr. Louisa Southgate, corresponding secretary; Dr. M. A. Tate, financial secretary; Dr. Samuel E. Allen, treasurer; Dr. E. Gustav Zinke, Dr. C. R. Holmes, and Dr. John Healy, trustees.

Boston City Hospital Alumni.—The Boston City Hospital Alumni met recently, with John H. McCollom, president, in the chair. Addresses were made by Dr. D. W. Cheever, who spoke on Medical Education; Dr. G. W. Gay, who spoke on the Practice of Medicine in Egypt; Dr. George B. Shattuck, who spoke on Medical Journalism; Dr. J. L. Hildreth, of Cambridge, on Hospitals in Sister Cities; Dr. Abner Post, on Past and Present of Surgery; and Dr. Paul Thorndike, on Modern Surgery. The following-named officers were elected: Dr. W. E. Boardman, president; Dr. W. A. Morris, vice-president; Dr. W. H. Robey, Jr., secretary; Dr. W. H. Prescott, treasurer; Dr. T. E. Goldthwait, to the executive committee for five years.

Reunion of Pennsylvania University Medical Fraternity.—The University of Pennsylvania chapter of the medical fraternity, the Alpha Mu Pi Omega, held a reunion recently in Philadelphia, about eighty members and guests being present. The toastmaster of the evening was Dr. Edward L. Duer, and toasts were responded to as follows: "The University," Provost Harrison; "The Past of the Fraternity," Dr. R. G. Curtin; "Athletics," Dr. Edgar F. Smith; "The Profession,"

Dr. James B. Walker; "Our Brothers in Law," George Wharton Pepper; "Teaching," Dr. Alfred Stengel; "The Future of the Fraternity," Dr. Thomas H. Fenton; "Undergraduates," Daniel M. Hoyt. Dr. Edmund W. Holmes also spoke briefly. Among the guests were Dr. S. Weir Mitchell and Thomas Darlington, of Kingsbridge, N. Y.

The Baltimore County Medical Association.—The February meeting of the Baltimore County Medical Association was held recently at the Baltimore, Md., Medical College. Dr. H. Burton Stevenson is president; Dr. R. C. Massenburg, corresponding secretary, and Dr. H. S. Jarrett, treasurer. Addresses were made by Dr. L. M. Allen, Dr. L. Gibbons Smart, Dr. H. B. Stevenson, and Dr. B. F. Bussy. Dr. R. C. Massenburg read a tribute to the memory of Dr. S. C. Tomay.

The New York Academy of Medicine.—The monthly meeting of the New York Academy of Medicine will be held at 17 West Forty-third Street, New York city, on Thursday evening, March 21st, at 8 o'clock. A symposium will be presented on the modern treatment of gonorrhœa and its complications and sequelæ, the following papers being promised: Acute Gonorrhœa, by Dr. G. K. Swinbourne; Chronic Gonorrhœa, by Dr. John Van der Poel; The Complications of the Anterior Urethra, by Dr. M. J. Echeverria; The Complications of the Posterior Urethra, by Dr. J. Pedersen; Gonorrhœal Complications, by Dr. W. A. Holden; Gonorrhœal Stricture of the Urethra, by Dr. J. R. Hayden. The papers will be discussed by Dr. R. W. Taylor, Dr. R. Guitéras, Dr. B. Lapowski, Dr. C. H. Chetwood, Dr. E. Fuller, Dr. F. Bierhoff, Dr. Hill, and Dr. C. L. Gibson.

County Organizations of the New York State Medical Association.—The following county associations, members of the New York State Medical Association, have been organized: On January 22, 1901, the Westchester County Medical Association was organized, the following officers being elected: President, Dr. N. J. Sands, of Portchester; vice-president, Dr. J. L. Porteous, of Yonkers; secretary and treasurer, Dr. D. T. McPhail, of Purdy Station. Dr. E. F. Brush, Dr. H. Eugene Smith, Dr. P. J. Sands, and Dr. McPhail were elected members of the various committees required by the by-laws of the State association. On the 12th of February the Orange County Medical Association was organized, with Dr. M. C. Conner, of Middletown, as president; Dr. F. W. Dennis, of Unionville, as vice-president, and Dr. C. I. Redfield, of Middletown, as secretary and treasurer. Dr. C. Townsend, Dr. R. A. Taylor, Dr. W. E. Douglas, Dr. F. D. Myers, Dr. Joseph B. Hallett, Dr. William Evans, Dr. Charles A. Canfield, Dr. Edward Woodhull, Dr. Henry B. Swartwout, and Dr. E. A. Nugent were elected members of the various committees. The Sullivan County Medical Association was organized on February 19th with the following officers: President, Dr. C. S. Payne, of Liberty; first vice-president, Dr. Frank Howser, of Centerville Station; second vice-president, Dr. S. W. Wells, of Liberty; secretary, Dr. J. L. C. Whitcomb, of Liberty, and treasurer, Dr. C. W. Piper, of Wurtsboro.

To Establish a Hospital for the Insane in New York.—Dr. Henry, the chairman of the Assembly committee on public health, has introduced a bill to provide for the establishment of a hospital for the treatment of acute mental and nervous diseases in the city of New York, to cost not more than $3,000,000, and appropriating $250,000 for its maintenance.

A Consumption Sanatorium for New Jersey.—A number of prominent New Jersey physicians, together with Dr. Flick, of Philadelphia, and Dr. Knopf, of New York, appeared at Trenton on March 11th to urge the joint appropriations committee of the New Jersey legislature to make provision for the construction of a sanatorium for the treatment of consumption. Senator Hutchinson, of Mercer, has introduced a bill calling for the expenditure of $50,000 in the building of such an institution.

Hospital Staff Changes.—Dr. John W. Foster, who left St. Elizabeth's Asylum at Washington, D. C., recently, to take charge of a hospital in Bangor, Me., has been succeeded by Dr. Benjamin R. Logie, formerly of the Manhattan State Hospital, New York. Dr. Logie was appointed to the position made vacant by Dr. Foster's resignation under the civil service regulations.——Dr. Ethan A. Nevin, of Ogdensburg, N. Y., has been appointed a junior physician at the Long Island State Hospital, at a salary of $900 a year.——Dr. Charles M. Burdick, of Buffalo, has been appointed medical interne in the St. Lawrence State Hospital, at a salary of $600 a year.——Dr. W. J. O'Donnell, formerly of the Emergency, Erie County, and State hospitals, Buffalo, N. Y., has been appointed an examiner in lunacy.——Dr. D. George Bodkin, who for eighteen months has been attached to St. Catharine's Hospital, New York city, has left that institution, his term having expired. Dr. Bodkin is a graduate of the College of Physicians and Surgeons, Manhattan. A banquet was tendered to him by the members of the hospital staff.

Staff of Buffalo's New German Hospital.—The new German Hospital of Buffalo was opened on March 11th. The staff selected is as follows: Internal consulting physicians, Dr. Conrad Diehl, Dr. Emil S. Tobie, and Dr. Thomas Lothrop; attending physicians, Dr. H. C. Buswell, Dr. William Meisberger, Dr. Julius Ullman, and Dr. Robert Henenstreit. Consulting surgeon, Dr. Roswell Park; attending surgeons, Dr. M. Hartwig, Dr. Herman Mynter, Dr. J. G. Meidenbauer, Dr. Henry G. Bentz. Consulting physician in gynæcology, Dr. Matthew D. Mann; attending physicians, Dr. Charles H. W. Auel, Dr. Max Breuer, Dr. Herman E. Hayd, and Dr. Sigismund Goldberg. Consulting physician in obstetrics, Dr. Charles H. W. Auel. Diseases of children, Dr. L. Schroeter, Dr. Charles Weill, and Dr. H. C. Rooth. Diseases of the eye and ear—Consulting physicians, Dr. Lucian Howe and Dr. Julius Pohlman; attending physician, Dr. Jacob Goldberg. Diseases of the nose and throat—Attending physicians, Dr. G. F. Cott and Dr. W. S. Renner. Diseases of the skin—Consulting physician, Dr. Ernest Wende; attending physicians, Dr. Grover Wende, Dr. J. Kraus, and Dr. Alfred E. Diehl. Diseases of the genito-urinary organs, Dr. Alois Jokl and Dr. Julian A. Reister. Consulting and attending physicians in nervous diseases, Dr. W. C. Krauss, Dr. Floyd S. Crego, and Dr. H. G. Matzinger. Pathologists, Dr. W. G. Bissell, Dr. H. R. Gaylord, and Dr. J. A. Miller.

Hospital Buildings and Endowments.—The sum of $25,000 has been appropriated, in addition to the $20,-

000 already provided, for the alterations and repairs required by the Cumberland Street Hospital in Brooklyn. ——An anonymous gift of $15,000 has been made to the New York Post-graduate Hospital for the support in perpetuity of three free beds in the babies' ward.—— St. Mary's Free Hospital for Children has purchased a plot measuring 25 by 100 feet on Thirty-fifth Street, New York, adjoining in the rear the property now occupied by the institution on Thirty-fourth Street.——The Harlem Medical Society and the Harlem Chamber of Commerce have united in protesting against the selection of the site at One Hundred and Thirty-sixth Street and Lenox Avenue for the location of the new Harlem hospital. It is asserted that the site first proposed at One Hundred and Twentieth Street and Lexington Avenue is more conveniently located, more healthful, and much less expensive than the Lenox Avenue site.—— Plans have been approved for the erection of a five-story hospital building, costing about $50,000, by the New York Medical College and Hospital for Women adjoining the college at 19 West One Hundred and First Street. ——Plans have been filed in this city for a home for the nurses of the Presbyterian Hospital, to cost $300,000. It will be an eight-story structure, to occupy 31 to 37 East Seventy-first Street. The new structure has been provided for financially through the efforts of the officers of the institution. The building will be absolutely fireproof and constructed of brick and limestone. There will be a complete gymnasium and all kinds of baths in the basement.——The board of estimate of New York city has set aside $25,000 for the improvement of the Homœopathic Hospital, now a part of the Brooklyn charities department.——The Muhlenberg Hospital, Plainfield, N. J., has been tendered free of cost a site for the location of its proposed new building, with the proviso that no contagious diseases be treated in the hospital.——A movement is on foot looking toward the erection of a large general private hospital in Montreal on the site of the old Western Hospital. It is asserted by some that the methods in vogue in the private wards of the municipal hospital are open to criticism, and that the trouble can best be obviated by the erection of a private hospital, to which any physician may send pay patients with the assurance that his rights and wishes will be respected.——A small isolation hospital for smallpox is to be erected in Wilmington, Del.——A site for the proposed hospital for consumptives has been offered as a gift in West Roxbury, a suburb of Boston. The local opposition to the use of the Marcella Street Home for the purpose continues as strong as ever.——The Union Hospital of Lynn has been incorporated in Massachusetts and has purchased the Tapley estate in Linwood Road for hospital purposes.——John D. Rockefeller has subscribed $5,000 toward the payment of the $15,000 indebtedness of the Huron Street Hospital, Cleveland.——A provision in the will of Mrs. Love A. Palmer, of Ann Arbor, Mich., bequeaths $35,000 to the University of Michigan for the benefit of the University hospital.——The sum of $1,000,000 has been given to the Dunham Medical College, at Chicago, by John E. Du Bois, of Du Bois, Pa. The gift comes as an unsolicited testimonial for the benefits which his wife received recently in treatment by members of the faculty last fall. Mr. Du Bois is a multimillionaire lumberman and mine owner. He made the gift without any reservation, simply declaring that the money is at the disposal of the college authorities as soon as they have laid their plans for its disposition.——A. P. Johnson, of Chicago, has donated $1,000 to the Norwegian Lutheran Deaconess' Home and Hospital of that city toward a new building, which, when completed, will have cost $100,000, and will be one of the finest of its kind in the city. Work will be commenced in about a month.——A plot of ground on Fifteenth Street, Philadelphia, which cost $60,000, is shortly to be presented to the Hahnemann Hospital by George C. Thomas, of Drexel & Co.——A corporation has been formed, with a capital stock of $50,000, to build a hospital in Oshkosh, Wis.——The will of Mrs. Marietta Hay, of Tarrytown, N. Y., bequeaths fifty-five shares of Chicago, Rock Island & Pacific and Ohio Railroad Company bonds to the Saratoga Hospital, Saratoga Springs, N. Y., and $4,000 in bonds to the New York City Infirmary for Women and Children.——A bill has been introduced into the New York legislature to provide for a hospital for the treatment of acute nervous and mental diseases within the city and county of New York, at a cost not to exceed $3,000,000, and to appropriate $250,000 for its maintenance.

Births, Marriages, and Deaths.

Married.

BRIDGEMANN—JONES.—In Lacrosse, Wisconsin, on Thursday, March 7th, Dr. Henry M. Bridgemann and Miss Florence R. Jones.

COLTRIN—JEKYLL.—In Washington, on Monday, February 25th, Dr. Francis Delano Coltrin and Miss Annie Charlotte Jekyll.

Died.

ANDERSON.—In New Haven, on Friday, March 8th, Dr. William D. Anderson, in the sixty-fifth year of his age.

ARMSTRONG.—In Buffalo, on Monday, March 4th, Dr. J. Stone Armstrong, in the sixty-first year of his age.

CARR.—In Sedalia, Missouri, on Monday, March 4th, Dr. R. Wilson Carr, in the seventieth year of his age.

CLEMENT.—In Baltimore, on Sunday, March 3d, Dr. Albert W. Clement, in the forty-fourth year of his age.

CROUNSE.—In Clarksville, N. Y., on Friday, March 1st, Dr. Hiram Crounse, in the eighty-first year of his age.

DAVISON.—In Kenosha, Wisconsin, on Saturday, March 2d, Dr. William M. W. Davison, in the fifty-second year of his age.

DAWSON.—In Ottawa, Canada, on Saturday, March 2d, Dr. George M. Dawson, in the fifty-second year of his age.

DEWOLF.—In Halifax, Nova Scotia, on Tuesday, March 5th, Dr. James R. DeWolf, in the eighty-first year of his age.

GOLDSTEIN.—In Louisville, on Thursday, February 28th, Dr. Adolfus Goldstein.

JOHNSTON.—In Gallipolis, Ohio, on Friday, March 8th, Dr. James Johnston, formerly of the United States Army, in the sixty-seventh year of his age.

LEONARD.—In Worcester, N. Y., on Wednesday, March 6th, Dr. William H. Leonard, in the sixty-sixth year of his age.

MORSON.—In Toronto, on Sunday, March 3d, Dr. Alfred Morson, in the ninety-first year of his age.

RILEY.—In Boston, on Monday, March 4th, Dr. Thomas Riley, in the fifty-eighth year of his age.

ROSS.—In Williamsburg, Pennsylvania, on Wednesday, March 6th, Dr. John Dean Ross, in the ninety-fifth year of his age.

SCHNIZLER.—In Philadelphia, on Thursday, March 7th, Dr. Emil Schnizler, in the sixtieth year of his age.

SHELDON.—In Bloomington, Illinois, on Monday, March 4th, Dr. John Sheldon, in the sixty-eighth year of his age.

SMITH.—In Syracuse, N. Y., on Friday, March 8th, Dr. Alonzo T. Smith, in the eighty-first year of his age.

STONE.—In New York, on Thursday, March 7th, Dr. Robert Stone, in the sixty-fourth year of his age.

SYLCURK.—In Frederick, Maryland, on Wednesday, March 6th, Dr. John Sylcurk, in the twenty-fifth year of his age.

THAYER.—In Newton, Massachusetts, on Tuesday, March 5th, Dr. Frederick L. Thayer, in the fifty-third year of his age.

WOODS.—In New York, on Friday, March 8th, Dr. Eliza Woods.

Pith of Current Literature.

Medical News, March 9, 1901.

Our Duties toward the Consumptive Poor. By Dr. S. A. Knopf.—The author points to the estimate of Dr. Herman M. Biggs, that this city has constantly at least thirty thousand cases of consumption, and that more than half of these are harbored in the worst tenement districts. The vast majority will die at an age when they should be bread winners and useful citizens. Consumption is not merely a medical, but also a social disease: Society must come to the aid of the physician. The author describes a typical visit to the tenement home of a consumptive, and he asserts that such a patient should not be allowed to live in such surroundings. According to the author, what are needed are multiple sanatoria and special hospitals of moderate size, located near the large centres of population.

The Intravesical Evidences of Perivesical Inflammatory Processes in the Female. By Dr. Frederic Bierhoff.

The Prevention of Insanity. By Dr. Henry Waldo Coe.—As a preliminary to the marriage of a healthy man to a recovered insane woman, the author advocates the removal of the ovaries, and he asserts that the sexual passion of the average woman, even with her ovaries, is of such trifling moment that ovariotomy need not on this account be largely considered. Fifty per cent. of insane people should never have been born, according to the author, and he holds physicians responsible to a certain extent for this mistake. He protests against large families; the ordeals of pregnancy, lactation, and the care of rapidly growing children are especially trying on the nervous and mental powers of the neuropathic mother, and a healthy woman in rapidly supervening pregnancies is less able in her offspring to offset an evil mental tendency on the part of her husband as such pregnancies are repeated.

The Tonometer and its Value in Determining Arterial Tension. By Dr. Henry L. K. Shaw.

The Present Status of the Subarachnoidean Injection of Cocaine for Anæsthesia (Corning-Bier Method). By Dr. John S. Miller.—The author's opinion is that this variety of anæsthesia should be used only when ether and chloroform are contra-indicated. It has a decided advantage, however, over general anæsthesia in that the respiratory, cardiac, and renal organs are not so seriously disturbed as by the inhalation method. The author submits that there is a medicolegal element in these "experiments," and he suggests that, in order to avoid the possibility of a suit for damages in case of accident or untoward results, it would be advisable to secure the absolute consent of the patient and family in writing or in the presence of witnesses, after explaining to them the merits and demerits of this procedure, which carries with it no small element of risk.

A Case of Peroneal Nerve-palsy from Muscular Effort. By Dr. Charles J. Aldrich.—The author echoes the observation of Hogarth, that, when we consider the exposed condition of the peroneal nerve, it is remarkable that it so rarely suffers injury.

Medical Record, March 9, 1901.

The Period of Incubation of Yellow Fever: A Study from Unpublished Observations. By Dr. Henry R. Carter.—In an extended series of observations, the shortest incubation recorded is three days; the longest, eight and one quarter days; while very few of the cases show over six days. The author concludes that, while it may be that this question can be determined more readily simply by observing the time between the inoculation of the disease by an infected host and the development of the fever in the subject, yet it is well to compare the findings of observations on Nature's experiments with those from direct experimental research, for the first lack the precision of the latter in which we control all the conditions of the problem.

A Contribution to the Bottini Operation for the Radical Relief of Prostatic Obstruction. By Dr. L. Bolton Bangs.—A case given in detail illustrates the three points, in the way of technique, upon which the author lays stress. These are: (1) that the flow of electricity must be maintained to a degree that will keep the blade at white heat; (2) that, in measuring a given case for the length of the incisions, allowance must be made for the action of the galvanic cautery beyond the distance at which the knife shall actually penetrate; (3) that the operation must be done with great slowness in order to prevent hæmorrhage and to get the best results. In twenty per cent. of cases the operation was a failure. The author believes that the "extravesical" portion of the prostate, which cannot be reached by the galvanocautery, may be the cause of failure in these cases.

Acute Gastric Ulceration. By Dr. H. Newton Heineman.—The prognosis in these cases is exceedingly grave. In fifty cases of Savariand, in which hæmorrhage was the cause of death and in which autopsies were made, in one fourth, death was sudden by an overwhelming bleeding; in a second one fourth it occurred within from twenty-four to thirty-six hours after the first hæmorrhage; in the third one fourth, at the end of a week; and in the last one fourth, at the end of a fortnight. Until a repetition of the hæmorrhage has occurred and a count of the red blood corpuscles shows a serious diminution in their number, medical treatment should be tried. This should consist of absolute rest to body and stomach, with rectal alimentation, exclusively, for three or four weeks. An ice-bag applied to the stomach is useful, and intravenous or subcutaneous injections of serum should be used. In view of the fact that the first hæmorrhage may, by continuation, be fatal, or that the second may prove so, preparations for an immediate operation should be made. The author favors the procedure of Dr. Cazin as the one promising the best result, and the inversion of the gastric mucous membrane, careful absorption of the mucus by means of sterilized gauze, and a minute search with a pocket lens for the seat of ulceration should be made. When the diagnosis is promptly made and the ulcer is found at the operation, and the latter is timely, the prognosis ought to be good.

Treatment of Acute Sero-fibrinous Pleurisy. By Dr. Charles E. Nammack.—It is the author's belief that chest tapping should be performed in sero-fibrinous pleurisy for three indications: (1) when life is directly threatened or endangered by asphyxia from compression, or by cardiac weakness; (2) when fluid has risen to the third interspace in front, since experience has shown that effusions of this size rarely disappear spontaneously; (3) in all lesser effusions when spontaneous absorption is unduly delayed. In the absence of these indications the medicinal treatment should be studied; the local application of guaiacol or of iodine; internally, mild catharsis by sulphate of magnesium in concentrated so-

lution, with limitation of the ingested liquids to as low a point as possible, and the consumption of as much table salt as the patient can be induced to take. The author's experience seems to warrant the assertion that progress is more rapid in the cases not tapped.

Journal of the American Medical Association, March 9, 1901.

Sanitation and Progress. By Dr. Walter Wyman.—The author considers the present status of sanitation, and concludes that the outlook for the future is very bright. For the twentieth century there can be no more hopeful sign of progress than is held out by sanitation. Sanitation is a common field upon which nations may meet with unselfish and common purpose, a policy which would put a rifle-groove in the shotgun now loaded with spasmodic municipal reforms, good government clubs, and crusades against vice, and weld these latter into one missile of definite direction and force.

Results of Surgery in the Aged. By Dr. James P. Tuttle.—The author has had quite a large experience in this work among paupers, criminals, and vagrants, and, contrary to the prevailing impression, he finds that the mortality is very low and shock has been almost absent. The author's explanation is that when an individual has reached the age of sixty or seventy years, in comparatively good health, we must assume that he has either taken good care of himself and not undermined his constitution by dissipation and excesses, or that he originally had an exceedingly strong constitutional foundation to build on, and that he thus presents himself a suitable subject for operation.

Sarcoma of the Intestines, with Table of Fifteen Cases of Resection. By Dr. C. Van Zwalenburg.—This condition seems to be more common than the text-books indicate. The ileum appears to be its favorite location. Sarcoma rarely produces stenosis. Dilatation is more frequent. Usually the growth arises from one side of the bowel entirely. In the author's case, symptoms of obstruction were present, which were evidently due to a change in position of the freely movable tumor. It was entirely relieved by manipulation. The diagnosis is difficult and will always remain obscure; still, if a freely movable tumor is found in the abdomen, we should, unless it can be otherwise satisfactorily accounted for, be reminded of the probability of sarcoma of the intestine—especially if there is also present the general picture of sarcoma with its peculiar anæmia. The only treatment for the intestinal form is resection. We have a right to assume, in this connection, that in extirpating a sarcoma we remove a toxine-centre as truly as when we open an abscess.

Rest Treatment for Hysterical Disease. By Dr. John K. Mitchell.—The worse the case, the more satisfactory is this treatment, as a rule. Isolation is the most important feature of the treatment, and the more distinctly hysterical the disease, the more strict the isolation must be. In a moderately severe case, from six to eight weeks of isolation is enough. Massage has an important place in the treatment. Electricity is not regarded by the author as being of prime importance. The moral treatment, unlike the physical treatment, is different in each case and must meet the exigencies of each particular problem.

Hereditary Subnormal Color-perception. By Dr. F. Savary Pearce.—The author points out that Horner's law applies particularly to these cases. This law is to the effect that sons of daughters whose father was color-blind are most likely to be the same, or "color-blindness is transmitted in the revertible type from grandfather to grandchild."

The Simplest Explanation of the Functions of the Nervous System. By Dr. G. W. Drake.—The author's explanation involves the interesting hypothesis of the existence of a specific energy peculiar to nervous tissue. Sound-waves, light, mechanical touch, odoriferous particles, sapid substances, under appropriate circumstances, liberate nerve energy, which is conducted to the auditory centre visual centres, etc., and there makes a neurograph of sound, sight, touch, etc.

Psychic Therapeutics. By J. C. Culbertson.

Treatment of Deflection of the Nasal Sæptum Complicated by Traumatic Deformity of the External Nose. By Dr. E. B. Gleason.

Extensive Laceration of the External Ocular Muscles; Diplopia; Spontaneous Recovery. By Dr. Walter L. Pyle.

Anastomosis of the Ureters with the Intestine. A Historical and Experimental Research. By Dr. Reuben Peterson.

Exstrophy of the Bladder. By Dr. F. Gregory Connell.

Acute Temporary Dilatation of the Heart Accompanying Thermic Fever. Report of Two Cases. By Dr. C. F. Close.

Rupture of the Membrana Tympani from Indirect Violence, with Concussion of the Labyrinth and Complete Deafness. By Dr. Richmond McKinney.

Philadelphia Medical Journal, March 9, 1901.

False Pregnancy (Pseudocyesis) and Myxœdema. By Dr. Edward P. Davis.—In diagnosticating false pregnancy, the physician must not be misled by ectopic gestation. Examination under ether is of special value, as it enables the physician to map out the pelvic contents as accurately as possible. It is a mistake to allow patients having false pregnancy to go with an examination alone, without treatment. The source of nervous irritation giving rise to the supposed pregnancy should be removed, the nutrition of the patient stimulated as vigorously as possible, and her general condition brought as nearly to the normal as her circumstances permit. Where the patient can afford it, rest in bed, massage, careful feeding, electrical treatment, and a selected diet are indicated.

The Actions of Morphine upon Metabolism, with Special Reference to "Internal Secretion" and its Bearing upon Toxicology. By Dr. Edward T. Reichert.—The author considers that the profound depression of general metabolism, even by sublethal doses, together with the probable involvement of the processes concerned in internal secretion and in repair, and their consequent effects, must be considered among the important factors in the treatment of morphine poisoning. He believes that further research will show that we have in this depression an agent in explaining, in part at least, the values of certain physiological antidotes, and, on the other hand, the ineffectiveness of others which upon theoretical grounds should prove of signal power. If a means can be found to restore the normal processes concerned in internal secretion and in repair, the counteraction of the direct action of morphine upon the metabolic processes that are specifically engaged in the discharge of respiratory impulses, will probably be ac-

complished with far less difficulty than heretofore experienced.

Paresis Simulating Brain Tumor. By Dr. Wharton Sinkler.

Operative Treatment of Tubercular Lymphomata of the Neck. By Dr. Prescott Le Breton.

A Skiagraph of Bennett's Fracture of the Metacarpal Bone of the Thumb, or "Stave of the Thumb." By Dr. John B. Roberts.

A Cast and Skiagraph of the So-called Smith's Fracture of the Lower End of the Radius. By Dr. John B. Roberts.

On the Necessity for the Organization of Bacteriological Commissions for the Study and Investigation of Quarantinable Diseases under the Formation and Control of the Governing Authorities of the Countries Interested—An Absolute Necessity for the Scientific Management and Betterment of Maritime Hygiene and Quarantine. By Dr. Henry R. Horlbeck.

The Function and Distribution of Combined Hydrochloric Acid in Proteolytic Digestion. By Dr. A. E. Austin.

Boston Medical and Surgical Journal, March 7, 1901.

Clinical Notes and Comments: Cancer of the Extremity of the Common Bile-duct. By Dr. Robert T. Edes.—The author asserts that there can be but little doubt that cancer of the bile-duct is somewhat more common than would appear from some of the older statements, and he believes that many cases which would have been described as "obstruction" fifteen or twenty years ago have been brought by more careful microscopic methods under the head of carcinoma. He also speaks of the feasibility of an operation for the removal of cancer of the bile-duct, but he is careful to emphasize the fact that it is almost impossible to cut wide enough of any focus of cancer to be sure of having included the utmost limits of the infected region.

The Interpretation of Bacteriological Findings in Diphtheria Diagnosis. By Dr. Hibbert Winslow Hill.—It is pointed out that the board of health does not take the position that a sick person is *necessarily* suffering from the *disease* of diphtheria simply because a positive culture has been obtained. It insists, however, that such a person is a nucleus from which the bacilli may be spread, and remains such until the bacilli disappear. As to a negative report, four or five negative cultures should be obtained before a diagnosis of diphtheria is abandoned on bacteriological evidence alone.

Destruction of Left Eye and Frontal Lobe of Brain from a Shotgun Explosion. By Dr. Edward Swasey.

Convulsions in Children. By Dr. William N. Bullard and Dr. Charles W. Townsend.—One per cent. of the children applying at the Children's Hospital, Boston, come for convulsions. Ten per cent. of children between five and twelve years of age give a history of convulsions. Cases that appear to be due to some manifest reflex cause may turn out to be true epilepsy. Other cases, wherein the attacks occur frequently and without apparent cause, may suddenly recover, at least for a considerable period. Children who have had convulsions may be strong and free from nervous tendencies in later life, although the proportion of those who have nervous tendencies seems to be greater in them than in those who have not had convulsions.

Acute Pancreatitis. By Dr. M. H. Richardson.—The diagnosis of these obscure lesions is practically impossible. However, in all obscure inflammations of the epigastrium attended by acute sudden pain, we ought to explore. If we cannot do anything else, we can at least drain.

Case of Recovery after Operation for Acute Pancreatitis. By Dr. J. C. Munro.

Lancet, March 2, 1901.

Public Health and Housing: The Influence of the Dwelling upon Health in Relation to the Changing Style of Habitation. By Dr. J. F. J. Sykes.—In the Milroy Lectures for 1901, the author considers the effect produced upon the public health by the increasing density of population in cities and by the changes in construction of houses. Numerous statistical tables are given and conclusions drawn therefrom. In this, the first lecture, special attention is paid to the health of the inhabitants of stable dwellings, and the author concludes that the occupants of such premises have a high birth rate and a high mortality under one year, and at all ages high death rates from pulmonary and zymotic diseases, especially diarrhœa and diphtheria. These point to the vicissitudes of temperature affecting adults and unhealthy conditions at home affecting young children.

On the Influence of Ozone on the Vitality of some Pathogenic and other Bacteria. By Dr. A. Ransome and A. G. R. Foulerton, F. R. C. S.—The author's experiments go to show that ozone in the dry state has no appreciable action on the vitality of the various bacteria experimented with. Nor does a prolonged exposure to the action of ozone diminish in any way the pathogenic virulence of *Bacillus tuberculosis* in sputum. Single experiments tend to show that ozone can have little, if any, effect on the pathogenic virulence of *Bacillus mallei* and *Bacillus anthracis.* On the other hand, ozone possesses distinct bactericidal properties when passed through a fluid medium containing bacteria in suspension. This suggests a superficial resemblance with chlorine, sulphur dioxide, and other gases. So that any purifying action that ozone may have in the economy of Nature is due to the direct chemical oxidation of putrescible organic matter, and it does not in any way hinder the action of bacteria, which latter are, indeed, working toward the same end in their own way.

On the Quantitative Estimation of the Bactericidal Power of the Blood. By Dr. A. E. Wright.—In a previous communication in the *Lancet* for December 1, 1900, the author described the technique of a method by which the bactericidal power of blood could be determined. What is measured by this method is rather the total antibacterial power of the blood than the bactericidal power proper. To determine how much of the result registered is referable to an inhibition of the growth of the bacteria, and how much to a direct bactericidal action, it is necessary to blow out the contents of the incubated cultivation-tubes into sterile nutrient broth. Should any growth take place, it shows that the bacteria have only been inhibited in their growth, not destroyed. Where it is desired separately to estimate the bactericidal power, this can be done by making a series of graduated dilutions of a bacterial cultivation in broth, and by mixing one volume of each of these with one volume of serum. A convenient arithmetical expression for the bactericidal power is obtained by specifying the number of micro-organisms which one cubic millimetre of serum is capable of killing.

Result of Major Amputations Treated Antiseptically in the Royal Infirmary, Newcastle-upon-Tyne, during the Year 1899, and for a Period of Twenty-one Years and Nine Months—Viz., from April 1, 1878, to December 31, 1899, Inclusive. By H. B. Angus, M. R. C. S. —One thousand two hundred and thirty-three major amputations have been performed in the Royal Infirmary since 1878. Of these, 1,119 patients have recovered and 114 have died—a mortality of 9.2 per cent. Five hundred and eight cases were those of amputation for injury, and 71 patients died—a mortality of 13.9 per cent.; 725 were for disease, and 43 patients died—a mortality of 5.9 per cent.

A Method of Distinguishing Bacillus Coli Communis from Bacillus Typhosus by the Use of Neutral Red. By W. Hunter, M. B.—1. *Bacillus coli communis* possesses to a marked degree the power of reducing neutral red (safranine), producing a superb canary-yellow fluorescent color of the medium. 2. The so-called *Bacillus enteritidis* of Gaertner also produces this reaction, and is probably only a variety of *Bacillus coli communis.* 3. The *Bacillus typhosus* never possesses this power of reduction. 4. The common pathogenic micro-organisms do not give this reaction. 5. By means of neutral red it is possible within from twelve to twenty-four hours to diagnosticate with absolute accuracy the presence of *Bacillus coli communis.*

Note on a Case of Influenza with Meningitis as a Complication. By Dr. A. Foster.—The author reports the case of a woman, aged fifty-four years, in whom an attack of influenza was complicated on the fourth day of the disease by symptoms of meningitis. Severe headache was the first symptom, followed by muscular rigidity, retraction of the head, strabismus, and partial unilateral facial paralysis. The patient gradually failed, and she died on the sixth day. There appeared to be no doubt as to the diagnosis of influenza. For some weeks previously the patient had been greatly worried by family troubles.

Three Cases of Cervical Spina Bifida Treated as Outpatients by Open Operation. By J. H. Nicoll, M. B.

A Case of Fracture of the Sternum. By Dr. J. S. Martin.—The author reports the case of a miner, aged twenty-three years, who was crushed against a wooden upright by a passing truck, and his sternum fractured. There was definite projection of the manubrium sterni running vertically downward, and crepitus could be easily elicited. The fracture caused very little physical disability.

A Case of Cerebro-spinal Meningitis. By F. Riley, M. B.

Four Cases in which Pain was Relieved by Suprarenal Extract. By Dr. E. A. Peters.—The author reports four cases which show that the application of a suitable suprarenal extract may be of great benefit in allaying the pain of cancer and other forms of recurrent inflammation without any apparent deleterious effect. In one case of recurrent scirrhus of the mamma, with great pain in the growth, painting with ten-per-cent. suprarenal lotion relieved the pain almost entirely. A case of painful stricture of the œsophagus was benefited by the patient's sipping the same lotion; used as a spray in a case of tuberculosis of the larynx, the throat was rendered free from soreness for some hours. In the last case, one of periodontitis, pledgets of wool soaked in the ten-per-cent. suprarenal lotion and placed between the lip and the gum, gave great relief.

British Medical Journal, March 2, 1901.

Some Points Relating to Varicocele. By W. H. Bennett, F. R. C. S.—For practical purposes varicocele is merely varix of the veins of the spermatic cord, which is always congenital; to this is added in many cases some varicosity of the veins of the scrotum. The peculiarity (it cannot be called a disease) usually escapes notice until puberty, and, when noticed, it is most commonly discovered by accident, unless some injury has occurred to attract attention to it. As a rule, no trouble arises from the abnormity. From mental causes a considerable number of persons suffering from varicocele are led to seek treatment, and the majority of these are hypochondriacal. Operation affords a certain cure for the varicose condition itself, and should be recommended in cases of young individuals, healthy mentally as well as physically. In hypochondriacal cases, should the patient be fully convinced that if the varicocele is cured and the defect removed relief will follow, operation may be undertaken without hesitation. In about sixty per cent. of such cases in which the operation is attempted the patient is cured; in the other forty per cent. the treatment will fail. The author describes in brief detail the operation employed by him. An incision of from one half to three quarters of an inch—not more—is made over the cord on a level with the upper border of the root of the penis—that is to say, over the external abdominal ring. The whole of the spermatic cord, except the vas deferens, is pulled out of the wound (the veins not being laid bare), ligatures tied at ether end, the intervening portion of the cord cut and removed, and the two stumps sutured together. Although the spermatic artery is thus removed, the vessels accompanying the vas deferens are sufficient to nourish the testicle. All fear of atrophy or gangrene may be dismissed.

Ad Terram. II. The Earth and the Soil. By Sir F. S. Haden.

The Influence of the Dwelling upon Health. By Dr. J. F. J. Sykes.—The first of the Milroy Lectures. (See abstract of the *Lancet* for March 2, 1901, in this number of the *Journal.*)

Painless Calculous Pyonephrosis without Fever; Nephrectomy; Recovery. By A. Doran, F. R. C. S.—The author reports a case of calculous pyonephrosis occurring in a woman aged thirty-eight years. For some months she had had a swelling in the right side, with nausea and epigastric distress, but never any pain in the swelling, and no fever. Examination of the urine was negative. At the operation the right kidney was found to have become a cyst, and was removed with great ease. The patient's recovery was uneventful. The kidney contained over half a pint of greenish-yellow pus. Two small calculi were found in separate loculi of the cyst. The absence of pain and fever were the remarkable features of the case. Langenbuch's incision was used at the operation, giving a clear view of the kidney and its relations.

The Treatment of Puerperal Eclampsia by Saline Diuretic Infusions. By Dr. R. Jardine.—This article is a short defense of the use of saline diuretic infusions in puerperal eclampsia. The author states that he has had greater success with this mode of treatment than with any other. In the Glasgow Maternity Hospital, the death rate in cases of puerperal eclampsia used to be forty-seven per cent.; since the use of saline diuretic infusions has been introduced, the death rate has fallen to seventeen per cent.

A Case of Puerperal Eclampsia and its Treatment by Morphine. By Dr. G. Elder.—The author reports a severe case of puerperal eclampsia occurring in a woman aged thirty-five years, in which the administration of one third of a grain of morphine hypodermically stopped the fits and produced two hours' sleep. No further medication was required, the patient's recovery being uninterrupted.

A Case of Multilocular Cystoma of the Omentum; Removal; Recovery. By N. P. Marsh, M. B., and K. Monsarrat, F. R. C. S. E.—The authors report a case of extensive cystic degeneration of the omentum occurring in a female child, aged one year and eight months. The child's abdomen had been enlarged for four months; it was tapped by means of a Southey's trocar four times between January and November, 1900, a large quantity of dark-brown fluid being removed each time. The fluid contained a large number of cholesterin crystals. Laparotomy was finally performed, and a large multilocular cyst removed. Recovery was rapid. The growth was probably congenital. The great vascularity of the cyst walls lends support to the suggestion of some inflammatory condition being associated with their origin, and such a process, antenatal, offers the most probable explanation of their ætiology.

The Campaign against Ague. By H. E. Durham, F. R. C. S.

Lyon médical, February 10, 1901.

Aerophagia and the Gastric Disturbances Accompanying It. M. B. Lyonnet and M. F. Vincens say that the voluntary swallowing of air is a physiological curiosity; involuntary aerophagia, however, is pathological and is due to hysteria. There is always a clonic spasm of the pharynx. Anorexia, pain, headaches, muscular asthenia, and general functional disturbances are frequent symptoms of the habit. The treatment is to be directed toward the general hysterical state, toward relieving the pharyngeal spasm, and toward the dyspeptic symptoms.

The Sanatorium of Hauteville. By M. J. Gentschel.

February 17, 1901.

Local and General Action of Cocaine.—M. Jaboulay finds that the local anæsthetic effect of cocaine is enhanced by the addition of morphine, the effect being more penetrating and more lasting.

Cholecystitis Resembling Appendicitis.—M. Adenot reviews the symptoms of acute and chronic appendicitis and cholecystitis and distinguishes between them. (*Continued article.*)

Severe Contusion of the Abdomen, Intestinal Rupture, Laparotomy, Cure. By M. Lagoutte.

Progrès médical, February 9, 1901.

Aspiration of Acute Prostatitis Occurring in the Course of Senile Hypertrophy of the Prostate.—M. A. Guépin advises this method when the acute prostatitis undergoes suppuration. He narrates six cases in proof of his assertion, in which normal urination followed aspiration of prostatic abscesses, all of them arising during the course of an hypertrophy of senile character.

Journal des praticiens, February 23, 1901.

Toxic Dyspepsia of Alimentary Origin in Childhood. By M. Sevestre.

Pathogeny of Biliary Lithiasis.—M. G. Linossier says that the discussion as to the pathogenesis of biliary lithiasis possesses only a theoretical interest. If the principal ætiological rôle is attributed to germs, intestinal antiseptics must be chosen as the main therapeutic agents. If, however, the patient's physical tendencies and disposition are regarded as prominent in evoking the disease, diet, hydrotherapy, massage, and exercise will be the leading forms of treatment. The latter are in practice the more efficacious. The question will bear further inquiry and investigation.

Indépendance médicale, February 20, 1901.

Acute and Chronic Inflammation of Douglass's Pouch. By M. Leon Archambault.—The article is a review of the subjects of pelvic peritonitis and cellulitis, and contains nothing new.

Gazette hebdomadaire de médecine et de chirurgie, February 14, 1901.

Cytolysis of Cancer.—M. Louis Dor writes that the serum obtained from animals in the peritoneal cavity of which malignant tumors have been implanted, seems to exert a specific effect upon malignant tumors in the human species. This cytolytic action has been observed by the author in two cases of malignant inoperable sarcoma.

Presse médicale, February 6, 1901.

Treatment of Sphenoidal Empyema.—M. F. Furet says that in simple cases in which the nasal fossæ are large and the sphenoidal sinus accessible through them, the nasal route is to be chosen in opening an empyema of the sphenoidal sinus. When the maxillary sinus participates in the inflammatory process, when cerebral affections complicate the sphenoidal inflammation (not a common combination), and when the nasal fossæ are small or deformed—under these circumstances, the sphenoidal sinus should be attacked by the maxillary route by means of the trephine.

Wiener klinische Rundschau, January 27, 1901.

Stereoscopic Views of Röntgen-ray Pictures of Bones. By Dr. Max Reiner.

Two Cases of Ovarian Sarcoma.—Dr. Alexander Dörner reports two cases. One patient died of recurrence a few months after operation, the other has remained well for three years. The author says that the tumors in both cases developed from the matrix of the blood-vessels, not like angeio-sarcomata which represent vascular neoplasms, but from the endothelium of the blood-vessels, possibly of the lymphatic vessels.

Wiener klinische Wochenschrift, February 7, 1901.

Occupation Disease among Wood-turners.—Dr. Rudolf Blum describes a form of exudation of a greyish color on the nasal mucous membrane, with a swollen nose, some dyspnœa, and a pustular condition about the nostrils, as characteristic of workers in hazel wood. The fine dust evolved in the process of manufacture, he thinks responsible for the condition. It yields easily to ordinary measures.

Hysterical Facial Diplegia.—Dr. Hugo Lukacs describes such a case.

Foreign Bodies in the Male Bladder. By Dr. Fritz Pendl.—A clinical article.

Centralblatt für Chirurgie, February 9, 1901.

Injuries to the Soft Parts of the Knee-joint.—Dr C. Lauenstein says that experience has shown the wisdom of aspirating effusions of blood into the knee-joint, not only the ultimate cure being hastened, but the ability of the patient to return soon to his work being facilitated. If a probe is gently introduced through the can-

nula by which the blood has been removed, and the interior of the joint gently palpated, one can frequently find the source of the hæmorrhage in a ruptured capsule. At the point of rupture, the probe can be felt directly beneath the skin, which is not the case elsewhere in the joint. The Röntgen rays should be employed for the diagnosis of more extensive injuries to the knee.

Treatment of Patellar Fractures. By Dr. Popper.

Treatment of Contractures of the Knee-joint.—Dr. Carl Bruns reports two successful cases of transplantation of the biceps tendon upon the quadriceps tendon for the relief of contracture of the knee-joint, one of the cases being one of phlegmonous gonorrhœal arthritis. The operation is simple and free from danger, and the result is permanent.

Centralblatt für innere Medicin, February 9, 1901.

Fatty Degeneration of the Heart.—Dr. Georg Rosenfeld concludes, from an experimental and chemical study, that fatty degeneration of the human heart is the result of the deposit of fat in the intrafibrillary substance. The fibrillary substance undergoes actual degeneration only when a great, or too great, amount of fat is deposited within its folds; its death is the result of pressure from the large amount of fat. The fat is not a result of degeneration of the cardiac muscle, but is brought to the heart from other parts of the body.

Centralblatt für Gynäkologie, February 9, 1901.

Are Baths the Most Efficient Means of Cleansing Puerperal Women?—Professor W. Stroganoff says that the bath is not yet proved to be efficient in cleansing puerperal women. The water in the bath always contains the diluted dirt, and even the diluted excrement, of the person using it. If the individual has ulcers or sores, staphylococci or streptococci get into the water and may locate in other parts of the body, while the tubs may contain germs from previous bathers. Infection of the nipples, or even of the vagina, may thus take place. He prefers a rubbing with soap with a constant stream of water pouring over the patient. In the author's hospital service, the latter method of cleansing puerperal women has resulted in six months in a diminution of seven per cent. of morbidity.

Cure of Tuberculous Peritonitis after Laparotomy.—Dr. A. O. Lindfors believes that, by ligation of the tuberculous focus, the peritoneal irritation entirely disappears. This is due to the disturbed nutrition of the focus, just as the menopause may be induced by a double salpingectomy or ligation of the uterine arteries.

Riforma medica, January 14, 15, and 16, 1901.

A Contribution to the Bacteriology of the Blood in Acute Gastro-enteritis. By Dr. G. Pierraccini and Dr. Nencioni.—The conclusions of the authors are as follows: The symptoms which accompany intestinal indigestion are consequences of a toxæmia of gastro-intestinal origin, and not of a bacteriæmia. A bacterial invasion of the whole organism may only take place as the result of very severe alterations in the digestive apparatus.

January 17, 1901.

A Contribution to the Clinical and Semeiologic Study of Carcinoma of the Stomach. By Dr. V. Casaretti.—The author reports a case of carcinoma of the stomach which presented several interesting peculiarities. The patient was a man aged fifty-eight years, whose family history was unknown. He had been suffering from malaria since his twentieth year. On admission he presented the marked cachexia which accompanies cancer. He apparently preferred the supine position, and complained of a severe pain in the epigastrium and left hypochondrium which was continuous, but markedly aggravated after meals. There was also salivation and a painful sensation in the mouth. On percussion, there was dulness at the lower portion of the left lung, especially below the angle of the scapula. On the left side of the epigastrium there was a slightly elevated area, and the superficial veins were enlarged to a marked degree over the upper quadrant of the abdomen, especially on the left side. Deep palpation produced acute pain in this region. A sensation of resistance, but no well-defined tumor, was felt in the left epigastric region, under the ribs. On percussion this zone was dull, the dulness being continuous with that of the spleen. A slight, soft-blowing murmur was repeatedly heard on auscultation between the semiclavicular and anterior axillary lines on the left side of the upper half of the abdomen. The spleen was slightly enlarged, but the liver was normal. The patient had nausea, absolute anorexia, and vomited frequently after meals. On examination, the gastric contents showed no traces of hydrochloric acid, but a distinct lactic-acid reaction to Uffelman's test. The patient was soon unable to take anything except liquid food, and there was a severe and persistent diarrhœa. He died of exhaustion, with signs of œdema of the lungs. The necropsy showed old pleuritic adhesions on the left side of the chest, behind. The walls of the stomach were found transformed into a hard mass which was adherent to the spleen and to the transverse colon. The liver was congested (nutmeg liver in the second degree). On opening the stomach, no ulcerations were found, but a number of neoplastic masses were discovered in the wall, and on microscopical examination these proved to be infiltrated carcinoma of the stomach. The interesting part of this case is the possibility of mistaking it for a severe case of malarial cachexia with splenic tumor. The soft-blowing murmur which was described above has been met with in a number of malarial cachectics by Fedeli, of Rome. The explanation of this bruit is probably the compression of the vasa brevia which pass to the stomach from the splenic artery, and of the terminal branches of this artery which divide at the hilum of the spleen. According to Fedeli this murmur is due to anæmia and to vascular contraction. It is especially marked when anæmia is associated with a congestion of the spleen.

Vratch, January 20, 1901.

Corporal Punishments in the Twentieth Century. By Dr. D. N. Jbankoff.—In spite of the fact that we have entered into the twentieth century, corporal punishment is still used in Russia, and the advocates of this form of penalty point with pride to the fact that in some of the western countries of Europe, where corporal punishment has long been abandoned, there have been, of late, attempts to restore this relic of barbarism. The desire to rule over the farm laborers is common to the landed proprietor in Prussia as well as Poltava. It is to be noted, however, that the German barons do not advocate corporal punishment for their own caste, but for the lower classes only. On the other hand, in Berne, there has come a project which provides that pupils in the public schools may be flogged for grave offences (*e. g.*, lying), at the request of their parents. The German Agrarians submitted a carefully worked out bill to the Reichstag, in which they plan to combine incarceration with flogging for all sorts of offences. The instrument to be used is a whip of leather, and the smallest number of blows is twenty-five. Still more sad, in the

author's opinion, is the proposition of the London *Lancet,* to the effect that all persons who are guilty of assault, highway robbery, etc., shall be flogged systematically. Some American authors and some American medical journals have gone even further, and recommended castration of all criminals.

In Russia, the use of the whip, and the abuse of the privilege of employing corporal punishments to "subdue" inferiors of all sorts, such as servants, hospital orderlies, and other "small fry," is flourishing as well as ever to-day. Peasants are flogged at the initiative of the local magistrate for nonpayment of debts. Another common cause of flogging is a complaint of an aged father, entered with the local magistrate or police officer, to the effect that the son can not be "managed." No witnesses are heard, and the "defendant" is not even allowed to speak for himself in many cases. These things are not really sanctioned by statutes, but are done quietly, the population taking such occurrences tacitly and regarding them as perfectly proper. The days of serfdom are still in the memory of many people. The effect of this is, that very often persons belonging to the classes of society which "may be flogged" for certain offences, according to Russian law, are beaten most inhumanly without the sentence of any court, simply because a person of this kind may be legally beaten. Thus prisoners are very often flogged at the police station before they appear in court, and the police employ their privilege of beating any one who offers resistance when arrested. Corporal punishment is also very often used in the elementary schools in Russia. (*To be continued.*)

The Hygienic Importance of Skin Diseases. By Dr. O. V. Peterson.—The author's conclusions are as follows: Affections of the skin are very prevalent in Russia. About one half of these patients suffer from local skin infections which are easily cured. The spread of knowledge concerning the laws of hygiene will diminish the number of cases of skin disease. The establishment of public baths is a very important factor in the prevention of skin diseases.

The Use of Injections of Cinnamate of Sodium in Tuberculous Subjects. By Dr. L. A. Finkelstein. (*To be continued.*)

The Determination of the Amount of Oxidizable Substances in Water by Means of Potassium Permanganate. By Dr. A. F. Drjevetsky.

Chirurgia, November, 1900.

Bullous or Hæmorrhagic External Otitis. By Dr. P. V. Iliyne.—The author describes a disease of the external auditory canal characterized by the formation of bullæ or swellings which completely occlude the lumen of the canal. In men, this disease is most frequent on the left side; in women, on the right. The canal is narrowed, so that examination of the membrana tympani is difficult. As a rule, the swellings are in the bony portion of the canal, and they are either perfectly transparent or dark-blue in color, and contain serum and blood. They may extend outward to the cartilaginous portion of the canal or inward to the ear drum. They are soft, elastic on probing, and may easily be ruptured. Pain, difficulty in hearing, and noises in the ears constitute the chief subjective symptoms. In one case there was delirium with delusions of persecution. The bullæ may be confounded with polyps of the middle ear, or with a bulging ear-drum at the beginning of an acute inflammation of the middle ear. Massage of the ear, according to Delstanchou, may give rise to such hæmorrhagic effusions, and in such cases the origin of the trouble will be determined on taking the history. The duration is short; the prognosis is good. At the outset an antiphlogistic treatment may be of value; but, if the bullæ have begun to form, it is best to open them, allowing the liquid to escape, and to pack the canal with cotton or gauze. In a few days the skin heals. If it does not, the site of the bullæ must be touched with some caustic or scraped with a sharp spoon to remove the granulations. The author reports three cases of this kind.

Chronic Perichondritis of the Auricle. By Dr. V. A. Svenitsky.—The author reports a case of this kind which he observed in a Cossack soldier in the campaign in Manchuria. The cause of the disease was a violent fall from a horse in full gallop, the Cossack falling so that his ear was compressed between the temporal bone and some hard substance. Suppuration followed, the perichondrium peeled off, and the inflammation assumed a chronic type, involving the entire external ear. The distinction between an affection of the skin only and of one involving the cartilage may be made without the aid of the microscope if the following clinical facts are considered: Perichondritis is present when there is a marked thickening of the external ear; when the ear feels softer in some places than in others, and when the skin adheres to the perichondrium and can no longer be moved over it as usual.

Fifteen Operations on the Stomach. By Dr. B. S. Kozlowsky.

The Symptomatology of the Joint Affections Accompanying Syringomyelia (Initial Stage of Arthritic Involvement). By Dr. P. D. Solovoff and Dr. S. S. Nalbandoff.

Journal Akouscherstva i Gienskich Boliesney, November, 1900.

The Results of Operations in Retroperitoneal (Postcervical) Fibromyomas of the Uterus. The Significance of the Vaginal Method in Conservative Myomectomy. By Dr. D. Ott.—There is a group of fibromyomata of the uterus still considered as inoperable by the majority of gynæcologists. This group includes the fibromas that develop wholly outside the peritoneal cavity, in the retroperitoneal connective tissues. A type of these are the so-called postcervical fibromas, which, by their growth, destroy the normal anatomical relations of the peritonæum and surrounding parts, lifting the cul-de-sac of Douglas high up into the pelvis. These tumors occasion serious disturbances in the surrounding viscera, and also show a marked tendency to malignancy. As a rule, they are either not surgically treated or are merely scraped—a highly unsatisfactory procedure. The mechanical conditions accompanying the development of postcervical tumors are the worst possible for the organism. The tumor is wedged into the pelvis, the uterus pushed upward and forward, the vagina stretched, the urethra and the neck of the bladder are pressed against the symphsis pubis, the ureters displaced, and the rectum is compressed. If the tumor is large—and they sometimes reach the xiphoid cartilage—the vessels, nerves, and other structures in the abdominal cavity are also pressed upon. The author reports fifty-two cases in which he removed such retroperitoneal fibroids. In all these he had to open the peritoneal cavity to cut through the posterior leaf of the peritonæum, and then to enucleate the tumor from the

surrounding cellular tissue. After the removal of the tumor there remained a cavity in the retroperitoneal space, which he filled with a broad strip of sterilized gauze, the lower end of which was led into an opening in the vaginal vault, either specially made for it or remaining after a simultaneous vaginal hysterectomy. The peritonæum was carefully sutured over the cavity, thus cutting the latter off from the peritoneal space. By this method of tamponing the author succeeded in carrying to a favorable outcome cases of enormous fibroids, reaching to the xiphoid, behind the peritonæum. The abdominal wound was sutured completely and the vagina lightly tamponed with iodoform gauze. This tampon was renewed as often as it became saturated by the secretions that drained into the vagina along the gauze filling the cavity in the abdomen. In the fifty-two cases operated upon, there were only two deaths. These two patients were exhausted by disease and by previous unsuccessful operations, so that the conditions were unfavorable for recovery. The author emphasizes the advantages of the vaginal route in these operations, and states that, wherever possible, this method should be used, thus avoiding the risk of peritoneal infection. If the tumor is very large, it should be exposed below and removed piecemeal. On comparing his statistics, he found the vaginal method three times less dangerous than the abdominal operation.

A Historical Sketch of Obstetric Surgery. By Dr. M. Lachtine.

A Case of Myxoma of the Chorion Mistaken for Extra-uterine Pregnancy. By Dr. I. S. Kalabine.—The patient was a woman, aged twenty-nine years, multipara. During the fourth month of pregnancy she had a hæmorrhage, which lasted four days, disappeared, and reappeared at intervals during the succeeding month. At times clots were passed. Weakened by the loss of blood, the patient was obliged to remain in bed during the fifth month, and suffered from attacks of spasmodic pain in the lower part of the abdomen, the groins and the loins. In the sixth month a noted gynæcologist made the diagnosis of extra-uterine pregnancy and recommended operation. The hæmorrhage continued. On examination, the author found the uterus enlarged somewhat beyond normal for the patient's stage of pregnancy. The cervix was slightly open. The right ovary was somewhat sensitive. The diagnosis of extra-uterine pregnancy was excluded, and the ovarian inflammation was found to be due to gonorrhœal infection. The softening of the uterine wall was not particularly marked and nothing pointing to myxomatous chorion or to myxomatous ovum was found in the hæmorrhages. A month later, the cervix admitted two fingers, the flow continued, and vesicles of myxomatous mass could be felt distinctly. The cervix was dilated with the fingers, the hand introduced into the uterus, and the new growth removed with the fingers; a lysol injection was given and ergot administered. Recovery was uneventful.

The author emphasizes the absence of softening of the uterus in this case, which led to a mistaken diagnosis of extra-uterine pregnancy, and then to one of threatening abortion.

Habitual Miscarriage and Habitual Premature Labor. By Dr. S. S. Cholmogoroff (*continued*).—The author's conclusions as regards the origin of the miscarriage and premature labor "habit" are as follows: In patients in whom no satisfactory explanation can be given for the occurrence of repeated miscarriages or premature labors, mercury and iodides should be used during succeeding pregnancies in order to prevent such occurrences and to make the children healthy and strong. The same treatment is to be used where there is a history of syphilis in one of the parents. Neither iodides alone nor a carelessly conducted and insufficient course of mercurial treatment is efficient under these conditions. Such insufficient treatment can only postpone the labor and slightly increase the vitality of the fœtus. Often, antisyphilitic treatment conducted during one pregnancy will protect the mother and the offspring for one or more succeeding pregnancies; in other cases repetition is required at each pregnancy. In some cases the treatment must be repeated three times. Iodides should be used in the second pregnancy if the mixed treatment was successful in the first. At the beginning of the pregnancy one may give iodides to a patient who gives the history of repeated miscarriages, and when the critical period has passed, one may continue with mercury. Iodides may again be given at the end of the pregnancy.

Concerning the Duration of Pregnancy, Labor, and the Puerperal Period in Young Primiparæ. By Dr. N. P. Mariantchik.—The author's conclusions, based on very extensive statistical material, are as follows: Labor is not particularly unfavorable in women between the ages of sixteen and twenty years. While the duration of labor in such primiparæ is much longer, the frequency of important complications of labor is less, as, for instance, eclampsia, placenta prævia, post-partum hæmorrhages, and lacerations of the perinæum. It must be remembered, however, that a woman is only fully developed at the age of twenty years, and her pelvis becomes what it should be for the purposes of parturition, and her uterine musculature sufficiently strong to perform the required work. The occurrence of a greater percentage of miscarriages in young women may be interpreted as an effort of Nature to avoid the complications of labor when the apparatus of gestation and parturition is not fully developed. On the other hand, the children of such young mothers are distinguished by a lower vitality.

Letters to the Editor.

PUERPERAL SEPTIC DISEASES.

New York, *March 2, 1901.*

To the Editor of the New York Medical Journal:

Sir: In your issue of January 26th appears an article by Dr. H. J. Boldt on Septicæmia, Acute Bacteriæmia, etc. The article contains the following sentence: "This leads to confusion, especially when we see reports with such headlines as 'Acute Puerperal Septicæmia; Laparotomy; Removal of the Annexa; Recovery,' or 'Hysterectomy for Acute Puerperal Septicæmia Recovery.'"

The author had reference to my articles on the subject of puerperal sepsis which have appeared in various journals during the past three years. This fact was more clearly brought out by him when he closed the discussion which followed the reading of the paper before the New York Obstetrical Society, January 8, 1900, but which does not appear in the report of the proceedings of the society as published in your issue for February 16th, nor do the remarks made by me in the discussion excepting in a very meagre and imperfect manner.

I drew his attention then to the fact that I had never made use of the term "acute septicæmia" in the headlines of my papers. My astonishment was therefore great when I saw the article in print with the sentence in its original and incorrect form.

To set the matter at rest once for all time, I will herewith transcribe the headlines of all my publications on the subject: 1. Hysterectomy for Acute Puerperal Septic Metritis, with the Report of a Successful Case, *New York Medical Journal,* April 2, 1898. 2. Report of a Case of Salpingo-oophorectomy in Acute Puerperal Sepsis, *Medical News,* March 25, 1899. 3. The Surgical Treatment of Acute Puerperal Sepsis, with Special Reference to Hysterectomy, *American Journal of the Medical Sciences,* February, 1900; *Transactions of the American Gynæcological Society,* 1899.

The subject of puerperal sepsis is of such paramount importance to the profession at large, and is of such interest to me, that I am constrained to make further criticism of the author's paper. I am pleased to see that Dr. Boldt has changed the views he held two years ago, when puerperal sepsis was the subject of discussion between us. At that time he held that hysterectomy was never indicated in acute puerperal sepsis. In his present paper he lays down similar indications to those which I set in my first paper, without giving me any credit for them.

1. "If, after a full-term delivery or an abortion, there are no conception products in the uterus, and the patient has fever with exacerbations, chills, and a small and frequent pulse (120 to 140 or more), if careful observation should show that the infection comes *from the uterus alone,* that organ being enlarged and relaxed in its consistence, if there is no evidence of peritonitis, the parametria being free, if streptococci are found in the uterus, and especially if the blood shows the presence of pathogenic germs as in Prochownick's patients.

2. "If there are decomposition products in the uterus, as in the instances reported by Schultze, Sippel, Prochownick, and others, which cannot be removed satisfactorily *per vaginam,* if on doing a Cæsarean section the uterus is found septic—then an abdominal hysterectomy is indicated."

These indications exactly correspond to those I laid down in my papers, with the exception of the presence of streptococci in the uterus and in the blood of the patient, and a very important omission, which was to the effect that a hysterectomy was only to be entertained in the condition described in paragraph 1 after intra-uterine irrigations and stimulating treatment had failed.

My reasons for not determining as an indication for hysterectomy the presence of streptococci in the uterus were:

1. The presence of streptococci in the uterus does not necessarily argue that a given case of uterine sepsis will not be cured by less heroic measures. Bumm and others have found streptococci in abundance in the lochia and scrapings from the uterus in cases which ran a favorable course and were cured by curetting and irrigation.

2. Other bacteria than streptococci—*e. g.,* the *Staphylococcus pyogenes,* the *Bacillus coli communis,* the *Bacillus aerogenes capsulatus,* the bacteria of putrid decomposition—have each set up a sepsis so serious as to prove fatal.

Now, as to the presence of "pathogenic germs" in the blood. This, as an indication for hysterectomy, is at total variance with the context of the author's paper and his strenuous contention. He holds that acute bacteriæmia, which he tells us is "parasitic micro-organisms invading the circulatory system from some primary seat of infection," is an absolute contra-indication to any operative procedure. He will probably reply that when he said the presence of pathogenic germs in the blood he meant that which occurs in chronic bacteriæmia (pyæmia). I should like to ask him now the same question that I did at the Obstetrical Society, to which he did not give a satisfactory reply: How many germs in the blood would he consider necessary to constitute the acute variety of bacteriæmia, and how many would be necessary to constitute the chronic variety? Further, if he meant chronic bacteriæmia (pyæmia), he has not stated the symptom *par excellence* of pyæmia, metastatic abscesses.

He states that the patients with septicæmia (acute bacteriæmia) generally succumb within five days after the disease begins. What term would he apply to that vastly larger proportion of cases in which they succumb after the fifth day, and which do not show any signs of pyæmia? Would he say they were cases of "sapræmia"?

In the matter of diffuse septic peritonitis, Dr. Boldt has made a complete change of front. He stated in his reply to me in the *Medical News,* April 16, 1898, p. 571: "I have operated upon a goodly number of women ill with acute puerperal septic peritonitis, hoping to save one or another, but so far in vain. If a major operation is performed, such patients die earlier, usually within thirty-six hours after the operation, the shock of the surgical procedure contributing to this." In his recent paper he states: "Abdominal section with drainage is indicated in diffuse septic peritonitis when there is no evidence of an exudate in the pelvis." It is to be regretted that the author did not state his reasons or give the data which influenced him in his change of mind on the question of diffuse septic peritonitis and hysterectomy for acute puerperal septic metritis or acute puerperal sepsis with the uterus as the sole source of infection.

HIRAM N. VINEBERG, M. D.

NEW YORK, *March 6, 1901.*

To the Editor of the New York Medical Journal:

SIR: I regret that Dr. Vineberg should make an article which was intended to act as a stimulus for further investigation in the subject of puerperal infection a basis for personal controversy. His questions in the letter to you have, if my recollection is correct, been answered in society discussions or personally. When Dr. Vineberg states that "the author had reference to my articles on the subject of puerperal sepsis which have appeared in various journals during the past three years," he is presuming on a statement that cannot be borne out by facts. To-day (March 6th) I took the trouble to read *for the first time* all of your correspondent's articles in the medical journals. In the headlines of his first article he describes the condition as a local infection, "Hysterectomy for Acute Puerperal Septic Metritis, etc.," but, when one reads the article, it conveys the impression that he, in his opinion, had cured a patient ill with acute puerperal septicæmia. The second article clearly shows in the headlines that he maintains that he saved the life of the patient ill with puerperal septicæmia by removing an intensely inflamed tube and ovary. In his article he refers to a case published by Albert de Pourtales (*Archiv. f. Gynäk.,* vol. lvii, p. 36) which received a scientific microscopic examination, showing the invasion of the blood-vessels by septic micro-organisms; whereas his specimen received no such attention. This omission leaves us in doubt as to what

the true condition of his patient was. By personal observation, I can state that highly inflamed pelvic organs which produce intense constitutional symptoms resume their normal functions not infrequently without surgical intervention; so that his conclusions are only an assumption on his part. His patient may have got well, not because of her physician, but in spite of him.

In the third article the headlines also speak for themselves. I am unable to see any difference between the terms "acute puerperal sepsis" and "acute puerperal septicæmia." All the patients operated on and reported by the doctor had a local septic infection with intense constitutional symptoms. Whether the intervention to which he resorted was justifiable or not is a matter of personal opinion. Unfortunately for him, not one who saw the specimens and discussed them—one specimen excepted—shared his views. So far as the specimens themselves are concerned which were presented by him, they lose all scientific value, because in not a single instance was a microscopical or bacteriological examination made. They were merely macroscopical pathological specimens.

Complaint is made by him that I did not give him credit for laying down his indications for hysterectomy. I should gladly have done so, if anything therein had been original with him. As a matter of fact, long before the doctor reported his first case, not only I, but all who are engaged in this line of work, had been for a number of years led to perform such operations on similar indications.

The doctor asks me "How many germs in the blood would be considered necessary to constitute the acute variety of bacteriæmia, and how many would be necessary to constitute the chronic variety?" I regret our inability to distinguish between acute and chronic bacteriæmia by the number of micro-organisms found in the blood. The clinical picture usually does this. I thought that it was evident from my article that, so far as the results of bacteriological examinations were concerned, the acute bacteriæmia could not be distinguished from the chronic bacteriæmia. This distinction may be made only from the course of the disease. Again, if he has read my article, he must know that metastatic abscesses were included by me under the picture of chronic bacteriæmia (pyæmia).

Once more Dr. Vineberg asks: "What term would he apply to that vastly larger proportion of cases in which they succumb after the fifth day, and which do not show any signs of pyæmia? Would he say they were cases of 'sapræmia?'" If the thrombotic blood-vessels of patients who die as the result of septic infection so long after abortion or full-term delivery are examined, it will be found that they contain numerous sepsis-producing micro-organisms. This condition is frequently spoken of as septicopyæmia, a term invented to cover this mixed condition.

I have in no way changed my mind or opinion, although he insists that I have done so, with regard to our inability to cure patients ill with acute puerperal septicæmia, or, as he terms it, "acute puerperal sepsis," by performing hysterectomy.

As for my "change of front," I said that abdominal section with drainage was indicated in diffuse septic peritonitis, and this opinion is now generally accepted by the profession at large. To illustrate my conception of diffuse septic peritonitis, see the *Medical Record* for February 2, 1901. The case mentioned here, however, can be called a chronic form of diffuse septic peritonitis; whereas there are other cases of acute septic peritonitis, if not dependent upon puerperal infection, but upon rupture of an ulcer or an appendicular abscess, etc., which may be cured by similar intervention. I, too, have been able to save several such patients with that treatment. Acute septic puerperal peritonitis is, however, a different condition so far as prognosis is concerned, I placing it on the same basis as septicæmia (acute bacteriæmia).

How much practical benefit may result from careful bacteriological blood examinations such as I, in line with others, am carrying out in all patients ill with septic infection who have serious constitutional symptoms, remains to be seen. Another object of my article, in addition to the intended stimulus to work on a more scientific basis on the question of puerperal infection, was to clear up just such confusion of terms and definitions as seemingly exists in the minds of some members of the profession, as is evident when one reads Dr. Vineberg's articles. It is useless for me to argue with the doctor so long as he apparently does not comprehend what the term septicæmia (for which I have substituted the term acute bacteriæmia) means.

H. J. Boldt, M. D.

Book Notices.

Sanity of Mind: A Study of its Conditions, and of the Means to its Development and Preservation. By David F. Lincoln, M. D. Pp. vi-177. New York and London: G. P. Putnam's Sons, 1900.

In this little work the author sets forth, in a generally comprehensible, if not in a popular, way much about insanity which is of public interest. Beginning with general remarks, the second and third chapters deal with the nature of mental derangement in accordance with the latest classifications, and with degeneracy. The subsequent chapters are devoted to education, to self-education, and to our social and civic duties in regard to insanity.

The author is sound in his propositions, emphasizing throughout that in the proper education and training of neuropathic children, in the early detection and treatment of the insane diathesis, and in the quick recognition of a beginning mental disorder, together with a more general social recognition of such conditions, lies our greatest hope of diminishing the number of the insane. Were books of this character more popular we might hope for more satisfactory legislation in regard to the early and preventive treatment of insanity.

Manual of the Diseases of the Eye. For Students and General Practitioners. With 243 Original Illustrations, including 12 Colored Plates. By Charles H. May, M. D., Chief of Clinic and Instructor in Ophthalmology, Eye Department, College of Physicians and Surgeons, Medical Department, Columbia University, New York. Pp. xiii-406. New York: William Wood & Company, 1900.

This excellent little book fulfils its purpose as stated in the preface, namely, to say enough and not too much, especially for the student. It is doubtful, however, whether it will be of as much value to the general practitioner.

It is extraordinary that so much that is valuable—all, in fact, that is essential to those for whom it is in-

tended—should be compressed into such a small compass, and it is but natural that much that is interesting and that would add to the literary value of the book has been sacrificed. It is far superior to the usual book of the compend type, and will rank in popularity, we doubt not, with Swanzy and Nettleship.

The illustrations, most of which are original, are admirably clear and simple, especially those in colors, and the work of the publishers is above criticism.

Original Contributions Concerning the Glandular Structures Appertaining to the Human Eye and its Appendages. By ADOLF ALT, M. D., Professor of Ophthalmology in Beaumont Hospital Medical College, St. Louis. Pp. 23. St. Louis: *American Journal of Ophthalmology,* 1900.

THE seventy-one original illustrations which form the basis of this book are of unequal value. They certainly show the industry of the author, though they may not add materially to the sum of medical knowledge.

It is a question whether it is not better to combine several pictures of the same object into a composite, diagrammatic result if this could be done without bias, rather than to repeat a number of unimportant variations which show little more than the amount of work done.

The subject is treated with independence, credit being given to A. Terson and to E. Bock for their work in the same direction.

The comment on page 16, regarding the apparent misstatement of Fuchs concerning Krause's glands, evidently depends on the translation.

The Practice of Medicine. A Text-book for Practitioners and Students, with Special Reference to Diagnosis and Treatment. By JAMES TYSON, M. D., Professor of Medicine in the University of Pennsylvania and Physician to the Hospital of the University, etc. Second Edition, thoroughly Revised and in Parts Rewritten. With 127 Illustrations, including Colored Plates. Pp. xvii-17 to 1222. Philadelphia: P. Blakiston's Son & Company, 1900. [Price, $5.50.]

IN the second edition of this able work a considerable revision appears, more particularly in the portions of the book dealing with the diseases of the blood and of the nervous system, as well as with the infectious diseases. With these revisions and additions the work may properly be said to represent what is most modern in its field. The favorable opinion entertained generally for the first edition of the book is not likely to suffer diminution in the case of the second; indeed, it is one of the best of the modern works upon the practice of medicine.

On Some Cirrhoses of the Liver. Being the Lumleian Lectures for the Year 1900, delivered before the Royal College of Physicians, London. By WALTER BUTLER CHEADLE, M. A., M. D. Cantab., Senior Physician and Lecturer on Clinical Medicine, St. Mary's Hospital, London, etc. With Illustrations. Pp. 109. London: Smith, Elder & Company, 1900.

THESE lectures, being the Lumleian lectures for 1900, have before appeared in print. They cover well the field of cirrhosis, several interesting phases of the pathology and treatment of the disease being especially dwelt upon in an absorbing manner; thus, the occurrence of jaundice in cirrhosis, the treatment of syphilitic cirrhosis with mercury and the iodides, the phases of paracentesis, etc. The little volume is well illustrated and is a worthy contribution to its subject.

A Manual of Medicine. Edited by W. H. ALLCHIN, M. D. Lond., F. R. C. P., F. R. S. Ed., Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital, etc. Volume II. General Diseases—Continued. Diseases Caused by Parasites; Diseases Determined by Poisons Introduced into the Body; Primary Perversions of General Nutrition; Diseases of the Blood. Pp. vi-380. New York and London: The Macmillan Company, 1901. [Price, $2.00.]

THE second volume of this manual continues the discussion of general diseases and, to particularize, presents the diseases caused by parasites and those occurring from the introduction of poisons, the disorders resulting from perversions of general nutrition, and the diseases of the blood. The text is of most excellent quality, as must needs be when one considers the list of contributors, and of an exhaustiveness sufficiently complete; in fact, it is one of the strong features of this work that it gives one all that is essential upon the various subjects presented, without that microscopical detail that would seem unavoidable in more pretentious works. The reasonable and readable sufficiency of the book we have spoken of before this. No detailed comment need be made in the case of this volume, we think; the various contributions are able and harmonious, but the one upon gout has given us particular satisfaction as being a very simple and straightforward handling of the subject.

An American Text-book of Physiology. By HENRY P. BOWDITCH, M. D.; JOHN G. CURTIS, M. D.; HENRY H. DONALDSON, Ph. D.; W. H. HOWELL, Ph. D., M. D.; FREDERIC S. LEE, Ph. D.; WARREN P. LOMBARD, M. D.; GRAHAM LUSK, Ph. D., F. R. S. (Edin.); W. T. PORTER, M. D.; EDWARD T. REICHERT, M. D., and HENRY SEWALL, Ph. D., M. D. Edited by WILLIAM H. HOWELL, Ph. D., M. D., Professor of Physiology in the Johns Hopkins University, Baltimore. Second Edition, Revised. Pp. 3 to 598. Philadelphia: W. B. Saunders & Company, 1900. [Price, $3.]

THE most striking change noticeable in the second edition of this work, as compared with the first, is its appearance in two good-sized and well-shaped volumes. This change will doubtless conduce to the popularity of the work; it certainly adds to its usefulness. A certain amount of revision is noticeable in the later edition, more especially in the portions that deal with the central nervous system, but essentially the text is unaltered. In our review of the first edition we spoke in praise of its many excellences; these remarks remain true of the revision, and its two-volume form, as we have just said, is an added advantage.

BOOKS, ETC., RECEIVED.

A System of Practical Therapeutics. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Physicians, etc. Second Edition, Revised and largely Rewritten. Volume II. Fevers—Diseases of the Respiratory and Circulatory Systems—Diseases of the Digestive System and Kidneys—Nervous Diseases and Diseases of the Skin. With Illustrations. Pp. 3 to 926. Philadelphia and New York: Lea Brothers & Company, 1901.

A Medico-legal Manual. By William W. Keysor, Lecturer on Medical Jurisprudence in the Omaha Medical College, etc. Pp. 316. Omaha: Burkley Printing Company, 1901.

The Syphilis of Children in Everyday Practice. By George Carpenter, M. D., Lond., Physician to the Evelina Hospital for Sick Children, London. Pp. 9 to 112. New York: William Wood & Company, 1901.

An Atlas of the Bacteria Pathogenic in Man, with Descriptions of their Morphology and Modes of Microscopic Examination. By Samuel G. Shattock, F. R. C. S., Joint Lecturer on Pathology and Bacteriology, St. Thomas's Medical School, London, etc. With an Introductory Chapter on Bacteriology: Its Practical Value to the General Practitioner. By W. Wayne Babcock, M. D., Pathologist to the Kensington Hospital for Women, etc. Sixteen Full-page Colored Plates. Pp. 7 to 82. New York: E. B. Treat & Company, 1901.

The Use of the Röntgen Ray by the Medical Department of the United States Army in the War with Spain (1898). Prepared, under the Direction of Surgeon-General George M. Sternberg, United States Army, by W. C. Borden, Captain and Assistant Surgeon, United States Army. Pp. 5 to 98. Washington: Government Printing Office, 1900.

La Surdi-mutité. Étude médicale. Par Etienne Saint-Hilaire, Médecin auriste de l'Institut de Sourds-muets du Départment de la Seine, etc. Pp. 300. Paris: G. Maloine, 1900.

Bibliographie générale des travaux parus sur lait et sur l'allaitement jusqu'en 1899. Par le Dr. Henri de Rothschild, Lauréat de la Faculté de Médecine. Avec une préface de M. E. Duclaux, Directeur de l'Institut Pasteur. Pp. xii-584. Paris: Octave Doin, 1901.

Report of the Commissioner of Education for the Year 1898-1899. Volume II.

Thirty-third Annual Report of the Board of Water Commissioners of the City of Middletown, N. Y. For the Year ending January 31, 1900.

Tenth Annual Report of the State Board of Medical Examiners of New Jersey. 1900.

Annual Report of the Department of Health of the City of Niagara Falls, N. Y. For the Year 1900.

Transactions of the Luzerne County, Pa., Medical Society. For the Year ending December 31, 1900.

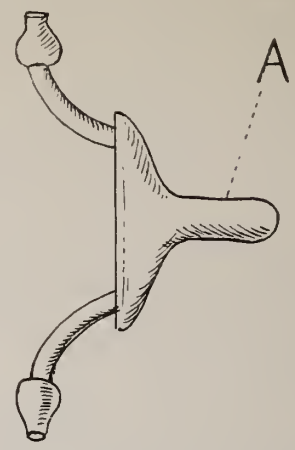
New Inventions, etc.

AN APPARATUS FOR THE THERMAL TREATMENT OF THE EXERNAL AUDITORY CANAL.*

BY EMIL AMBERG, M. D.,

DETROIT.

WE know that ear patients, under certain circumstances, are greatly benefited by applications to the external ear. I submit to the profession an apparatus by the aid of which such treatment can be carried out in the external auditory canal. It is shown in the accompanying cut. The apparatus, made of metal, is hollow, closed at the end, and has two tubes, one for the inflow and one for the outflow of the fluid. Part A is flattened and should not be longer than one centimetre. The instrument is to be used in the same manner as Leiter's



coil. I have had the apparatus constructed on general principles, and I hope to be able to report on its merits as soon as an opportunity presents itself.

*Demonstrated before the Detroit Medical Society, January 30, 1901.

Miscellany.

Tendon Transplantation for Deformity of the Hand.—At a meeting of the New York Neurological Society held on February 5th, Dr. W. R. Townsend presented a patient who had been exhibited to the society about a year before. The case was one of infantile cerebral palsy. Instruments had been used at the time of the patient's birth, but apparently no damage had been done to the exterior of the skull. He had never been able to use the right hand, and it was a typical "claw-hand" when the boy came under observation, at the age of fifteen years. On December 21, 1899, an incision was made over the wrist, exposing the tendons. The flexor carpi radialis, the flexor carpi ulnaris, and the palmaris longus were divided just above the annular ligament. The hand was then turned over and an incision made on the dorsum of the wrist, exposing the extensor communis digitorum. A dissection having been made through the interosseous space, the extensor tendon was pushed through and, being too long, was doubled upon itself. It was then attached to the tendons previously mentioned. The union of the tendons had been satisfactory and permanent. The tendons had not shown any tendency to unite to the surrounding tissues. The boy was now able to write fairly well, whereas formerly he could not even grasp a pen.

Dr. B. Sachs said that it was certainly the best procedure that had been suggested for these cases of contracture, whether of spinal or of cerebral origin. The problem was to split the tendons of the overacting muscles and unite them to the tendons of the underacting muscles, and so restore the equilibrium of power. It had been found prudent not to allow the patient to exercise much or to use electricity until the tendinous union had become very firm. It was unfortunate that this boy was not able to extend his fingers, yet he had good power of extension of the wrist. In spite of the tendon transplantation, the boy experienced no difficulty in producing flexion when he desired to do so.

Paralysis of the Spinal Accessory Nerve.—At the same meeting Dr. Pierce Bailey read a paper in which he said that the chief interest of this nerve was surgical.

Within the past year two instances had come to his notice of accidental section of the nerve. In most cases the paralysis which resulted from section was not particularly disabling, but such had not been the case in the instances referred to. When the sternomastoid was completely paralyzed, the freedom of movement of the head was interfered with, but not totally abolished. In the two cases referred to, the disability had been unusually great, and had led him to study the nerve more carefully. It was now regarded as a spinal nerve, pure and simple. The spinal portion of the nerve, represented by the external branch, sprang from the upper five segments of the cord. Paralysis of the nerve presented a varying symptomatology, according to the site of the lesion. An injury outside of the skull, to cause symptoms referable to both branches, must be situated directly at the base of the skull. The extracranial lesions of the spinal accessory were confined to the external branch, and were nearly always traumatic. Inflammation in this nerve was rare. A case was cited to illustrate the possible traumatic origin of spinal accessory palsy by injury with a blunt instrument. In two other cases reported the paralysis had been directly the result of an operation. In the second case the resulting incapacity had been so great that the right arm had been rendered practically useless for any heavy work. Neurorrhaphy had been performed about six weeks after the operation at which the nerve had been injured, and the ends of the divided nerve had been found separated over one inch. The improvement in motor power had been slow. A reference to the literature showed conflicting views regarding the nerve supply. Dr. Bailey said that the spinal centre between the first and fifth cervical segments of the cord was fixed and constant, but occasionally all the axones passed to the muscle by the spinal accessory. Under these circumstances the motor impulses reached the trapezius through the spinal accessory, and, hence, section of it meant total palsy.

Dr. W. M. Leszynsky said that two months before he had seen a patient who had been operated upon for torticollis. Over an inch of the spinal accessory nerve had been removed on the left side without relief, and the function of the muscle had remained perfectly normal. He had seen over an inch of the other spinal accessory nerve removed subsequently, yet the muscle had not been affected at all; hence he had held that it was useless in these cases of spasm to operate upon the spinal accessory nerve.

Dr. J. Arthur Booth said that he had had a case of spasmodic torticollis treated by section of the spinal accessory nerve. A little more than an inch had been excised, and the sternomastoid and part of the trapezius had been paralyzed as a result.

Epicondylar Fracture of the Elbow.—At a meeting of the Section in Orthopædic Surgery of the New York Academy of Medicine, held on January 18th, Dr. Homer Gibney presented a small boy who had sustained a fracture of the elbow three months previously. The fracture was above the condyle. When the patient presented himself at the hospital the elbow was fixed at an angle of 105°, with but little movement. The joint was cut down upon by Dr. V. P. Gibney and the detached fragment sutured into place. Dr. V. P. Gibney said that the epicondyle and nearly the entire condyle had been displaced, interfering with motion. He had cut down upon the joint and separated it with an osteotome, cleaned off the site of the fragment, and pushed it down, suturing with kangaroo tendon; he had then put the arm in a straight position, left it for four or five weeks, and then allowed active motion. Passive motion was not employed. Dr. T. Halsted Meyers commented upon the excellent result and remarked that children were often allowed to go on with fracture of the elbow united in poor position, in the belief that they would outgrow the disability in a great degree, which was true, but it was better to correct the deformity entirely, even resorting to an open operation when necessary. He called attention to Dr. Lloyd's excellent reports.

Statistics of Grippe in New York State.—The New York State Board of Health has issued a report on grippe which shows that the disease made its appearance in 1889. Every year since, in the winter season, it has recurred, the annual epidemic having various characteristics. The number of deaths which occurred each year from the disease is as follows: 1890, 5,000; 1891, 8,000; 1892, 8,000; 1893, 6,000; 1894, 3,000; 1895, 5,000; 1896, 2,750; 1897, 3,000; 1898, 2,500; 1899, 7,000, and 1900, 11,500. The report says: "Of the distribution of the disease, it has not been found to be one of either the city or the country. It is a disease of the colder months. It has varied greatly in severity in different years; it seems likewise to have varied greatly in virulence in different localities and shown varying types. It likewise varies in rapidity of spread. It is evidently communicable from the individual directly and conveyable in infected clothing. Like all zymotic diseases, susceptibility to it varies; unlike some, immunity does not follow a previous attack. The State is now in the course of the twelfth recurrence of grippe. Affecting the mortality of December by about 500, it has increased the number of deaths in January by probably 3,000, and was still in progress during February."

The Vital Statistics of Havana for January, which have been issued by Major Gorgas, chief sanitary officer, show that the number of deaths, 476, is the smallest that has occurred in any January in Havana in the last twelve years, the next lowest being that of January, 1890, 486 deaths; the highest being that of January, 1897, with 1,556 deaths. The death rate for this month, 22.75, is considerably less than the lowest for the past twelve years, 1894 being the next lowest with a rate of 27.36. In 1899, as shown by the report, the rate for this month was 63.84; in 1900, 23.90. The rate for last year was 24.40. Yellow fever has decreased from 62 to 24, and the deaths from this cause from 20 to 7. The number of deaths is kept up by the increase among the deaths from tuberculosis, which about balances the decrease in deaths from fevers.

The Antivaccination Movement has taken its most definite form apparently in Massachusetts, where much oratory and enthusiasm came to the surface during the hearing before the committee on public health of the Massachusetts legislature on a bill doing away with compulsory vaccination for school children. Dr. James D. Bell, of Boston; Dr. Montague R. Leverson, of Brooklyn; Dr. W. B. Sanders, William Lloyd Garrison, and Mr. Foster, a member of the House of Representatives, all appeared in favor of the bill. Dr. Leverson stated that he had for the time being abandoned his practice so as to devote his time to furthering the antivaccination movement.——A bill has been introduced in the Pennsylvania legislature to repeal that section of the law which makes the production of a certificate of vaccina-

tion necessary before a pupil is admitted to the public schools. The bill is not expected to pass, having been very actively opposed by the board of health and by the medical societies generally.——An antivaccination society met at a private residence in Cleveland, O., recently, and Dr. J. P. MacLean criticised the local health board for its failure to prevent the spread of small-pox.

Health of English Towns.—The vital statistics of thirty-three large English towns, including London, for the year 1900, as summarized in the *British Medical Journal,* show the annual birth rate per thousand of population to be 29.24, or 1.8 per 1,000 below the rate for the previous ten years, while the death rate is 19.5 per 1,000, or 0.8 per 1,000 lower than the death rate of the preceding decade. In London the birth rate was 28.6 and the death rate 18.8 per 1,000, as against a rate in the provincial towns of 31.2 for births and of 20.2 per 1,000 for deaths. Of these deaths, 2.50 per 1,000 were from zymotic diseases.

A Hospital Tag for Discharged Patients.—The Samaritan Hospital of Chicago has adopted a novel system of identifying former patients. It consists in giving to each patient, on leaving the institution, a metal tag to be constantly worn, bearing the following inscription: "In case of accident, telephone this number — to Samaritan Hospital, Chicago. They will notify my friends and give you instructions." A record is kept of each case by number, and in this way appropriate remedies can be promptly resorted to in case of sudden illness.

The Losses from Disease in South Africa were the subject of a parliamentary inquiry in the British Parliament recently. Statistics show that up to the end of last year more than 7,500 had died of disease and more than 30,000 had been sent home as invalids. The Government stated that the introduction of military titles for medical officers had not had altogether the best effect. The Government also stated that the leaders of the medical profession would be consulted, with a view to reforming and making more effective the army medical service. In the course of the inquiry the Secretary of State for War said that during October there were 568 cases of typhoid, with 98 deaths; in November 1,013 cases, with 207 deaths, and in December 1,065 cases, with 286 deaths. The total number of cases from the beginning of the war to December, 1900, was 19,101, and of deaths 4,233. The number of officers and men invalided for enteric fever who had arrived from England from the beginning of the war to December, 1900, was 10,975.

The Amateur Nurse.—She was young, pretty, and distinguished, and she had volunteered as a nurse in South Africa; so, when she reported for duty, she asked the medical officer what she ought to do. "You are supposed to know your duties when you come here," curtly replied the harassed doctor, who had answered the same question many times before. "Do anything you find that needs doing."

The amateur nurse looked wistfully around, then marched to the cot of a handsome Highlander and asked him: "Will you let me wash your face?" The wounded soldier turned wearily to her and said: "Yes, ma'am, but please hurry up. It has been washed six times since breakfast, and I've already promised to let two other ladies wash me, but perhaps I can manage to get a nap before tea."

And still a slanderous doctor publicly inveighed against the two plagues of the South African campaign, flies and women!

The Diagnostic Value of the Reactions of Degeneration in Cases of Progressive Amyotrophia.—M. Jules Abadie (*Nouveau Montpellier médical,* October 21st and 28th), as the result of a careful clinical study of this subject, arrives at the conclusion that the facts are calculated to render one somewhat skeptical in regard to the diagnostic value of the reaction of degeneration. So far back as 1893, Guinon wrote that "the presence of the reaction of degeneration, or rather the inversion of the formula of electrization of certain muscles, is not conclusive in the establishment of a diagnosis." This view has lost none of its importance, but rather gains daily support from new facts. 1. Anatomo-pathological study shows, in the two kinds of amyotrophia, similar lesions (without doubt due to trophic troubles). 2. The reaction of degeneration tends to disappear as a distinguishing characteristic of myopathic and myelopathic atrophies, as well from clinical demonstrations as from the data of physio-pathology. 3. There is, then, no reason why the two kinds of amyotrophia should not be more and more recognized as acknowledging a central origin, and an absolutely general purport may be given to Professor Grasset's proposition: "Muscular atrophy is the syndrome of the inferior central motor neurone."

Operations on the Intestine.—Dr. C. S. Hamilton (*Columbus Medical Journal,* September) reports four operations upon the intestines in connection with strangulated hernia, and concludes that the essentials for a successful suture of the intestinal tract may be enumerated as follows:

1. Free access to the field of operation by incision suitably located and of sufficient length. In dealing with strangulated hernia this frequently implies incision into the parietes beyond the anatomical limits of the hernia itself. 2. Rigid asepsis and special provision by properly arranged towels and compresses for catching intestinal contents, which necessarily escape to a greater or less extent. 3. Temporary compression of the intestine on either side of the proposed operation by clamps, gauze strips tied around the bowel, or the fingers of the assistant, to prevent the escape of fæces. 4. In the case of excision for any condition, division of the intestine in a healthy area wide of the disease, so that the tissue changes upon which union depends may progress normally. 5. Careful cleansing of the cut ends of the bowel and the V-shaped excision of the mesentery with the necessary hæmostasis. The vascular relation of the mesentery to the bowel is to be borne in mind at this stage. 6. Union of the mesentery, and of the intestine by suture alone or by suture associated with some mechanical device.

Hamilton believes that the majority of operators prefer simple sutures, except when there is a demand for speed. When this is the case the Murphy button is one of the most satisfactory devices for end-to-end union. The value of Senn's decalcified bone plates in lateral anastomosis is well known.

In end-to-end union the first line of suture includes the mucosa, the operator using, according to his individual preference, catgut or fine silk, interrupted or continuous; the second row consists of Lembert sutures penetrating the peritoneal, muscular and tough submucous coats. The adaptation of the mesenteric borders of the intestines demands the greatest care and accuracy, as it is here that leakage occurs if anywhere.

Original Communications.

SOME RETROSPECTS AND PROSPECTS IN GENITO-URINARY SURGERY.*

By REGINALD HARRISON, F. R. C. S. Eng.,

LONDON, ENGLAND.

Though my friend, Dr. Samuel Alexander, whose place at this clinic I occupy to-day, endorsed by my still older colleague and host, Dr. Frederic S. Dennis, gave me, on my arrival in New York a few days ago, but little chance of escape into Florida, I feel that an apology is due from me to you for addressing you on a subject relating to the practice of surgery which will not present any material feature of originality or novelty. I propose to consider Some Retrospects and Prospects. The old century is past and gone, and I am reminded that it has left behind it important landmarks of progress which, though at the present moment they may perhaps be regarded somewhat in the light of ancient history, are full of suggestion as to the directions research is likely to take with advantage to the cause of science in the new epoch that has opened.

Thus may the past furnish view-points wherefrom to anticipate the future, and so tend to free me from feeling that I may not aimlessly have occupied the time of so distinguished a gathering of my American brethren who have so warmly again welcomed me amongst them.

It would amount to false modesty on my part if, in the face of my various contributions to the surgery of the urinary organs and its literature, both at home and in America, I were to hesitate to address you on some matters relating to this interesting and far-reaching subject. In pursuance, therefore, of my idea of attempting to show how one recognized advance may be regarded as merely an instalment in the direct line of progress or discovery, I will take up the several points I wish to illustrate in the order in which they have casually presented themselves to me and have occupied my attention.

In addressing an audience of physicians and surgeons in the United States, I need hardly say that amongst the most prominent advances in surgery that distinguished the last century was the development of the operation for vesical stone by Professor Bigelow, of Boston, and the perfecting of the process now known under the name of litholapaxy, wherein the crushing of the stone with the lithotrite was immediately followed by the rapid evacuation of the fragments so triturated and prepared.

On the occasion of my first visit to America, in 1878, it was my good fortune and privilege to see some of Bigelow's earliest operations, as recorded in his work, and to hear from the lips of this distinguished surgeon the expectations he hoped to realize. The latter have been accomplished, the operation has generally been accepted, and the mortality and suffering connected with the removal of stone from the bladder have been greatly diminished. Shortly after this visit it fell to my lot to demonstrate for the first time in my own country the instruments and processes employed by Bigelow, and in a very short time to witness the supplanting of old methods by what at that time was new and original. It is a point of interest to notice, as indicating the completeness of the mechanism proposed and adopted at the time referred to, that the apparatus used now is practically the same as that with which Bigelow himself worked, a set of instruments being now in my possession as he presented them to me. It is rare to find the details connected with a complex discovery in its early stages so complete in all respects as this appears to have been.

It is impossible not to recognize at this stage of my remarks that Bigelow's proposal to revolutionize the operation for the treatment of vesical stone in the way I have described, particularly in reference to the character of the instruments employed in his operation, was doubtless influenced by another discovery which preceded it. I can remember Bigelow mentioning this subject on more than one occasion, thus again indicating how one advance is often dependent upon another. I refer to the late Dr. Otis's investigations as to the size of the male urethra, and the greater degree of distention, as compared with the former views, it was capable of undergoing without detriment to the normal canal and with much permanent advantage to the strictured one. This was an important precedent to Bigelow's proposal, which followed in its wake.

These are, I admit, matters which I would now speak of, with all respect, as of ancient history. But Bigelow's influence over others in regard to this operation did not cease with him. In the course of time, and as experience increased, it became clear that, though his operation was both safe and successful, it was open to be followed by recurrences which tended to limit somewhat its application, and to the substitution of less desirable methods.

The prominence given to the latter consideration by the analysis of results has directed attention to the importance of applying knowledge we possess, but have not hitherto sufficiently used, as to the probable mode in which urinary stone and concretions are formed, and the influence that the enlarged prostate exercises on the trapping, the formation, and recurrence of these bodies. Hence I have alleged for Bigelow's work, in reference to the subject of stone alone, not only that he has provided us with the best and most scientific method of removing stone from the bladder, as demonstrated by over twenty years' experience of it, but that the application of it has actually been the means of demonstrating that, apart from the mere mechanism of

*An address delivered at the Medical School of Cornell University, March 13, 1901.

these operations, there are underlying considerations connected with them to which importance has not hitherto been sufficiently attached.

Time will not permit me to go over that ground connected with this aspect of Bigelow's work which I have recently occupied and publicly discussed. Since the time when, some years ago, the American Surgical Association was good enough to confer upon me the great distinction of their honorary fellowship, I have not omitted, whenever I happened to contribute anything to the medical press or to our societies, which in my humble judgment seemed worth repeating and reprinting, to forward a copy of the reprint to my colleagues in America belonging to this association as some trifling acknowledgment of their kindness to me.

The Probable Mode of Formation of Urinary Stone in Relation to Rainey's Views on Molecular Coalescence, and the Bearing of Prostatic Enlargement and its Complications upon Stone Recurrence, was the title of the most recent reprint I have had the honor of submitting to the fellows of the American association in the spirit I have just referred to. It would be unnecessary to further refer to it. I may, however, briefly remind some present here to-day who may be unacquainted with Rainey's work in reference to the subject of stone, that he demonstrated at St. Thomas's Hospital in London, so far back as 1857, a mode of making calculi artificially by what he described as "molecular coalescence." The more recent works and demonstrations of the late Dr. Vandyke Carter and Dr. W. M. Ord have confirmed and extended these views. From them we may conclude, as I have already stated: (1) that for the production of calculi artificially by molecular coalescence, *precision* in regard to all details connected with it is required; (2) that success in moderation is dependent upon the sequence or concurrence of several factors or fixed conditions; and (3) that molecular coalescence, as first described and taught by Rainey, explains the formation of calculi in the human urinary apparatus. By the kindness of my colleague, Dr. Dennis, I have had the opportunity of seeing within the last few days the splendid laboratories for research which this, the new building connected with the University of Cornell, contains. I have never seen anything to equal them, much less to surpass them, in their construction and equipment. I do not know any subject which is likely to afford greater fascination or intellectual profit to the graduates and others than repeating Rainey's experiments relative to the formation of stone, with a view to their further development in the cause of both prevention and cure, under the very favorable conditions which exist in this building, for I can only speak of it as a palace devoted to the highest and most humane kind of research.

It is somewhat remarkable, judging from their omission, as a rule, from all surgical text-books, including special treatises on the subject, that hitherto Rainey's views have received so little prominence and attention at the hands of practical physicians and surgeons. This is to be regretted, as a knowledge as to the construction of these concretions is a necessary preliminary to their treatment by operation or otherwise. I have endeavored in the treatise referred to to afford evidence and reason for this. Had Bigelow, by inference, done no more than give prominence to defects inseparably connected, to some extent, with all operations for the treatment of stone, his memory would still have deserved our consideration and respect.

Without any special reference to stone recurrences or Bigelow's operation for its relief, in 1893 our colleague, Dr. William White, of Philadelphia, propounded the suggestion, by rational deduction, that by the removal of one or both of the testicles the hypertrophied prostate might be arrested in its growth, or even be reduced in size. This has been successfully demonstrated, and upon this other practices, such as the obliteration of the vasa deferentia and other constituent parts of the spermatic cord, have been founded, and followed by varying degrees of success and of failure. Out of this a considerable controversy has arisen, which still goes on. There can be no doubt whatever that a certain amount of success has thus been attained by one or other of these means, though the results obtained have been so variable as to give rise to some perplexity, which I think it should be our business to endeavor to remove. All this, as I have said before, is ancient history, so far as the present century is concerned. But what about the future? Are all the records which divided opinions have called forth during the last seven or eight years not worth the paper upon which they are written, or are we to go back and take up the position of matters before this class of operation was launched upon the expectant world of urinary surgery? I think not. Cautiously feeling our way, as a pilot does in foggy weather when in the neighborhood of obstructions, some of which are merely sand which delay, whilst others are rocks which would sink, we are beginning to recognize that the term "enlarged prostate," by which I mean the hypertrophied prostate, is, surgically speaking, a generalization which, in relation to the application of treatment, is liable to mislead. What should we think in the present day of a surgeon who proposed to discuss for this purpose enlargements of the breast or injuries to the hip without further definition? In the near future, judging from observations which are steadily going on, the surgical treatment of the prostate, when it has reached that stage or mechanism as to seriously obstruct the function of the bladder and to be unmanageable by the catheter, will largely turn, as in the almost analogous case of the tonsils and the throat, upon the evidence that is mainly afforded by an ocular inspection of the parts. For such purposes the development of electric cystoscopy, with the view of determining the precise nature, as well as

the shape and relations, of the obstruction it is proposed to remedy by surgical means, has already proved of much advantage.

I would stop for a moment to illustrate this point in the following way as bearing upon others already touched.

In a case of rapidly recurring stone in the bladder of a man under sixty years of age, it was found by cystoscopic examination, before repeating Bigelow's operation of litholapaxy for the third time within two years in an otherwise healthy man, that a pedunculated or tongue-like process of prostatic tissue, but slightly detectible by rectal examination, had practically converted the lower and posterior segment of the bladder into a box with a movable lid of prostate, which, by confining a certain proportion of the urine, brought about its decomposition and rendered it liable to produce that kind of phosphatic stone when it was submitted to such conditions.

On this being accurately determined in the manner described, it was recognized that the calculus was only to be regarded as a natural consequence arising out of this condition of the parts; as a fact, it would have been wrong if a stone had not formed under such inviting circumstances as presented. I therefore practised the median perineal *boutonnière* operation and twisted off the narrow-necked growth connected with the central flaps of the prostate. Under cover of it were two phosphatic stones about as large as common filberts. A drainage-tube was temporarily introduced, and, when I left home a fortnight after the operation, the patient was progressing favorably. This is a fair illustration of what the cystoscope may do in cases of this kind. The operations for stone were in no sense at fault.

In a recent paper, which I think I have also submitted to the fellows of your surgical association, I have endeavored to show that there are at least three varieties of prostatic hypertrophic obstruction, which, it is obvious, would not be likely to admit of a uniform method of operative treatment. There are other varieties in shape, but these three may be taken as typical of what in practice are most frequently met with as obstructing the function of the bladder. The more general hypertrophic growth is one usually associated with more or less congestion and engorgement, and presents the variety in which vasectomy, castration, and possibly Bottini's operation, have furnished the larger majority of good results. The pendulous prostatic outgrowth is not suited to any one of these proceedings I have just mentioned, but is best dealt with in the manner I have illustrated by the narration of a case; while the obstruction which is represented by the presence of interstitial adenomata analogous with what occurs in connection with the female breast and the tonsils, has been most successfully dealt with by enucleation through the suprapubic incision. By distinguishing these various conditions of prostatic hypertrophy, there seems every prospect of obtaining more uniform and better results from this class of operations.

Let me now turn, in continuation of my review, to the pathology of the kidney in reference to what seems to promise to be an addition to its surgery.

The surgery of this organ is a creation and feature of the nineteenth century. We deal with it surgically in a variety of ways, with good success, for diseases and conditions which, if left to take their natural course, would speedily prove fatal. These I need not enumerate or further detail, as they are matters of more or less ancient history. But what about the future? As president of the Medical Society of London, in 1896, at the suggestion of the late Sir William Roberts, my presidential address was devoted to the subject of renal tension in relation more particularly to the continued presence in the urine of albumin as a prominent feature of disease.

The basis of these remarks arose partly out of the observation of the living kidney as seen in connection with its exploration for doubtful states of disease, such as stone, abscess, and pain; and partly from cases of more or less chronic albuminuria, where, after the search for likely temporary causes for this, the albumin had subsequently, entirely and, so far as I know, after considerable periods of observation, permanently disappeared from the urine.

Exploratory observations of the kidney, in addition to the examination of post-mortem specimens removed after periods of intense renal congestion, such as occur in connection with scarlet fever and some acute forms of nephritis, have led me to think that we underrate, or do not correctly estimate, the damage that may be done to the secreting portion of the kidney in this way. With the exception of the eye, there is probably no more delicate structure in the human body than that which is engaged in excreting so complex a fluid as the urine. Nor, having regard to the way in which this structure is packed away in, so to speak, compartments composed of slowly yielding fibrous tissue, and the whole invested in a capsule of the same nature, is there any other organ more likely to suffer from the effects of tension, however this may be produced? That the degree of tension in the kidneys is, at times, considerable and unusual, is often apparent on their exploration. Not only are they found deeply colored, tense, and resisting to the touch, but I have frequently seen, on puncturing the capsule for the purpose of exploring, blood spurt out in jets, as if projected under considerable contractile pressure and eager to escape.

It seems to me that, as with the eye, the testicle, and other structures of the body that will occur more particularly to the surgeon, such pressure, when long continued, may be capable of causing considerable damage, which is not lessened by the subsequent processes of repair that are rendered necessary; thus may easily be commenced a series of changes, hypertrophic and other-

wise, which it is not unreasonable to suppose result in a slowly proceeding impairment or destruction of the secreting function of these organs.

The proposal to deal with this condition surgically is, at the present day, a reasonable one. Under antiseptic precautions, the kidney may now be explored, and, if found necessary, the capsule divided to a limited extent with very little risk to life. It would be better to undertake such a risk if a chronic albuminuria, an invalid life, and the prospect of slowly disorganizing renal tissue could be averted by such means. Cases that have been recorded by Dr. Newman, of Glasgow, in addition to my own and others that have been published, tend to support the conclusion I arrived at some years ago in reference to this point. Sir William Roberts, in a letter to me shortly before his lamented death, seemed to think that the suggestion I ventured to make might be the means of leading to a considerable revision in our views on kidney pathology and treatment.

I have undertaken to bring this subject forward for discussion in the Surgical Section of the British Medical Association at Cheltenham next July, and I am very pleased, as president of the section, to ask those of my friends here to-day who may find it convenient to be present to take a part in these proceedings, either by word of letter or of mouth. I may state for your information that I propose submitting this matter in the form of two questions: *First,* To what extent may kidney tension, as seen in kidney congestions, be responsible for permanent structural damage to these organs, which may ultimately result in their chronic degeneration, as observed in some forms of Bright's disease? That is to say, is there such a condition in pathology, to coin a term once put in my mouth by a friend much interested in this subject, as pernicious renal glaucoma? *Secondly,* Under what circumstances, if any, is the removal of tension by a surgical proceeding expedient and justifiable?

In the last place, I must not fail briefly to notice what antiseptics have done for the surgery of the urinary organs and the influence we may forecast that they may exercise on further developments, both in pathology and treatment.

Probably no set of organs has shared in these benefits more largely than the entire urinary apparatus. The complex nature of the urine and its liability to excite sudden and violent symptoms of septic invasion under certain conditions are well known. They are such as we might suppose, though varying greatly in degree, could only be aroused by a virulent and fatal poison belonging, for instance, to the alkaloid group. We see this occasionally occurring unexpectedly after comparatively slight operations, such as the passing of bougies and catheters and other urethral instruments, and more frequently after internal urethrotomy. It is our desire, if possible, to keep clear of these. I remember some years ago—I dare not in the face of Lord Lister's active and progressive scientific life, a life which we hope will be prolonged to its utmost limits, refer to antiseptics as "ancient history," unless used as a term of our sincerest respect and endearment—the late Dr. Palmer, of Louisville, advocating the saturation of the urine with boric acid, before operations, as a means of preventing those accidental developments to which I have just referred. The plan answered well in my hands, and I believe that in this way, by boric acid or by those digestible drugs of this kind, the desired object may usually be obtained.

The study of bacteriology as applied to the urinary organs by Janet, Guyon, and the French school particularly, has already furnished some excellent results, and the diagnosis and treatment of urinary tuberculosis has also progressed under the practical application of these discoveries.

Can it be otherwise when we look around this palatial building, which has been provided through the generosity and philanthropy of Colonel Payne, whose interest in science and humanity have induced him to make this great gift to Cornell. It is a pleasure to see the kind of men and women that are actually working in it, and the kind of work they are doing for us. Would any one of us desire a more enduring monument, whether living or dead, than this?

I must now bring my remarks to a close. I feel very conscious that they are hardly worthy of the occasion. They have been put together at a few hours' notice, and if, as I am sure is the case, they are hardly up to your expectation, I only hope you will just hold up my friends, Dr. Dennis and Dr. Alexander, for my having inflicted this address upon you, as I hope to be on my way to Florida by this time to-morrow, and shall no longer be on hand.

THE PHYSICAL EXAMINATION OF THE STOMACH.*

By MARK I. KNAPP, M. D.,

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CURABLE diseases of the stomach, it seems to me, can more easily be cured than curable diseases of any other organ, provided a correct diagnosis is made. It is the correct diagnosis that is absolutely necessary—the same as in diseases of any other organ. So definite are the methods of controlling and of examining each and every function of the stomach that hypotheses and presumptions regarding them should under no circumstance be allowed. Especially is this so if we reflect upon the very great bearing of the function of the stomach upon the entire constitution. To say that at least four fifths of the chronic diseases have their primary cause in the de-

*Read before the Eastern Medical Society, February 8, 1901.

rangement of the functions of the stomach is putting it rather mildly. The well-digesting stomach supplies good material to the blood; the opposite results under contrary conditions, blood supplied with bad materials means bad blood, and where bad blood will strike first we do not know. This last sentence may not sound quite æsthetic or scientific enough, but holds true, nevertheless. Many an obscure case accounted for as due to idiosyncrasy, as neurasthenia, as nervous, or as hysterical—terms, in most cases, the synonyms of ignorance—will, if properly searched, reveal some abnormal condition of the digestive organs which we may correct, and thus cure the disease. To cite but one instance, I would mention the so-called nervous headache, from which the writer of this paper suffered for so many years, but which ceased after proper attention to the stomach.

For the proper diagnosis of diseases of the stomach, the examination both of the fasting stomach and of the contents of the organ after a test meal is absolutely essential; this examination, however, must be preceded by the physical examination of the organ in question, the anatomical position of which might well be remembered.

The stomach is situated in the left hypochondrium and in the epigastrium. We distinguish three parts of the stomach: The cardiac, the part which is continuous with the œsophagus; the pyloric part, which is continuous with the intestines; and the fundus, a saccular expansion close to the cardia and to the left. The upper margin of the stomach is the lesser, the lower, the greater curvature. The superior surface of the fundus, when not collapsed, lies in the dome of the diaphragm, in the fifth intercostal space, behind and slightly above the apex of the heart, and almost entirely shielded by the ribs. As to the position of the stomach, I agree with the majority, who hold the opinion that the stomach lies in the transverso-oblique position. Some dispute this and believe the normal position of the stomach to be the vertical one. There is also some difference of opinion as to the exact level of the greater curvature. According to Pacanowsky, the level of the greater curvature is about three centimetres above the umbilicus; but as the greatest physiological latitude may be taken, the level of the umbilicus—this opinion being held now by Ewald and his pupils, one of whom I have the honor to have been. Cases of gastromegaly are exceptions and cannot be considered here. The pylorus lies on the right side of the median line, under the liver, near the end of the cartilage of the eighth rib, and cannot be felt ordinarily.

The examination of the stomach has for its object to determine the physical, chemical, and dynamical qualities of the organ. The physical examination has for its purpose to define the position, the size, the sensitiveness, and gross abnormal anatomical changes, if any; the chemical, the secretion; and the dynamical, the motility of the stomach. For the physical examination we use the ordinary means of physical diagnosis, for the chemical we employ certain reagents, and for the motility we use as a guide the relative time consumed by the stomach in emptying its contents into the duodenum.

The physical examination of the stomach, unlike that of the chest, gives but relative values, yet by the senses of sight and touch we may arrive at very valuable information. It is of essential value for the examination to have the intestine, especially the colon, clear of fæcal matter. Neither inspection nor percussion, nor even palpation, can give us with certainty the looked-for information; no better do we fare with inflation or gastrodiaphany. Valuable, indeed, are the data we get by such examination, but seldom are they in themselves absolutely trustworthy. The cause of this lies in the great motility of the organ, the position of which varies with the degree of its repletion and with the quality of its contents. From the results reached by an examination of an empty stomach we cannot conclude upon its condition when it is only partially or totally filled or distended, and *vice versa*. To make our deductions right, we must always examine under the same conditions. With our greater experience in physical examination will also increase the value of our results so obtained.

The physical examination of the stomach, like physical examinations elsewhere, calls into play our senses of sight, hearing, and touch, in the form of inspection, percussion, and palpation. Auscultation has little if any value in the physical diagnosis of disorders of the stomach. In addition to these methods, we employ stomach inflation, sometimes sound palpation, and transillumination.

The proper position of the patient during the physical examination of the stomach is the recumbent one. When the examiner is palpating, the chest of the patient is slightly elevated and the thighs are somewhat flexed upon the abdomen, in slight abduction. The relative amount of adipose tissue facilitates or impedes the examination, the most favorable condition for the physical diagnosis being a thin-walled abdomen.

The first to be considered is inspection, which, as a rule, gives little information; on the other hand, it may prove a very valuable aid. Inspection must not only be made to consist in looking at the patient from in front, but also in looking at him from the side and from the back over his shoulders. Very often standing at a distance from the patient will tell us more than when near him. In the latter case we can much better perceive slight elevations and depressions; even the lesser curvature in gastroptosis can then be seen as a shadow moving with the respiration. In thin subjects the contour of the stomach can well be seen. Normally, the region of the stomach is full and slightly convex; in gastroptosis this region is depressed, because of the absence of the stomach, and this can readily be appreciated by inspection, which shows the depression in the epigastric region and below it the convexity of the stomach. In very thin subjects with gastroptosis and gastrectasy, both the lesser

and the greater curvatures can be seen, even the thickened, tumefied pylorus, the cause of the dilatation. Tumors, if of sufficient size and situated on the anterior wall of the stomach, can likewise be seen rising and descending with the respiration, this latter, however, only when there are no adhesions preventing such rising and descending. In proper cases the peristaltic movements of the stomach can be seen, when gastrectasy may very strongly be suspected. Normally, peristalsis of the stomach cannot be seen. Kussmaul's peristaltic unrest is due to retained food, which the hypertrophied stomach tries to force through some obstruction, usually located at the pylorus, but sometimes beyond the pylorus, in the duodenum. This peristaltic unrest may become apparent immediately on uncovering the abdomen, or, if not yet visible, may be induced by either sharply striking the abdomen or giving effervescent draughts. The inspection, however, cannot be considered complete unless cognizance is taken of the entire appearance of the patient. Is the patient robust? Is the patient lean, emaciated? Has he a healthy color, or is he extraordinarily pale or cachectic? Such observations are of decisive value and may speak volumes. An emaciated subject, a little bulging in the pyloric region, better appreciated when looking at the patient from some distance, a cachectic appearance—and the diagnosis of cancer of the pylorus will be more than a guess.

Of hardly less importance is percussion. Percussion of the stomach has for its purpose to ascertain its dimensions and the quality of its contents. The results obtained from percussing the empty stomach will differ from the results got by percussing a full stomach; therefore the necessity of percussing both the empty and filled stomach becomes evident. The percussion ought to be done with the patient in the recumbent and then in the standing position, and the results will vary accordingly. If there is any chyme, this will change its level with the various positions of the stomach, and for that reason percussion ought to be practised in more than one position of the patient. The percussion note will differ with the quality of the gastric contents, and accordingly as the gastric contents differ from the contents of the intestine. The air-filled colon will therefore be of considerable influence upon the percussed stomach, and consequently the percussion must be executed with very slight force.

We must, *a priori,* recognize that only that part of the stomach can be percussed that is in apposition with the abdominal wall, and conclusions cannot be drawn from this as to the part covered by the liver and the spleen.

Percussion of the empty stomach may or may not give us the desired information concerning the stomach itself. But it does instruct us concerning the position of the adjacent viscera, viz.: The lower border of the liver, of the heart, and of the spleen. Percussion of the chyme-filled stomach gives us different notes of resonance, varying with the position of the patient. If the patient is in an easy, recumbent position, with the knees drawn up, the stomach being only partly filled, percussion of the anterior portion of the organ will give tympanitic resonance, while on the left side of the abdomen, corresponding to the fundus ventriculi, we elicit a dull note. This phenomenon is simply due to gravity, the chyme gravitating down to the lowest level of the fundus. If now the patient is put on his right side, this side will be dull and the fundal portion tympanitic. In this way we have a double control and a means for a distinctive diagnosis between affections of the stomach and those of adjacent viscera. To better distinguish the percussion sound of the stomach from that of the colon, Pacanowsky recommends the introduction into the stomach of a small quantity of carbonic-acid gas, which gives to the stomach a deeper note than the colon emits.

In percussing the stomach, it is of like importance to ascertain both the vertical and the horizontal diameters, as sometimes a dilatation of the organ will be in the transverse instead of the vertical diameter. If no ptosis of the stomach is present, the determining of the height of the lesser curvature is at present impossible, as we, as yet, have no adequate means of so doing, but the level of the greater curvature must be sought and determined. If the greater curvature is found on a lower plane than is normal, we must attempt to find the level of the lesser curvature, as then a distinctive diagnosis will have to be made between gastroptosis and gastrectasy. To me it seems that the best method to determine the level of the greater curvature is, first to empty the stomach completely, then have the patient take about 150 cubic centimetres of water, and next to determine the level of the water, the patient standing, by the dull note on percussion, and then corroborate in another position, with a different percussional result. This amount of water is sufficient to give percussion results, but not enough to cause the greater curvature to be weighed down.

Before proceeding to the third method, that of palpation, I shall call attention to two sounds produced in the stomach in the presence of air or gas. They are the succussion and the gurgling or rumbling sounds. The first can be produced in the stomach when this viscus contains air or gas and liquids. This succussion sound cannot occur in the presence of but one alone of either of these classes of substances. This sound is normally present after the imbibition of fluids or after meals within the period of digestion. It becomes abnormal only when elicited at a time when the stomach is supposed to be empty. The extent of this succussion sound can likewise be utilized for the purpose of determining the limits and the size of the stomach. The pathological significance of this sound becomes apparent when we consider that, besides chyme, air or gas also must be present at a time when the stomach is supposed to be empty. Such a condition can obtain only when

there is delay in the propulsion of the gastric contents into the gut either by the intrinsic motor fault of the stomach itself, the outlet of the stomach remaining patent, giving the ordinary condition of myasthenia gastrica, or by some obstruction at the pylorus or beyond, in cases of gastrectasy, or by both. Foul odors belched up by the stomach will suggest decomposition of the chyme, by either long delay or other causes, and such a history will at once arouse our suspicion and give us imperative cause for microscopical and chemical examination of the gastric contents. If the belched-up gas has no odor, the supposition is that it is only air or carbon dioxide, and, while this latter may not cause us to apprehend any grave organic lesion, the cause must be investigated. This belching up of air may indicate a general nervous disposition, a hasty gulping down of food with the mouth wide open at every bite, thus admitting large quantities of air, or, secondly, it may mean the insufficient closing of the cardiac opening of the stomach; this remaining open, admits air, which normally finds its way into the œsophagus, but is checked from further progress by the closed cardia. Again, the belching up of carbon dioxide may be due to acid gastritis, in which case the mucus is being attacked by the acid, with the evolution of the gas as one of the chemical results.

The succussion sound may also be produced in the intestine, in which case the emptying of the stomach with the stomach-tube will clear up the diagnosis. If the stomach-tube shows the stomach to be empty, and the succussion sound still persists, the succussion sound is outside of the stomach; it is in the intestine. This sound is produced by sharply and quickly striking the gastric region with the tips of the fingers, and may be produced involuntarily by the patient himself by a sharp motion of his body, or also voluntarily by alternate contractions and relaxations of the abdominal muscles. The recumbent position is the best for eliciting this phenomenon.

The gurgling sounds of the stomach are produced in an air-filled stomach, no liquids being present. Some patients can produce them at will. The rapid and alternate contractions of the abdominal wall upon an air-filled stomach are the causes of the gurgling. This sound has no pathological significance whatsoever.

The most important and the most difficult of all the methods of physical examination is palpation. No rules can be laid down by which palpation can be taught. Experience under prudent and frequent guidance is most important for the study of palpation. There is no law that will supplant the palpating fingers.

The position of the patient is as above described, on his back, with the abdominal muscles relaxed and breathing somewhat quickly and deeply; *long,* deep respirations interfere with palpation. In some cases the palpating of the patient in a side position, or in the knee-elbow position, or even in the standing position, may at times be resorted to with benefit.

The examining physician sits at the right side of the patient, who lies easily on a high couch. The couch must not be too high, nor should the physician stand while palpating. The palmar surface of the palpating hand must be placed on the patient, the metacarpal bones of the hand forming only the prolongation of the axis of the forearm, and not an angle with it. The entire forearm and hand must be in a horizontal line, the forearm possibly slightly and gently resting on the patient. The examining hands of the physician must not be cold, as cold hands will cause a contraction of the abdominal muscles of the patient, and thus frustrate our efforts, besides causing an unpleasant sensation to the patient, a thing we must always avoid, if possible. We feel with the palmar surfaces and tips of the last phalanges. The examiner must hold his fingers in an easy position; he must not strain the extensor muscles of his fingers while palpating, as straining them will interfere greatly with the tactile sense of his examining fingers. No force or great pressure should be used in palpation. We simply glide our fingers over the abdomen in a somewhat to-and-fro, rotary motion, applying but very gentle pressure, and gradually and carefully going deeper, as becomes necessary, bending the last phalanges. The gentler the palpation, the better we can feel. Too forcible pressure is almost invariably made by the beginner, who does his best to "grasp" the situation, and by such forcible pressure causes the abdominal muscles to contract, so that their margins, coming prominently into "view," simulate tumors.

For palpation we may either use the fingers of both hands simultaneously or we may use only one hand for palpation and the other, superimposed on the palpating one, to give to the lower, feeling hand the necessary pressure; or, again, we may use one hand only. Often we feel with but one hand and with the other try to bring the part or object to be palpated toward the palpating hand.

We palpate for the following reasons: For defining the size and position of the stomach and its relation to other organs, for evidence of pain, for gross pathological changes, and for tumors. In a thin-walled abdomen, especially in cases of thin, multiparous women with the condition known as *diastasis recti—i. e.,* divulsion, separation of the recti abdominis muscles—we may well be able to feel the greater curvature of the stomach. The greater curvature of the stomach may also be felt by the method known as sound palpation, which method consists in introducing a stomach-tube into the stomach and then feeling the tube through the abdominal walls, the tube, as frequently demonstrated, coursing along the greater curvature. It should not, however, be too hard to feel the greater curvature of a more or less empty stomach in patients with little adipose tissue. We very often may mistake the greater curvature for the lower border of a supposed ptotic liver, but percussion will help us out in showing tympanitic resonance of the

same quality above and below; the hardness we do feel, and the flat note it gives on percussion is due to the necessary double thickness of the apposed walls of the viscus.

Riegel advises two methods for palpation: The first for the purpose of acquainting one's self generally with the size and position of the stomach; the second one to diagnosticate localized areas. For the first method Riegel advises laying the slightly curved hand on the abdomen, the ulnar side of the hand turned downward and adapting itself to the surface of the abdominal wall. It is moved from above downward in a stroking manner. After some endeavors we may be able thus to feel the ventricular walls, especially in cases of gastrectasy and atony. This method, Riegel admits, cannot be executed when the stomach is absolutely empty, but it must always be filled to some extent by gases or ingesta. After trying this first method, we proceed with the second, using our finger tips, somewhat perpendicularly to the abdomen. In this way localized areas can better be felt.

Before proceeding with palpation for tumors, we must bear in mind the occupation of the patient, as this quite often has a decided bearing on the development of the abdominal, especially the recti, muscles. Either one or both these last-mentioned muscles may, by occupation, be hypertrophied, or only parts of the muscle, between two of the transverse tendinous lines that cross the recti abdominis. The first sections, those between the ribs and the first transverse lines, are the most often so hypertrophied. Such an hypertrophied section may indeed be mistaken for a serious condition. It is always best, in suspicious cases, to compare the suspected side with the other. Evacuation of the patient's bowels before examining him will always be of use, as accumulated fæcal matters will simulate tumors. Not so easy, if at all possible, is the diagnosis of "passive fat tumors." By this expression Senator means that isolated pieces of fat remain, while general atrophy of the fat of the body occurs. Such passive fat tumors do occur, and their diagnosis is difficult, if not impossible. Temporary "gas tumors" are freely movable tumors, sometimes felt in the region of the stomach, when the intestines lie in front of the stomach, and they are produced by the spastic contraction of the circumference of the intestine at two points, apart from each other. They include air or gas. It so happened that in palpating one patient I felt a distinct tumor, well circumscribed and passively movable. While attempting to locate and diagnosticate that tumor, suddenly I felt the tumor dissolve, accompanied by the peculiar crackling sound of emphysema of the skin. This phenomenon repeated itself during the examination. The tumor proved to be nothing but a localized, temporary, gaseous cyst of the intestine.

The bore of every novice in palpation is "aneurysm of the abdominal aorta." This diagnosis is a very frequent one with every beginner. He nods assent when his attention is called to the mistake, but, indeed, he does it half-heartedly, until he gradually learns to recognize his mistake. Especially is the beginner led into mistakes when the conditions for palpation are favorable, as in lean subjects, and especially in cases of diastasis recti. He feels the pulsating abdominal aorta, which is covered by the tissues overlying it. These overlying structures naturally increase the thickness over the aorta, so that the covering is forgotten and everything taken as one pulsating mass, which is diagnosticated as aneurysm of the abdominal aorta.

Having diagnosticated a tumor, the following questions arise: What is the consistence of the tumor, what is its size? Is it unilocular, is it multilocular? Is it freely movable, or is it partially or entirely adherent to the circumjacent structures? Where is the tumor situated? Is the pylorus, as is by far most frequently the case, the seat of the neoplasm, or is it the lesser curvature, which comes next in frequency, or the anterior or the posterior wall of the stomach, or is the tumor *ad cardiam?* A tumor *ad cardiam* can sometimes be felt, but, if it is not of sufficient size, the characteristic history pointing to a tumor of the cardia must be confirmed by the œsophageal sound. If a tumor is felt, and the question arises as to whether that tumor is on the anterior wall or the posterior, then such question may be decided by examining the stomach both empty and filled. If the tumor is felt best when the stomach is empty, the diagnosis of tumor of the posterior wall will be a proper one. If, however, the tumor is best felt when the stomach is filled, then we have to deal with a tumor of the anterior wall. It is just here in trying to locate a tumor and ascertain its motility that the patient is put in different postures. The knee-elbow position is very well adapted for the diagnosis of tumors of the anterior wall of the stomach.

There are two more methods for the physical examination of the stomach. The one is distention of the stomach by carbon dioxide or air, and the other is transillumination of the stomach, gastrodiaphany. The purpose of either of these is to supplement or to corroborate the other methods of physical examination, to define the position and the size of the stomach, especially when a diagnosis between dilatation and ptosis is to be made. The inflation of the stomach will also show the condition known as the hour-glass contraction of the stomach. If a tumor is felt, the distention of the stomach by air or gas will show whether the tumor belongs to the stomach or to another organ, as the tumor will change its position with the changed condition of the inflated stomach. If a tumor belongs to the posterior wall of the stomach, the distention will cause such tumor to disappear under the touch.

Carbon dioxide was first used by Fenwick in 1868, who gave small and equal doses of bicarbonate of sodium and tartaric acid in water. The gas evolved in the stomach by these chemicals distended the stomach and gave a different percussion note, the purpose for

which it was used by him. Instead of bicarbonate of sodium and tartaric acid, a glass of ordinary carbonic-acid water answers equally well. When gas generation in the stomach is used, three quarters of a teaspoonful of the tartaric acid is first given in water, and immediately after a teaspoonful of the bicarbonate of sodium, also in water. This method has this merit: We need not introduce the tube into the stomach, a fact which must not be underrated. Especially is this method of value when there is a tumor *ad cardiam* and the tube cannot be introduced for the purpose of inflating the stomach. The drawback to the use of this artificial gas production within the stomach is that we can never fully know how much gas we are to produce, and any overdistention of the stomach may give rise to distressing—may, even alarming—symptoms. Nevertheless, neither Riegel nor other authorities have met with any accidents in the constant use of this method. It is different with the introduction of air into the stomach, first employed by Runeberg. This is done by introducing the ordinary stomach-tube into the stomach and connecting the proximal end of the tube with a double rubber bulb. This method has the advantage that the degree of the distention of the stomach is always at our command, and the patient can instantly be relieved from any overdistention by simply disconnecting the rubber bulb and allowing the air to escape, helping by pressure upon the stomach. The volume of air in the stomach in this method can be regulated at will. The disadvantage of this method is the fact that we have to insert an instrument into the stomach. This is the method now used by Ewald, and, while it has always proved successful, it has never given rise to any alarming symptoms. It certainly is the method to be recommended if we find no objection to the tube and if the tube has a free passage into the stomach. By the distention of the stomach we are well able to see its contour, as the entire organ becomes prominent.

The next method is gastric transillumination, discovered by Milliot in 1867, and used by him in experiments on animals. For its use on man, gastrodiaphany was developed and introduced by Einhorn, of New York, in 1889. The principle of gastric illumination consists in introducing into the stomach, filled with water, a small electric lamp. The gastrodiaphane is essentially a small Edison incandescent lamp attached to the end of an ordinary stomach-tube, the electric wires running through the lumen of the tube. It is of importance that the stomach be first emptied and washed out. It is then filled with lukewarm water to its full capacity, and then the gastrodiaphane introduced. The purpose of the water is not only to prevent overheating by the lamp, but to give a good picture; little water does not give good results. The room in which transillumination of the stomach is done must be darkened. The patient may be in a recumbent or in a standing position; the examination in both positions is to be advocated. In the normal or in the dilated stomach the transillumination shows the greater curvature, the lower margin of the liver, and the moving diaphragm, sometimes also parts of the intestine. We can see the stomach rise and descend with respiration. In the ptotic condition of the stomach we see the lesser curvature as well, but the stomach does not move up and down with the respiration. The diagnosis between gastroptosis and gastrectasy is made mainly on the strength of the presence or absence of the respiratory movements of the stomach. Tumors of the stomach may sometimes be discerned by gastrodiaphany by dark, not transilluminated areas and spots.

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INFECTIVE SIGMOID SINUS THROMBOSIS.*

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In selecting this subject this evening, I have done so with the full knowledge of its comprehensiveness, and conscious that within the scope of my paper I can only give the salient features of its symptomatology, diagnosis, and treatment, and cannot go into the details of the subsequent operations found necessary after exposing and opening this sinus; for in an operation of this character one should be prepared to explore and operate upon the various parts of the cranial cavity likely to be affected from this condition by extension.

The sigmoid sinus is more often affected with thrombosis than any other of the sinuses, on account of its nearness to the middle ear, mastoid cells, and antrum, cavities that are so liable to purulent inflammation. Thrombosis of the sigmoid and lateral sinuses is rare in infants, is seen seldom in children, is common in adults, and rare in old age. In infancy the mastoid cells are not developed, as a rule, though the antrum exists; the squamomastoid suture is pervious, therefore the purulent secretions find their way through it. There are more exits for venous blood in infants, as compared with adults, and, lastly, the sinus is not embedded in an osseous canal, but rests upon a flatter surface than in adults. Infants are more prone to pathogenic involvement of the inner ear, by extension from the middle ear, causing leptomeningitis, which often terminates fatally before a thrombus of the sigmoid sinus develops. The ætiology of this condition is from extension of chronic purulent otitis media; extension of thrombosis from other sinuses; traumatism, such as a fracture passing from the base of the skull to the middle ear; infection from septic wounds of the head, neck, or mastoid region, and inflammatory secretions from throat or naso-

*Read before the Medical Society of the District of Columbia.

pharynx into the middle ear, antrum, and mastoid cells. The most common cause is through an infective inflammation from the middle ear, producing infective thrombosis of the small veins, going from the middle ear to the sigmoid sinus, or by direct erosion of bone. A discharge from the ear may be present for years, during which time a slow erosion of bone may be taking place, causing it to become thin, and the mastoid cells and antrum to fill with granulations, with little or no pus formation. Again, the veins of the middle ear may become thrombosed, and this condition may extend to the sigmoid sinus with little, if any, effect upon the bone. A large number of persons are affected with chronic suppurative otitis media, and it is from these persons that a large number of the cases of infective intracranial diseases come. Roherer found a distinct difference in the bacteria of fœtid and nonfœtid discharges from the ear. In the nonfœtid, micrococci only were found; in the fœtid, both bacilli and micrococci were found. He also found that the bacilli in fœtid discharges possessed only saprophytic properties, but that inoculation with the micrococci produced fatal sepsis. Gruber very pertinently says that "the offensiveness of the discharge is no criterion of the dangers that are to be apprehended from it." A chronic suppurative otitis media is more liable to cause infective intracranial conditions, because the resistance of the tissues is impaired, and the lining membrane of the tympanum and the accessory cavities has been partially destroyed, necrosis of the bone existing in places; thus the blood-vessels and lymph channels are rendered liable to septic infection and to carry this condition to other organs by means of the circulation. Acute suppurative otitis media is not so liable to cause this condition, for the periosteum is a protection against bacterial invasion, and the leucocytes play an important part in destroying the phagocytic action of the micro-organisms. Monti has demonstrated that weak cultures of staphylococci, which produced no results when injected subcutaneously, caused fatal sepsis in a very short time when nonpathogenic germs were injected with them. This may be the explanation of the fact that a discharging ear that has been long dormant, sometimes suddenly becomes active to a very serious degree by the introduction into it of some other germ, be it pathogenic or not, which causes a septic condition of the entire system or manifests itself in some localized affection of the brain or its covering. This condition may be divided into three stages, the manifestations of each being more severe in character than those of the preceding one. The beginning of a thrombus of the sigmoid sinus rarely has any symptoms pointing directly to it, other than the mastoid symptoms which demand the opening of the bone. They are: Hemicrania, persistent in character; pain on pressure over the antrum; the auricle stands out prominently from the head; sagging down of the posterior superior wall of external auditory canal, and fever. It is after the mastoid bone has been opened, cleaned of pus, granulations, etc., that the sinus is exposed and inspected when it is frequently found thrombosed, the bone being carious, extending through the inner table, and encroaching upon and surrounding the sigmoid groove. When there is, or has been, a chronic purulent otitis media, and the discharge has, or has not, ceased, and there is a persistent hemicrania with fever, rigors, nausea, and vomiting, the sinus should always be carefully inspected when the mastoid bone is opened. The second stage of this disease follows quite rapidly, should there be no operative procedure in the first instance. It is usually ushered in by a pronounced rigor; in this stage the thrombus has broken down, and the septic matter has become absorbed, causing constitutional symptoms most prominent of which are frequent rigors and fluctuating temperature; to discover the latter, the thermometer must be used every three hours and an accurate record kept. The symptoms of this stage are those of septic infection, the copious sweating, exhaustive in character, the anxious appearance of the face, constipation, irregular respiration, slow and fast at intervals and the before-mentioned rigors and fluctuating temperature. There are no uniform or specific symptoms which determine the presence of a thrombosis of the sinus that may not vary in such a manner as to cause doubt as to the condition present. It is here that experience in many cases will be of great assistance; there are certain symptoms, or manifestations, which have come to be regarded as indicating a thrombus of the sigmoid sinus by the regularity of their presence in most cases. In this, as in other conditions, a chain of symptoms are taken together and used in making a positive diagnosis. In enumerating these symptoms, the rigors or chills are probably the first to become manifest; these usually increase in frequency as the septicæmia increases, they may recur daily or several times a day, and are usually accompanied by a very exhausting sweat which leaves the patient more and more prostrated. These sweats may become continuous, always present though the temperature is high, differing from other fevers in which the skin is hot and dry. Sometimes the rigors are absent and the sweats also; in these cases the septic absorption is not so great. Allen has reported a case in which no sweating took place until shortly before death, though rigors were present. This case shows the variability of this symptom, and that it alone is not an infallible sign. The fluctuating temperature I regard as a very important and significant symptom. The pulse rate is high, from 150 to 175; the very rapid movement of the blood will soon cause unfavorable developments, not only of temperature, but of respiration, the latter becoming rapid and labored. Vomiting and dizziness may, or may not, be present. Meningitis may occur; when it does, these last two symptoms are usually present. The patient may become unconscious or delirious, or may remain conscious up to the time of death

or, again, may become lethargic and semiconscious, from which condition he or she may be aroused, may reply to questions, and then sink again into this semiconscious condition. A mild form of delirium may appear, which is not indicative of a serious condition, unless the patient becomes violent. This delirium is caused by noninfective emboli in some of the small cerebral vessels. Œdema of the mastoid region has no significance as regards thrombosis of the sigmoid sinus; this œdema is usually caused by a periosteitis of the mastoid bone; though a blocking of the veins in thrombosis may tend to increase the œdema. In subperiosteal abscess there is considerable œdema. There is often present an œdema of the occipital region, extending down the neck, which is caused by an obstruction of the occipital and mastoid veins, and by a phlebitis of same vessels. This is known as Griesinger's symptom, and, when present, is significant of sinus thrombosis. There sometimes occurs an œdema of the temporal region involving the upper eyelids on the same side, and often associated with ecchymosis; this is due to the phlebitis and thrombus extending to the cavernous sinus of that side. The involvement of the ocular muscles, and the partial or total loss of sensation of the same side of the head, point more fully to the cavernous sinus being implicated; both sides may become infected by extension through the circular sinus. The ocular muscles affected are usually those controlled by the third, fourth, and sixth cranial nerves, which are on the outer and inner side of the cavernous sinus respectively; the first division of the fifth nerve, which supplies sensation to the temporal region, eyelids, etc., is also on the outer side of the cavernous sinus. Pain on pressure on the mastoid is more indicative of a periosteitis of that particular bone than of a thrombus of the sigmoid sinus. Pain on pressure along the course of the internal jugular vein and upon the upper third of the posterior cervical triangle can often be elicited; this pain is usually so severe that the patient will wince under the pressure, even though he or she is semiconscious or somnolent. This is a very important symptom, and, when present, indicates a phlebitis and thrombus of the internal jugular, and probably of other veins in the neck. Comparison of the two sides, as to the degree of pain induced by pressure, will often give valuable information when in doubt as to the condition of the sinuses. The pain may be more intense on one side, but painful on both; this may indicate a beginning phlebitis in the other jugular by extension. Frequently the internal jugular can be felt in the neck like a cord, when it is thrombosed; it will be felt to the inner side of the sternomastoid muscle; the upper third of the vein is mostly affected, but often the thrombus extends throughout the entire vein, to its junction with the subclavian. The most serious stage of this disease is that of disintegration and breaking down of the thrombus, so that particles of it are carried into the circulation and induce metastasis to other organs, especially the lungs, causing pulmonary infarctions. Where this occurs the symptoms increase in severity, the rigors are increased and more severe, the fever becomes higher, and the exhausting sweats more profuse. The pulmonary manifestations begin very insidiously, dyspnœa and a slight cough being the first symptoms that appear; then pain in the chest on one or both sides, according to the amount of lung tissue involved; these symptoms are usually followed by the rusty-colored sputum and moist râles, the former having an offensive odor and bacteria being found in it, the most prevalent of which are the staphylococci, streptococci, and pneumococci. The lungs may become gangrenous and abscesses form in them, as well as in other parts of the body. Septic enteritis frequently occurs during this stage, and may be diagnosticated as typhoid fever, from the fact that the general history and symptoms of septic thrombosis may have been obscure or absent, and from the failure to recognize the otorrhœa as the cause. The symptoms of this type of this disease are similar to those of typhoid fever, viz., the furred tongue, loss of appetite, fluctuating temperature, and diarrhœa; the discharges from the bowels partake often of the odor of the otorrhœa, the prostration is great, and delirium soon appears. The diagnosis between septic enteritis and typhoid fever lies in the recognition of the otorrhœa and the mastoid symptoms, the absence of the rose-colored spots, the character of the temperature being more fluctuating, the difference of from four to six degrees occurring in two or three hours. The infective matter is often carried to the lungs and intestines by passing through the Eustachian tube into the pharynx, the stomach, intestines, and some of it may find its way into the lungs through the trachea and bronchi. The patient may, or may not, be conscious. Meningitis is liable to develop, if not present earlier in the course of the disease; when present, it sometimes masks the symptoms of the thrombosis. Neuroretinitis occurs very frequently, and is always present when meningitis or other brain complications arise.

Metastatic abscesses of other organs, viz., of the liver, spleen, and kidneys, occur with a certain degree of frequency. Peripheral abscesses are liable to form, and careful scrutiny of the entire body of the patient should be made, especially of the joints, in which these abscesses are so liable to form. It is fortunately the case that all the metastatic inflammations do not result in abscesses; many of them undergo organization and constructive metamorphosis. Whether a purulent accumulation in one or more of the vessels can, or does, cause reinfection from that particular point is a matter of individual opinion; statistics do not confirm this theory.

Diagnosis.—In the foregoing I have given the majority, at least, of the symptoms of infective sinus thrombosis, which, when present, enable us to make a pretty certain diagnosis, yet many of them may be absent or so obscure as not to be recognized. Therefore the ques-

tion arises: Which of them are to be relied upon, by their presence with a certain degree of constancy, to warrant a diagnosis of this affection? It is important that this condition should be recognized at its beginning and before the system is overwhelmed with pyæmia and the metastatic stage has begun, if we wish to treat it successfully. The majority of the fatal cases of infective sinus thrombosis are those that have not been operated on until late in the second stage, because, in the first stage, there was nothing to point to that condition of the sinus; no sign whatever of septic infection, but only those of uncomplicated mastoiditis were manifest, which gave no signs of intracranial invasion. The first stage is the one most favorable for operation; therefore all the features, symptoms, etc., of this favorable period should be familiar to us, that we may operate at once before the other stages set in, increasing the gravity of the condition of the patient and exaggerating the danger of a fatal termination.

In recapitulation, I would emphasize the following symptoms of infective sinus thrombosis as those upon which we should rely, and, when present, should act promptly and decisively, since delay is dangerous. When, therefore, a patient has a purulent otitis media, and there is an increase or decrease of the discharge, hemicrania appears, and a general systemic disturbance of greater magnitude than is usual in mastoiditis occurs, we should suspect an intracranial condition, and our suspicion, converted almost to a certainty should a chilly sensation or a pronounced chill or rigor take place, followed by high temperature fluctuating in character, profuse sweat, exhaustion, rapid pulse, and respiration, together with the following local signs, would confirm a positive diagnosis: Tenderness in the upper third of the posterior cervical triangle, occipital œdema, tenderness along the course of the internal jugular vein, neuroretinitis, œdema of the eyelids, and a cord-like feeling of the inner jugular vein, extending into the neck.

Operation.—In this, as in other intracranial operations, asepsis is absolutely necessary. The patient's head—and beard, if any—should be shaved, the parts scrubbed well with soap, afterward with a solution of bichloride of mercury, 1 to 5,000, and lastly with ether, and an aseptic bandage should be put over the site of operation. This should be done, if possible, the day before, or at least a few hours before, the operation. Proper attention should be given to the diet of the patient. The bowels should be well moved the day before the operation. Whether we should operate in the morning or evening is a matter of individual choice; when the conditions and circumstances admit of a choice, my preference is for the morning. The operator, assistants, and nurses should observe all the recognized methods of rendering their hands aseptic, and should wear aseptic gowns and caps. The patient on whom is to be done an operation for infective sigmoid sinus thrombosis is one who is in a septic condition, and has been so for several days; whose physical condition is greatly impaired and his vital energies at a low ebb. The operation is a grave one, and the shock from it, which is mostly caused by the loss of blood, is great; for in cleaning out the thrombus and in removing adhering particles this cannot be avoided; therefore, every detail of the operation must be as complete as possible, and all restoratives at hand.

One of the most valuable of these is the intravenous infusion of normal salt solution at a high temperature, and there should be no delay in using it, especially if the loss of blood has been great; for in it we have a great remedy for the prevention of shock, and a heart stimulant of the best character. I think, also, that it eliminates a certain amount of infective matter or toxines from the blood. This agent should be used in any stage of the operation, together with the proper hypodermic medications, when their use is indicated. Subcutaneous infusion or an enema of the salt solution should be used if there is any delay or difficulty in finding the vein. The operation should be done expeditiously, but nothing should be left undone that ought to be done, unless the patient's condition admits of no further operative procedure.

As to whether the antrum or sigmoid sinus should be first operated upon, the symptoms should be our guide. In my judgment, the antrum should first be opened and cleaned out, then the sinus uncovered and inspected, for, as a rule, the infection is due to extension from middle-ear suppuration. To open the antrum, the incision should be made a quarter of an inch behind the attachment of the auricle, beginning at the tip of the mastoid bone and extending to the posterior root of the zygoma; the periosteum should be pushed aside, the field made clear by ligating or using forceps on all bleeding vessels, and the parts separated by retractors or by sutures passed through them, looped, and held apart by an assistant.

The landmarks must be plainly in view before beginning the operation; they are the spina supra meatum, the linea temporalis, and the posterior external osseous canal. The bone should be entered at the base of the suprameatal triangle, a triangle formed by the posterior root of the zygoma, above, the posterior border of the external osseous canal, below, and an imaginary line uniting these two, extending from the zygomatic root to the most posterior portion of the external osseous canal. The antrum may be entered with safety within the base of this triangle; the opening to be made inward and forward. The antrum is often superficial in children; in adult life it is more deeply situated; its depth often varies from one eighth to three fourths of an inch, and sometimes more. If it is not exposed after penetrating about a half inch, further procedure must be with great care, lest the facial nerve be injured. The opening must be kept within the limits of the triangle before described; it is best not to let it go above the superior bor

der of the external osseous canal, but to keep it a little below it. The bone should be gradually chipped off with a gouge or chisel, and mallet, or with whatever instrument the operator prefers. The operator must be on the outlook for abnormities of the skull, for, where they exist, there is danger of injuring the facial nerve or the horizontal semicircular canal, or of entering the middle cranial fossa or opening the sigmoid sinus. We recognize that the antrum is opened when a probe can be passed into the cavity to the depth of from three fourths to seven eighths of an inch, indicating that the probe has passed into the middle ear. The passage between the antrum and the middle ear must be curetted and all necrosed bone, granulations, etc., removed. The ossicles must be removed if they are found to be necrosed. An assistant should be instructed to observe and report any signs of facial twitchings, which indicate a liability to injury of the nerve; it is a wise precaution, especially when there has been much erosion of bone on the floor of the antrum, not to remove any granulations springing from that point without examining them with a probe, to ascertain if the facial nerve is in connection with, or enclosed in, them, the twitchings of the face being our guide. To expose the sinus, the initial incision must be continued backward from an inch and a half to two inches, the periosteum pushed aside, and the parieto-squamo-mastoid junction exposed. The landmarks which guide us in locating the sinus in its different parts are the parieto-squamo-mastoid junction and a line drawn from this point to the tip of the mastoid bone, which indicates the course of the sinus; this line marks the middle of it, or, in adults, sometimes the posterior border only. If the bone is opened with this line forming the posterior border and keeping between the roof and floor of the external osseous canal, the sinus will be uncovered at the part most often affected. The most superficial part of the sinus is found in a line with the roof of the bony canal and lies only one twelfth to one quarter of an inch from the surface, being more superficial than the antrum. The sinus passes deeply into the skull at the level of the floor of the external bony canal. The parieto-squamo-mastoid junction indicates about the point where the superior petrosal sinus joins the sigmoid, and also the upper border of the petrous bone that lies next to the mastoid. The asterion indicates the point of union of the lateral with the sigmoid sinus. The knee of the sinus is situated about half an inch behind the posterior border of the external osseous canal, and about its upper two thirds; this portion is that mostly affected by infective material from the antrum.

If the sinus is to be exposed without opening the antrum, a trephine should be used to remove a button of bone, the centre of which should be at a point seven eighths of an inch behind the middle of the bony meatus, and a quarter of an inch above it. This opening can be enlarged in any direction and can be made sufficiently large for exploring the temporosphenoidal lobe and the cerebellum.

As the sinus is usually exposed after the mastoid antrum has been opened, the opening in the bone is contined from the posterior wall of the antrum, about a half inch backward and horizontally; this will expose the sinus, and it can then be uncovered in one or more directions, as the operator may desire. Valuable information is often obtained by the external shape of the skull; if the mastoid process is narrow, quite convex, and very prominent, the sigmoid groove is most likely to lie well forward, close up to the posterior wall of the external canal; in some cases only a thin cortex and the inner table lie between the sinus and the periosteum. Again, if the tip of the mastoid is broad and flat, the groove and sinus are to be looked for further backward from the canal wall. After the sinus has been exposed and the groove removed, the next step will be to determine the condition of the sinus, to ascertain if there is an incomplete or parietal thrombus, a thrombus obstructing it in the vicinity of the knee, or one occluding the entire length of the vessel, extending into the jugular vein in the neck. A parietal clot is somewhat difficult to determine, as the blood is flowing through the vessel and the aspirator reveals only blood. Carefully feeling it between the fingers will indicate that part of it in which the parietal clot is present; the affected part feels like thickened tissue as compared to the unaffected part of the sinus. A complete thrombus is easily determined by the sense of touch and by inspection, or by aspiration. The fluid withdrawn may be pus or decomposed blood; the microscope will reveal the presence of any pathogenic bacteria; pure blood is withdrawn when the sinus is normal or only partially occluded. A thrombosed sinus has lost its lustre and smoothness and is usually distended and discolored at the portion containing the clot; granulations are sometimes found springing from its walls, and it does not compress easily, as does an unaffected sinus. Before opening the sinus the field must be well cleaned with an antiseptic solution, all necrosed bone and tissue removed; the sinus may then be opened and split lengthwise. Care must be taken that the visceral wall is not cut through and the brain tissue wounded, thus opening up a pathway into it for pathogenic germs and septic infection. In opening a sinus having a parietal clot, it should be compressed above and below to control the flow of blood, which is liable to be excessive; antiseptic gauze packed between the sinus and its parietal wall, in the vicinity of the bulb, is usually sufficient for the purpose. Pressure should also be made at the distal side by means of gauze held firmly against the sinus by an assistant. The sinus must be cleaned of the clot and all adherent particles by means of a small curette, until there is a free flow of blood from both ends; this tends to wash out all septic matter. The clot must be removed entirely, for, should any of it remain, it is liable to un-

dergo purulent liquefaction, and to necessitate another operation, which will be more serious than the former on account of the additional shock from another excessive loss of blood. If the clot extends into the jugular vein, which fact can be determined by the cord-like feeling in the neck, the vein must be exposed and divided between two ligatures and resected, or the entire clot removed and the vessel walls curetted. When about to open the sinus, the foot of the table should be raised; this will increase the pressure of blood in the sinuses of the dura mater, and will in a great measure prevent air from entering the opened sinus; for, if the patient is lying prone, the pressure in the sinus is very slight, so the hæmorrhage that is likely to occur when it is opened will reduce this pressure still more, and an aerial embolus, with a fatal termination, is likely to be the result. Again, the lowering of the head of the patient will prevent cerebral anæmia and liability to heart failure.

If the sinus is thrombosed to any extent, or if the thrombus has undergone disintegration, the jugular vein should be ligated. This will, in a great measure, prevent septic particles from being carried to the lungs, though the anterior and posterior condylar veins and the occipital sinus will permit small particles of broken-down clot to pass to the lungs. If the jugular is tied about its lower third, the facial vein must also be ligated. In establishing the circulation from the sinus, remember that you will get a flow of blood from the petrosal sinus, which may mislead you to think that all of the clot is removed and a normal flow of blood established. After removing the clot, etc., the sinus must be rendered as aseptic as possible, preferably by means of iodoform or other powder, and the split walls folded inward and held in this position by pressure exerted upon them by means of aseptic gauze. This will close the vessel securely and obliterate its lumen. If the sigmoid is compressed as described for about an inch of its extent, the blood from the superior petrosal and lateral sinus will be cut off, as well as the outflow from the mastoid vein. This method of closing the vessel is preferable to ligating it, as the latter is difficult to do; the needle cannot be passed under it and through the dura mater without risk of passing it through the visceral wall of the sinus, which would nullify our efforts; then, again, the brain tissue upon which the sinus rests, or the meningeal vessels which pass into it, would be liable to be injured or penetrated.

The sinus walls are so thick and dense that any effort made to ligate them is liable to tear them. The wound must be treated as any other septic wound, packed with gauze and allowed to heal by granulation; the metastatic abscesses in the joints, etc., are to be opened and treated in same manner.

The wound in the neck, made in exposing the jugular, must be closed with sutures, leaving a part of it open, which should be packed with gauze and allowed to heal by granulation.

The patient is then put to bed, surrounded with heat, the foot of the bed elevated, heart stimulants given, preferably hypodermically, and intravenous or intracellular infusion of the normal salt solution administered. The patient is usually in a state of profound shock, and should be treated accordingly. A nurse should be constantly at the bedside for at least the first ten or twelve hours after the operation. The dressings may be left undisturbed for three or four days if no unfavorable symptoms occur. Should the temperature rise and fluctuate or rigors appear, the bandages should be removed, the wound carefully inspected, pus be searched for, and, if found, evacuated; the parts irrigated with an antiseptic solution, and the bandages reapplied, after which they should be changed daily. If there is much discharge from the wound and the dressings become soaked with it, they should be saturated with a solution of bichloride of mercury before removing them. Owing to the length of my paper, I will not go into details of the case that came to me for operation. I will only give a brief summary of it.

Mr. M., white, a man aged forty-five years, had had a discharging ear since childhood. The discharge ceased, hemicrania appeared, he became stupid, was chilly all the time, and the light hurt his eyes. These symptoms continued for several days, when he had a pronounced rigor followed by copious sweating; his family physician requested me to see him, as he said that he thought his condition was due to some ear trouble. I found tenderness in the posterior cervical triangle, pronounced occipital œdema, beginning neuroretinitis, and a fluctuating temperature. I diagnosticated the case as one of infective sigmoid sinus thrombosis and advised an operation, which was done. The mastoid antrum was opened, cleaned out, the sinus exposed, and about a half an inch of it was found thrombosed at its knee; a portion only of the bony surroundings was necrosed, which was removed. The sinus was compressed above, opened, the thrombus removed, and the vessel curetted; the loss of blood was not great. The sinus was closed and the patient treated according to the method described. The lungs were not involved and there were no metastatic abscesses. The clot had not disintegrated; the microscope revealed streptococci and staphylococci. The patient made an uneventful recovery. It was a case where the system was not overwhelmed with septic infection before operation. The fundus of the eye cleared up and sight was normal in about eight weeks.

In conclusion, I would enter a plea for the general physician to be on the lookout for symptoms pointing to this condition in those who have a suppurative otitis media; also to bear in mind that a discharging ear, be the amount great or small, is not a simple and innocent matter, but one that is liable at any time to cause grave conditions that may ultimately end fatally, either from infective sigmoid sinus thrombosis, or from some other infective intracranial condition.

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THE PATHOLOGY OF INTRA-UTERINE DEATH.

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(Continued from page 457.)

We have already seen that a frequent morbid condition of the decidua is congestion. That it is extremely frequent there is little doubt. Probably sufficient importance has not been attached to the possibilities. When it is understood that general plethoric conditions and all those associated with passive congestions lead primarily to pelvic engorgements, and that the boundary line between pelvic catarrh and inflammatory processes of the decidua is but a slight one, it will be recognized as a very important symptom. This we will now proceed to consider.

Inflammation of the decidua has been investigated and described by many eminent men, and, although they differ occasionally in their opinions as to its pathology, they all agree in recognizing it as a frequent cause of the death of the fœtus. It is usually found in the chronic form, although Slavjansky describes an acute form which he has frequently found in pregnant women who were suffering from cholera. In all cases abortions resulted and the mothers frequently died. When chronic, they have existed for some time before pregnancy has taken place, as inflammation of the mucous membrane of the uterus. This endometritis may have originated from a passive congestion, as already indicated, but there is no question that latent gonorrhœa is a very frequent starting point. Authors have described three different varieties of endometritis as affecting the integrity of the decidua. This depends upon the point of contemplation. It is probable that these three varieties arise from similar causes and are but different stages of the same inflammatory process. Chronic diffuse endometritis may be considered the mildest type, and here we will describe its pathological peculiarities. It always begins by a destruction and desquamation of the epithelium covering the mucous membrane of the uterus. The underlying surface is then affected. It becomes red and swollen, and connective tissue of varying thickness forms. The utricular glands become involved; so, too, do the cups of Montgomery. At first these cups take on a cystic appearance, but they afterwards atrophy. The whole mucous membrane subsequently becomes thickened and hyperplastic, so that when conception takes place it is absolutely impossible for the fecundated ovum to receive the necessary amount of nourishment for its growth and development. The proliferation of the cells of the mucous membrane is not always so profuse as this, and the alteration may be limited. In such instances it may be possible for an ovum to become attached and to go on developing for a time. Sooner or later, the irritation which the inflammation produces causes uterine contraction and brings about the death and expulsion of the embryo. Still other cases are known where the inflammation is of an extremely mild form, and where the nutrition of the ovum has not been sufficiently interfered with, and where the pregnancy has gone on to the full term. In these, the membrane is much thicker than normal, and its structure is considerably firmer than ordinarily. On microscopical examination it can be seen that there has been an attempt at increase of the cell elements of the decidual structure. In all probability there has existed a low inflammatory condition of the uterine mucous membrane prior to the period of conception. A variety of endometritis has been described by various authors as adhesive in its character. It is peculiar in that it usually does not make its appearance until the later months of pregnancy. It is generally limited to the uteroplacental mucous membrane, and should be considered as an affection of the placenta. One of its results is to form a firm adhesion between the placenta and the uterine wall. It may or may not jeopardize the life of the fœtus, but it nearly always complicates delivery. The placenta does not come away spontaneously, and frequently is difficult to remove artificially. Generally, pieces of the placenta will be left adhering to the wall of the uterus, and there form a constant focus of infection. It is in such a condition that the mother experiences pain during movements of the fœtus. The walls of the uterus are tender and painful, and consequently it has received the name of uterine rheumatism by several of the older writers. It is sometimes accompanied by chills, which are probably of a nervous origin. A latent form of syphilis causing a pre-existing chronic endometritis is supposed to be its cause.

Polypoid endometritis has been described by Virchow and others as a special variety of inflammation affecting the decidua. It is now considered similar in ætiology to that of other inflammations of this membrane, but of a more advanced type. The inflammatory process strikes deeper into the uterine surfaces than ordinarily, and, as a consequence, the mucous membrane is much swollen, and thickened to several times its normal degree. This thickening is not, however, uniform. It is much thicker in certain spots than in others, so that there are projecting prominences very similar to polypi standing out from the free surface of the endometrium. It is from this appearance that it derives its name. There is an increase and proliferation of the interstitial mucous membrane and a consequent hypertrophy. So much may this increase develop as to interfere with the nutrition and safety of the fœtus. The change is usually to be found in very young ova, and then it produces material alterations in the villi of the chorion. It is supposed to be due to a latent form of syphilis.

Another variety of inflammation affecting the decidua is that which is known as catarrhal endometritis. It is this form of inflammation which constitutes the hydrorrhœa in the pregnant woman. When fully developed, there is a more or less constant discharge of

transparent fluid from the uterus. Usually the fluid does not make its appearance until the last months of pregnancy, and then it persists in dribbling away at intervals until abortion takes place, although there may be no injurious effects and pregnancy may continue until the full term. Much discussion has taken place as to the source of the fluid and many discordant opinions have been expressed on the subject. The majority of German writers who have investigated the subject are of the opinion that it arises from the cavity of the decidua. They assert that the decidua is a secreting membrane, even while pregnancy is in progress, and that by some irritation or perversion of function the hydrorrhœa is due to a hypersecretion. Others cling to the opinion that the fluid comes from the amniotic cavity and that the decidua has nothing to do with it. Mattei advances the opinion that a sac exists between the chorion and the amnion, and that by some unusual exertion on the part of the mother a perforation takes place through the wall of the decidua and the fluid then burrows down along the uterine wall. Ternier and Budin, in their work on *Midwifery,* admit that it is usually due to an abundant secretion from the glands of the mucous membrane, but that, occasionally, the amniotic sac ruptures high up, so that only a certain amount dribbles away at one time. They give a drawing of a portion of the amnion with a perforation through its centre. It is not usual for hydrorrhœa to complicate pregnancy, and most women thus affected manage to go to the full term of pregnancy. In rare instances the discharge is not the clear, transparent, colorless fluid like that of the liquor amnii, but dark, grumous, and serosanguineous. This is more formidable to the welfare of pregnancy. In such cases the fluid may be too thick to pass away and it lodges between the decidua and wall of the uterus. When composed principally of blood, the clots can be found arranged in layers of different colors and consistency. The term usually given to this condition is that of "carneous mole."

Deciduoma Malignum.—That a malignant condition of the decidua should take place and pass unrecognized for so long a time is somewhat remarkable. So far as we have been able to ascertain, no description of this disease has yet been found in any of our text-books. It is but recently that any attention has been directed to this peculiar condition. Morice Cazin has written upon this subject more lucidly than any other man, and what we know of its ætiology and pathology is mainly due to his investigations. These growths are composed of large giant-cells with a basis of tissue resembling the sarcomatous type, and having no intercellular elements. The cells themselves have no definite arrangement and are quite distinct from those found in epitheliomatous neoplasms. Hæmorrhagic infiltrations are frequently present, and small patches of necrosis are not unusually seen. Against the sarcomatous origin of these growths, Marchand maintains that they are of a carcinomatous nature and are principally developed from the ovum. His opinion is that they are epithelial and have their beginning in the syncytium and the epithelium of the ectoderm. This simply means that he considers these growths as derived from the serotina. Whatever be their origin, they soon invade surrounding structures, penetrating through into the uterine wall, and may even reach out to the annexa. They distribute their cells somewhat irregularly, and the consequence is that in the more active areas there may be seen superficial zones of necrosis and a breaking down of tissue to such an extent that hæmorrhages are liable to occur. This accounts for the characteristic and intermittent attacks of flooding which are such a prominent and clinical feature of this disease. Lying adjacent to the necrosed portion, the tissues are much firmer for a considerable distance. Secondary nodules of this same protoplasmic material after a time develop throughout the muscular structure of the uterus. It is an exceedingly difficult condition to recognize, and it is very rarely suspected until after labor or abortion. It is much more frequent in comparatively young women. After labor or abortion, sooner or later, intermittent hæmorrhages appear, and they constitute one of the earliest and most prominent symptoms. In a certain proportion of cases a hydatid mole may be discharged, and may be followed by a discharge of foul-smelling, dirty-colored, broken-down material.

When the disease becomes more advanced, general cachexia will supervene. The influence of this disease upon the life of the embryo depends greatly upon its rapidity of advancement. In some instances its progress is quite acute and causes such a disturbance to the nutrition of the fœtus as rapidly to bring about its death and expulsion.

(To be continued.)

EMPHYSEMA OF THE EYELID FROM NASAL CAUSES.

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EMPHYSEMA of the eyelid, or the presence of air in the lid, is a condition that generally interests the eye specialist more than the rhinologist. However, certain cases have come under my observation which have interested me considerably, and I have found from reference to literature that very little has been published on this subject. The subject receives but the shortest notice in small type in the well-known book of Professor Fuchs. It seems to me that this is a condition of some importance, one which causes extreme alarm at the time of its occurrence, and, when it is due to operation, produces more or less apprehension on the part of the operator from the possibility of septic infection of important

organs other than those which are in the field of operation.

I do not wish, in this paper, to deal with the cases of air appearing in the cellular tissue of the upper lid, when they are due purely to eye conditions, nor is it my desire to deal with those cases which may be produced from fracture of the nasal bone or after operation upon the lacrymal duct. Such cases almost always give the history of an accident. Immediately afterward, the nose has been severely blown, generally to remove the blood, and the air, under considerable pressure, is forced through some channel, finally reaching the loose cellular tissue of the lid; the air collects very suddenly, causes pain, and is followed immediately by swelling and the presence of the air tumefaction. It may be so large as to close completely the upper lid over the eyeball.

All these cases must directly or indirectly necessarily receive the air pressure which causes the lesion through the nasal channels.

In the operation upon the lacrymal duct, the knife incises the wall of the duct, and, if the knife is introduced far enough through the duct wall, it enters the cellular tissue surrounding the upper end of the lacrymal duct; particularly the loose cellular tissue in the lid. Given, then, a patient who blows the nose, there is a sudden rise of pressure throughout the nasal chambers; this pressure is felt in the lacrymal duct, particularly if the small valve which lies at the nasal opening of the lacrymal duct has been distended or cut in the operation, and the air is forced through the cut wall into the cellular tissue of the eyelid. If this valve is present and sufficient, it is probable that emphysema of the eyelid could not occur, even if the walls of the lacrymal duct had been incised.

The cases which occur after fracture of the nasal bone are not difficult of explanation. It is necessary only that these fractures shall be compound, and that there shall be a slight rent or tear in the nasal mucous membrane near the seat of the fracture. The patient who blows the nose with this condition present forces the air through the rent in the mucous membrane, through the fractured nasal bone into the loose cellular tissue to the outside of the bone, and thence it is further forced into the upper lid.

The cases which I particularly desire to present for your consideration are those which occur from ethmoidal causes. In order to illustrate what is meant, I will narrate a case:

J. P., aged twenty-three years, came to the Post-Graduate Hospital during the winter of 1899, suffering from double ethmoiditis. One side was operated on without any unusual occurrence. The left side was operated on two weeks subsequently, by the usual method of opening the cells and destroying the cell walls. This was done after a method which will hereafter be described.

The operation was completely successful, without any accident, and the patient had left the operating chair and was seated some distance away while another operation was in progress. Five or ten minutes after the operation was completed he desired to blow blood from his nostril, and in doing so closed the right nostril completely with a towel, and the left partly—as most patients do who desire to empty the nasal cavity. During the act of blowing he suddenly stopped, shrieked with pain, and put his hand to his eye. In less time than it takes to tell, the entire upper lid was filled with air from the nose, and was so swollen that the lid fell completely over the eyeball and it became impossible for the patient to open his eye. The skin of the eyelid was swollen and tense, the surface of the lid being globular in form instead of being a fairly convex surface. Diagnosis was made of emphysema of the lid from probable fracture of the orbital plate of the ethmoid bone. The patient was placed in bed, ice cloths were applied, together with a gentle massage, and in a few days the condition entirely subsided without sepsis or reaction. Two days after the operation a severe ecchymosis appeared in the inner angle of the upper lid. There was no exophthalmos; neither was any distention or protrusion of conjunctival membrane noticed.

This patient was seen six months afterward, and he has remained entirely cured.

A brief account of another history will serve to illustrate a case which may occur without operation:

A. B. came to the Manhattan Eye and Ear Hospital with a marked emphysema of the right eyelid, which, he stated, came suddenly after a violent attempt to remove secretions from the nostril. The lid was completely ballooned out so that the eye was entirely closed, and there was no emphysema of the lower lid. Examination of the lacrymal duct showed it to be normal in every respect. It would seem, in view of the facts, that the lacrymal duct was normal and that there was no traumatism of the nose, that this case must be one of those in which a pathological opening existed between the ethmoid cells and the bony orbit. This patient has been subsequently seen and the following conditions noted:

The whole of the patient's nose is deformed, being deflected to the left side. The external deformity is very marked. The nasal sæptum is concavoconvex from before backward, the anterior part being concave, while the posterior part is markedly convex. At the posterior part of the nasal sæptum, it presses firmly against the right middle turbinate body; but this turbinate body is neither inflamed nor congested. The patient states that the right side of the nose bleeds if he blows the nose too hard, this bleeding being profuse and lasting from ten to fifteen minutes. There is some nasal discharge from both sides, the quantity from each side being equal. An effort was made to find an opening existing between the ethmoid cells and the orbit, but nothing could be demonstrated; and the patient, on blowing the nose as hard as possible, did not produce any emphysema of the lid.

This case is interesting and important because it shows that emphysema of the upper lid can exist from pathological nasal conditions, all other causes of such a condition having been excluded in the diagnosis. It also shows that, when the ethmoid cells are not particularly and actively inflamed, air may escape from the

cells into the orbit during the process of the blowing the nose. It also shows that after this accident has occurred, it is possible for the opening which has been made by blowing the nose to heal spontaneously and completely, so that the accident need not be repeated.

These three deductions are important from a medico-legal standpoint, because this case proves absolutely that such a condition may occur and be entirely recovered from, so that it cannot be again produced, and that the operating surgeon did not cause it.

The next is as follows:

Philip First, aged twenty years, referred to me by Dr. Frank K. Irwin, of New York, was seen the day of the occurrence of the emphysema, and stated that at 9:10 o'clock in the morning of November 20, 1900, he blew his nose while dressing. He ordinarily did this each morning in order to remove the mucus which had collected during the night. This morning he did not blow his nose harder than usual, but he immediately felt as if he had blown something into the left eye, and noticed an immediate swelling of the left lid, the eye becoming entirely closed. The sensation was not that of pain, but rather of pressure. After he had blown the nose in this way, a certain quantity of bloody mucus appeared as he continued the operation of blowing. The patient states that this swelling of the lid has never occurred before. He also states that he never has had any operation upon the nose, except one upon the cartilaginous sæptum, which was operated on fifteen years ago.

The nasal examination shows, on the left side, a slight thickening in the nasal sæptum. The cartilaginous sæptum is partly absent, and its place is taken by cicatricial tissue. The top of the nose is flattened and somewhat sunken, as is frequently seen in patients where there is an absence of cartilaginous sæptum. The left inferior turbinate is normal; the left middle turbinate lies against the sæptum, but otherwise is normal. The right side of the nose is normal except for the before-noted condition of the nasal sæptum. The left eyeball is normal and does not protrude further than the right, but the upper lid is swollen so that the eye is completely closed. When this swelling is touched with the finger it gives forth a sound, and bubbles of air can be seen passing beneath the integument of the lid. The lower lid is normal. At my request, the patient blew the nose rather hard, while I placed my finger over the inner third of the upper eyelid about the point of insertion of the levator palpebrarum muscle. Upon each effort to blow the nose a distinct impulse could be felt transmitted to my finger, which was placed on this emphysematous lid, while upon the opposite lid no such impulse could be felt. After blowing the nose three or four times, the eyelid became extremely tense from the presence of air, and it was noticed that the eyeball, which before occupied a normal position in the orbit, protruded considerably more than the opposite eyeball. The conjunctiva at the inner canthus was pushed forward and was filled with air. In other words, this patient was able to increase the emphysema of the eyelid at will by blowing the nostril, even so far as to cause a protrusion of the conjunctiva and to push the eyeball somewhat forward. This impulse, which can be felt on the eyelid when the nose is blown, is, so far as I know, a new sign, for I do not remember ever reading about such an observation. The fact that the impulse can be felt at the inner third of the eyelid, together with the fact that the conjunctiva is pushed forward at the inner canthus, indicates the point of greatest pressure, and corroborates the explanation which will be given later, as to how the air escapes into the eyelid. There is no evidence in this case of any ethmoiditis.

This case is important in the following way: It shows absolutely that the cause of emphysema must be in the region of the ethmoid cells, for in this case all other parts could be absolutely excluded as a causative element. It also shows conclusively that it is ordinarily caused by blowing the nose, and that it is not necessary that the nose should be blown harder than usual. It also shows a possibility of its occurrence without traumatism. Should this accident have occurred during an operation upon the ethmoid cells, the surgeon would undoubtedly have felt that it was his fault. Yet in no way could the operator be blamed for the occurrence had he been operating upon the nose of this patient at the time emphysema appeared.

Another patient coming more recently under my observation developed an emphysema of the upper lid during an operation upon the ethmoid cells. The history of the case runs as follows:

This patient, having an eye which was perfectly normal and hypertrophied lesions in the nose, submitted to operation for the removal of polypoid hypertrophy in the middle turbinate region. During the operation for removing the small polyps, pus was noticed issuing from the ethmoid cells, and the patient was sent to the transilluminating room for the purpose of transillumination, which showed that the antrum was involved and the frontal sinus was normal. The antrum was washed out and a small quantity of pus obtained from the left side. The following day the ethmoid cells were opened, without removing the middle turbinate body, which was used as a guide in introducing the cutting forceps into the ethmoid cells. With this turbinate as a guide, the alligator cutting forceps opened the anterior ethmoid cells. After this was done they were thoroughly curetted by means of the Hajek curette. Before the operation was completed the patient was ordered to blow her nose in order to remove clots of blood. This she had previously been ordered to do with good results. But this time, so soon as an attempt was made to blow the nose the patient cried out with pain and put her hand over her left eye. At once it was noticed that the eyelid was emphysematous without any extravasation of blood. The operation was completed and the patient was placed in bed, pressure and cold were applied, and in twenty-four hours the emphysema had entirely disappeared. The subsequent history is without interest, except to record a cure of the ethmoid and antrum disease.

As is easily seen from the cases here cited, this condition is not one of grave danger, and, in fact, is one of hardly any importance, except for the possibility of a further wound accident occurring. It is, of course, alarming to the patient when the air rushes into the orbit and leaves the impression on the part of the patient that a condition has arisen in the operation which is not at all desirable. This conjecture is probably made by the patient as often from the surprised and annoyed expression of the operating surgeon's face as from the

slight distress experienced from the emphysema. It must be remembered, however, that, while in the cases cited, no septic conditions have followed the entrance of air into the orbit, it is, nevertheless, possible for bacteria and putrid material to be carried along with the air at the time of its entrance, and there, in the upper part of the orbit, to set up a septic cellulitis of the eyeball and upper lid, eventually forming an abscess in the orbit, with the production of a severe exophthalmos and possible destruction of the eye. One such case I have seen in consultation; but it has never been my misfortune to have any septic condition follow this occurrence. Just at this point, there are three questions which may be asked with interest and answered with satisfaction:

(1) Is the condition which causes emphysema a wound accident, or may it result from pathological conditions occurring in the nose before operation?

(2) Is the surgeon at fault for this condition?

(3) Why does air enter the upper lid instead of the lower? How can we prevent such an occurrence?

Without a doubt, emphysema of the eyelid may occur from any wound of the lacrymal duct, such as the Bowman operation. It is also possible that it may occur when, from disease, the wall of the lacrymal duct has become weakened. But the question, whether emphysema is a wound accident which may occur in the lacrymal duct during an operation for ethmoiditis, is one about which some doubt may be expressed. It is possible to believe that the operator when working upon the ethmoid cells, particularly on the most forward ones, which generally lie very near the lacrymal bone, may perforate through the thin plate of the lacrymal bone, and in this way wound the upper part of the lacrymal duct while doing the ethmoid operation. The lacrymal bone at this region is particularly thin and is located just in front of the hiatus semilunaris and just at the outside of the processus uncinatus. As these are in the neighborhood of the parts removed in the ethmoidal operation, it is possible for the instrument to wound the lacrymal duct and the lacrymal bone in this ethmoidal operation. Under ordinary circumstances, when a wound of the lacrymal duct has been produced in the lower part of the duct, an emphysema of the *lower* rather than of the upper eyelid is more likely to occur. But when one is operating on the higher parts in the region of the ethmoid cells, the higher parts of the lacrymal duct alone can be wounded; and under these circumstances one can believe that, upon blowing the nose, the air rushing from the nose through the wounded lacrymal duct can produce emphysema of the upper eyelid. This must be a very rare condition. Any emphysema of the upper lid occurring as a wound accident is oftener, and, indeed, almost always, from direct perforation of the lamina papyracea of the ethmoid bone, which also forms part of the orbital wall. In this wound accident the conditions are slightly different from those obtaining when the upper part of the lacrymal duct is wounded, for during the ethmoid operation the instrument simply fractures part of the orbital wall, and wounds and tears as well the mucous membrane lining the ethmoid cells. This allows a direct communication of air between the nose and the orbit. This perforation through the thin layer of the orbit wall is a result for which a surgeon can in no wise be responsible. It certainly is liable to happen where there are very narrow ethmoid cells. That is, the space occupied by the cells between the outer nasal wall and the inner orbital wall varies so greatly that while in some instances it is so wide that a perforation is not easily possible, in other instances it may be very narrow, so that very little ethmoidal space exists between the nares and the orbit. There is no way by which narrow ethmoid cells can be distinguished by any examination, either external or internal, from those which are more capacious. The surgeon has to bear in mind the possible existence of narrow cells, and to work as far from the orbital plate as possible.

Again, any anatomical variation may make it possible for the surgeon to perforate. This is not due to carelessness on his part, for, in many instances, the anterior ethmoid cells are not developed as well forward as would be considered normal, being either very small or else the anterior cells are practically undeveloped. In such instances it is very easy for the surgeon to perforate the orbit in the absence of these cells.

No blame can be attached to the surgeon who exhibits ordinary care in the operation on the ethmoid cells when perforation occurs, for it is possible that a pathological condition may in itself form a communication between the eye and the ethmoid cells, and that this pre-existing opening between the orbit and the ethmoid cells allows of no entrance of air into the orbit until the surgeon operating on the ethmoid cells opens a cell which communicates pathologically with the orbit. This pathological communication may be explained by an absorption of a portion of the bone from the lamina papyracea, so that the linings of the orbit and the ethmoid cells lie together. It will be seen, then, so soon as the instrument enters the cell, the air follows it, and communication is established between the orbit and the nose without the surgeon having fractured or perforated, or in any way having wounded, the orbital plate. The possibility of this pathological condition should prevent our ever severely criticising the surgeon who finds an emphysema developed after his ethmoid operation.

The answer to the second question, as to whether the surgeon is at fault for this emphysema, has practically already been answered in the foregoing, and may be repeated with an emphatic "*No.*" For the reasons given above, the surgeon cannot be made responsible for this wound accident.

It is interesting to explain why the air in these conditions enters the upper lid instead of the lower. In

most of the traumatisms of the lacrymal duct the air enters the lower lid, but in all of the cases of traumatism of the ethmoid perforating the orbit which I have seen, the air has always been in the upper lid. This is probably explained by the fact that the wall of the orbit is perforated, as a rule, pretty near the middle, and that the air at once enters the space between the orbital periosteum and the first fascia of the eyeball. It seems that there is a fascia which extends from one side of the orbit to the other, separating the extrinsic muscles of the eyeball from the intrinsic. In other words, the muscle which raises the upper eyelid lies above this fascia and runs from the posterior part of the orbit forward to the tarsal cartilage of the upper lid. The fascia lies below it, separating it from the muscles which move the eyeball, and it is into this layer above the intrinsic muscles that the air from the ethmoid cells escapes. The air makes its way between the bony orbit and this fascia forward and backward, but finds less resistance forward than backward. Therefore, it infiltrates the loose cellular tissue of the upper lid and produces an immediate condition of emphysema. Such an occurrence can be partially guarded against by observing the following rules in operating:

(1) As much as possible, avoid the use of the curette, for it is the curette, I believe, which is responsible for much of the traumatism occurring to the lamina papyracea. Much better work can be done by the use of the alligator forceps, or some kind of cutting forceps having a small, blunt edge, which is less apt to perforate, and which will, with equal success, drain pus or remove polyps, as well as the mucous membrane lining the ethmoid cells. This forceps is very much more satisfactory than the curette in cutting away the thin layers of bone which form the walls of the ethmoid cells.

(2) Another rule is never to amputate any part of the middle turbinate, as it forms a very important guide along which an operation may be carried out. When it is remembered that the upper part of the middle turbinate body forms the inner wall of the ethmoid cells, it can readily be appreciated that by working carefully along the outer side of the middle turbinate—that is, the side away from the sæptum—the instrument must in each instance perforate the ethmoid cells, first, those which are anterior, and later, the posterior cells. In this way it is possible to open the ethmoid cells in the immediate neighborhood of the middle turbinated body without working too near the orbit. This valuable guide will often prevent our entering either the orbit or the brain cavity. If, subsequently, it becomes necessary to remove this turbinate, it may be taken away after the ethmoid operation.

While this condition, so far as my personal experience is concerned, has never been of any moment or seriousness, it can readily be appreciated that it is a condition from which grave danger may arise. Abscess, destruction of the eye, and possible meningitis may arise from septic conditions in operations carelessly done on the ethmoid bone. It is with a view to avoid these possible complications that our attention has been directed to this subject to-night.

Correspondence.

LETTER FROM TORONTO.

The Need of Infectious Diseases Hospitals in Montreal.—A Proposed Sanatorium for Consumptives in Nova Scotia.—The Winnipeg General Hospital.—An Increased Birth Rate in Ontario.—Lodge Practice in British Columbia.—The Medical Alliance of America.

TORONTO, *March 9, 1901.*

THE hospitals for contagious diseases for which Montreal has been struggling for a long time now seem to be as far off as they were two years ago. The present civic hospital is totally inadequate for the purpose it serves, and has been frequently condemned by prominent medical men of the city, as well as by numerous private and influential citizens. There are two propositions now before the city council—one for a single establishment under direct civic control, and the other to establish two hospitals under the respective control of the Hôtel Dieu and the Royal Victoria Hospital. Apparently the reason for not proceeding with the erection of the institution lies in the fact that the demands of the French and the English sections of the community must be adjusted satisfactorily. There is urgent need for a new hospital, as the death rate of the present civic hospital is enormous, and this excessive death rate is manifestly due to the defects of the present building. Small-pox is hovering at the present time around the outskirts of the city, and the city has absolutely no place in which to put a patient afflicted with this disease. Montreal appears to have a council which is not up to the times, so far as hygienic requirements are concerned, as when the provincial secretary of the board of health notified them that there were six cases of small-pox within a few miles of the city, the council showed their idea of the urgency of the matter by ordering the communication to lie on the table for a week.

A sanatorium for consumptives for the Province of Nova Scotia has been in contemplation for some little time, and the committee appointed by the government to look into the matter and submit recommendations has, through Premier Murray, laid its report before the Legislative Assembly, now in session. As to the location, the committee recommends that either Dutch Village, near Halifax, or a place on the shore of Bedford Basin, near the village of Bedford, be selected; that the congregate plan be adopted for a small number of patients, as they deem it more suitable; the accommoda-

tion to provide for twenty patients, with a competent and specially trained female nurse as lady superintendent, no resident medical superintendent, but regular stated visits to be made by two qualified medical men every week. The committee expressed the opinion that the treatment of consumption should be carried on in juxtaposition to centres of population, and further recommended that the sanatorial act passed at the last session of the legislature be amended to the extent that it might provide for municipalities receiving aid from the government for the purpose of establishing sanatoria. Dr. Reid, the secretary of the Provincial Board of Health, indorses the recommendations, with the exception of that relating to a resident medical officer and the site recommended on the Atlantic seaboard, which he considers unsuitable for the purposes of a sanatorium. Nova Scotia is likely to proceed at once in pursuing a systematic course with regard to the establisment of sanatoria.

The Winnipeg General Hospital board of governors met in annual meeting on the afternoon of February 28th. The report of the medical superintendent showed that the number of patients treated in the hospital during the past year amounted to 2,649, and in the outdoor department there were 1,435 consultations. Of the indoor patients, 1,684 came from the city of Winnipeg, 785 from other places in the Province of Manitoba, 150 from other provinces in the Dominion, and 30 from the United States. The financial report showed that there was a deficit of $4,510.50, which was accounted for by the fact of the outbreak of small-pox in the institution during the early part of the year. Reference was made in the report to the death of Nurse Lynch, who contracted the disease while in the discharge of her duties. The nursing staff of this institution now consists of a lady superintendent, five head nurses, one district nurse, and fifty pupil nurses. During the year 223 applications were received; of these applicants, twenty-three were accepted on probation and sixteen as pupils of the school.

An increase in the birth rate of the Province of Ontario is apparent from the report of the registrar-general. This is encouraging, as for the past years there has been reported an alarming falling off in this department of vital statistics. Several young fathers have been recently prosecuted for neglecting to register under the provisions of the act, and this has probably had a good deal to do with the increase. The following shows the births for the past three years, 1898, 1899, and 1900, in the Province, respectively: 46,599, 44,705, and 46,019, the increase over last year being 1,314. Of marriages, there were in the same years: 15,375, 16,514, and 17,123, being an increase of 609. Of deaths, there were: 26,370, 28,607, and 29,594, an increase of 987. The secretary of the Ontario board of health, Dr. P. H. Bryce, estimates that the birth rate last year was 19.9 per 1,000, compared with 19.4 in 1899 and 20.4 in 1898. Dr. Bryce compares these rates with that of England, which was 29.4 in 1898; with Scotland, 30.8; with Ireland, 23.2; with Connecticut, 24.4; with Buffalo, 30.; with Baltimore, 32; with New York city, 22.11; and with St. Paul, 16.4. He considers that the lower rate prevails in Ontario on account of the rural population.

Lodge practice in British Columbia received a "jolt" a little more than a year ago, when the Medical Society of Victoria declared that they would have nothing more to do with that stultifying department of the practice of medicine. For more than a year the special committee appointed by the fraternals to fight the doctors has been working, and frequent have been the endeavors to induce Ontario practitioners to come to British Columbia and assume the lodge practice, but the examinations of the Medical Council of the Province proved a bar to their progress; and then there has not been anywhere apparent on the part of the eastern practitioners a "rush" to this new Eldorado in the medical world on the Pacific coast. One would gather, however, from the very latest reports from British Columbia that the doctors were on the "cave," and that the fraternals were about to "win out" in the long fight. During the past summer the committee has not been idle. Petitions have been circulating broadcast throughout the entire Province; thousands have signed these, persons connected with societies, and they have been duly presented to the legislature of the Province, now in session, praying that the medical act be so amended as to permit of practitioners from the older Provinces, as well as from England, entering upon the practice of medicine in British Columbia without the customary examinations, provided they are already qualified in the other Provinces and in England. Against such odds as this, that faithful little band in Victoria will probably have to surrender; and another abortive attempt will have to be registered where an endeavor has been made to throw off this galling yoke. It is to be sincerely hoped that the profession in Victoria may still stand out for their rights and their honor.

The Toronto Clinical Society, at its regular meeting on the evening of March 6th, issued an unfavorable pronouncement upon the Medical Alliance of America, with headquarters at Montreal, and advised practitioners to have nothing to do with the alliance whatever. This is an organization which was incorporated by the Dominion Parliament during the session of 1899-1901, and at once began exploiting the profession in the city of Montreal and elsewhere in the eastern Provinces. Last fall it appeared in Toronto, and without due and proper examination of its prospectus several of the city physicians were induced to become members of the alliance. The doctor and his patient, or some other doctor's patient, must become members of this alliance; then the company agrees to pay the doctor "not more than $1 per office consultation and not more than $1.50 per house visit." It purposes doing away with "bad debts" for the doctor, and assuring to him his pay for the work he performs. It

further purports to do away with the lodge practice business; but its methods are not thought well of by the profession in Toronto; hence the action of the Clinical Society.

Therapeutical Notes.

The Treatment of Grippe.—The editor of the *New Orleans Medical and Surgical Journal* gives the following in the issue of that journal for February:

Mild Form.—However light the attack, the patient should remain indoors for several days. Diet light and nutritious, with cooling drinks (lemonade, apollinaris, etc.). A gentle movement of the bowels daily. Dover's powder, ten grains, monobromide of camphor, one grain and a half, if there be much headache.

Quinine sulphate in five-grain doses every four or five hours.

Strychnine sulphate, one thirtieth of a grain, three times daily.

Medium Form.—Patients should go to bed, and remain there until convalescence is well advanced. Diet, liquid in character, and given frequently in small quantities. Whisky or brandy in two-drachm doses, well diluted, several times during the twenty-four hours. Cold sponge baths if the temperature is above 102° F. For neuralgia, Dover's powder and monobromide of camphor. Quinine sulphate, salicylic acid, or salicylate of sodium, when the temperature range is high. Caffeine citrate, two grains; phenacetine, two grains, to control insomnia. For sleeplessness, trional, sulphonal, opium. Steam inhalations (formic aldehyde, benzoin, etc.), or inunctions of animal fats over the forehead and bridge of the nose, if coryza is troublesome.

The following is useful to mitigate cough:

℞ Heroine. . . . . 1½ grains;
Chloride of ammonium. . . . . 2 drachms;
Syrup of tar. . . . . 2 ounces;
Syrup of tolu. . . . . 2 "
Syrup of prunus virginiana, to make. . . . . 5 "

M. Sig.—Two teaspoonfuls every three or four hours.

Codeine sulphate, 3 grains, could be used instead of the heroine, if desired. Turpentine stupes or mustard plasters to the chest. Strychnine sulphate, one thirtieth of a grain, every three or four hours, day and night.

Severe Form.—Quinine sulphate in full doses, strychnine sulphate, digitalis hypodermically, bold stimulation. The various complications must be treated as they arise.

Tincture of Iodine in Infantile Diarrhœa.—M. Cattaneo (*Semaine médicale; Revue mensuelle des maladies de l'enfance,* March) has obtained excellent results in infantile diarrhœa from the treatment by tincture of iodine so much lauded by M. Grosch for infectious gastro-enteritis and typhoid fever.

℞ Tincture of iodine. . . . . from 10 to 15 drops;
Distilled water. . . . . 2,250 minims;
Syrup. . . . . 300 "

M. A coffeespoonful every two hours.

Under this treatment, in cases of acute gastro-intestinal catarrh of nurslings, associated with a hydric diet and lavages of the intestines, vomiting is said to cease immediately and the fever to disappear at the end of two days.

For Chronic Ulcer of the Stomach.—*Ἰατρικὴ Πρόοδος* for January cites the following from *Therapeutische Blätter:*

℞ Chloroform. . . . . 18 drops;
Subnitrate of bismuth. . . . . 45 grains;
Water. . . . . 5 ounces.

M. Half a tablespoonful every hour.

For the Intractable Cough of Phthisis—(A Correction).—Dr. W. C. Deming, of Westchester, has called our attention to an obvious typographical blunder in the formula published under this title in our issue for March 9th, the error consisting of the omission of a decimal point after the figures 1 and 3 in the first two quantities designated. Owing to the excess of solids ordered, it would manifestly be impossible to dispense the mixture according to the formula as originally printed, a fact which any dispenser would have observed even if the error should have been overlooked by the physician.

An Ointment for Chronic Blepharitis.—*Ἰατρικὴ Πρόοδος* for January ascribes the following to Panas:

℞ Binoxide of mercury. . . . . 1½ grains;
Lead water. . . . . 10 drops;
Petrolatum. . . . . 5 drachms.

M.

To be applied night and morning to the free edges of the lids.

For Tuberculous Laryngitis.—Dr. W. Freudenthal (*Journal of the American Medical Association,* March 16th) cleanses the larynx with some indifferent spray, or swabs it with cotton. A cleansing powder of from three to six grains of saccharated suprarenal gland is then insufflated into the larynx, on to the ulcerations, which exsanguinates the larynx and causes some local anæsthesia, when the following emulsion is applied locally by injecting *slowly* with a laryngeal syringe:

℞ Menthol. . . . . 1 part;
Oil of sweet almonds. . . . . 30 parts;
Yolk of egg. . . . . 25 "
Orthoform. . . . . 12 "
Distilled water to. . . . . 100 "

M.

As the toleration of the patient permits, the menthol is increased to 5, 10, or even 15, per cent.

For Neuropathic Alopecia.—*Ἰατρικὴ Πρόοδος* for January cites the following on the authority of Brocq:

Frictions are made with the following mixture:

℞ Glacial acetic acid. . . . . 12 minims;
Tincture of cantharides. . . . . 1 drachm;
Spirit of rosemary. . . . . 1 "
Tincture of couch grass. . . . . 2 drachms;
Spirit of camphor. . . . . 2 "

M.

Then Dupuytren's ointment is to be applied. [This is made by macerating a drachm of cantharides in a fluid ounce of alcohol and incorporating one part of the tincture thus formed with nine parts of lard.]

The foregoing liniment may be replaced by the following:

℞ Ammonia water. . . . . 24 minims;
Tincture of pellitory, } of each 1 drachm;
Tincture of jaborandi, }
Oil of turpentine, }
Alcohol. . . . . 6 drachms.

M.

THE
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NEW YORK, SATURDAY, MARCH 23, 1901.

THE PLAGUE IN CALIFORNIA.

IN our issue for March 2d we remarked upon the futility of the policy pursued by the State government of California in denying that there had been any cases of the Oriental plague in San Francisco and in seeking to discredit and obstruct Dr. Kinyoun and, through him, the United States Marine-Hospital Service in their efforts to avert a serious visitation of the plague. We were glad to be able to cite the manly and enlightened course of the *Occidental Medical Times* and the Sacramento *Evening Bee* in protesting against the State government's narrow-minded policy in the matter. We are glad now to be able to say, on the authority of the *Bee,* that the governor and his coadjutors seem to have been brought to realize at last that they cannot expect the rest of the country to accept their unreasonable and unsupported statements in opposition to the deliberate and unbiased findings of Dr. Kinyoun and his associates. Although at the time of our writing the details of the plan to be pursued in stamping out the infection do not seem to have been settled upon, it may be stated that they will conform as closely as possible to Dr. Kinyoun's original scheme, and that the State and municipal governments will cooperate with the efforts of the Marine-Hospital Service.

This is not a journal of politics; consequently we cannot take cognizance of the allegations that have been freely made of unworthy motives having prompted Dr. Kinyoun and his associates to insist upon the actual occurrence of the disease in Chinatown. With alleged railway rivalries and with dreams of the future supremacy of Seattle in the Oriental carrying trade as factors in the deplorable disagreement that for many months has existed between California and the national quarantine service we have nothing to do, and we mention them now only to reiterate our conviction that in this whole unsavory dispute the Marine-Hospital Service has had nothing in view but the real welfare of San Francisco, California, and the entire country. We do not like to hear of quarantine discrimination against San Francisco, for we believe there is no occasion for it; we are convinced, however, that the surest way of preventing it lies, not in blind denial of the obvious truth, but in dealing truthfully and manfully with the facts as they are. We are confident that short work will now be made of the danger of a serious prevalence of the plague in San Francisco and that the heartburnings that have been raised by the controversy will speedily be allayed and forgotten.

THE HYGIENE OF THE THEATRE.

OUR attention is called anew to this topic by an editorial article which appeared in the *Gazette médicale de Paris* for January 19th, presumably written by Dr. Marcel Baudouin, whose efforts in behalf of public hygiene are never-failing and whose versatility in bringing medical science to the aid of humanity is known and appreciated all over the world. It seems that in Paris there is a sort of organization of those medical men who have a more or less close connection with the theatres, the *Société des médecins de théâtre,* the organ of which is the *Paris-Théâtre médical.* M. Baudouin assures us that he is himself very well informed as to theatrical matters; we may therefore attach great importance to whatever he has to say concerning them. The society has to do, not only with the care of the stage force, but also with that of individuals of the audience who may be injured or taken ill. They are agitating for greater facilities for the performance of their duties. For example, they are demanding that in every place of public amusement, such as a theatre, a concert hall, or a circus, there shall be a "medical box" (*loge médicale*), that is to say, a space reserved for sick and injured actors and spectators, one large enough to admit of the free movement of two persons in caring for a patient. This space should have a window by which it may readily be aired, and it should be furnished with a sofa, washing facilities, antiseptics, and such medicinal preparations and surgical appliances as are likely to be needed in emergencies, including "une chaise percée."

But such requisites as those thus far mentioned are not the ones of paramount importance in the hygiene of the theatre; what is of the utmost urgency is the curtailment of the theatre's power for harm to the auditors'

health. Chief among the agencies for mitigating the unwholesomeness of the theatre—and this is not overlooked by our French colleagues—is the ridding of the auditorium of its stagnant, germ-laden atmosphere. Inclosed places of public resort must in the very nature of things be laden with a higher percentage of micro-organisms than is to be found in the open air or even in occupied dwellings, and in all probability more of those micro-organisms are pathogenic. Even churches, most of which are occupied but for a small portion of each week, are to be avoided by persons known to be susceptible to tuberculous disease, for they are seldom efficiently aired, save perhaps during the height of summer, a season in which may city churches are disused altogether. How much richer in pathogenic germs must the great majority of theatres be as those institutions are at present constructed and managed! In many of them a very large proportion of the space devoted to the stage and to the auditorium, and in some of them the whole of that space, is never subjected to direct sunlight or even to the ordinary diffused sunlight which we all demand in the rooms of our dwellings. If their floors are ever properly cleansed, it must be at rare intervals. In short, they are ideal devices for the impounding of the germs of disease.

While we freely concede that the theatrical people themselves have done much within the last few years in the way of mitigating the noisomeness of the theatres, notably by improved ventilation and by the substitution of seats of polished wood for the plush-covered cushions of a few years back, we must, nevertheless, insist that the hygiene of the theatre calls pressingly for earnest consideration and radical action at the hands of our sanitary officials, quite as urgently, indeed, as the public conveyances.

THE LAXATIVE ACTION OF APOCODEINE.

APOCODEINE, an artificial alkaloid obtained by treating codeine with zinc chloride, has, according to Flückiger and Hanbury, the formula $C_{18}H_{19}NO_2$. M. Raviart and M. Bertin (*Echo médical du Nord,* December 2d; *Gazette hebdomadaire de médecine et de chirurgie,* February 3d) have been studying the therapeutical properties of its hydrochloride, which were studied several years ago by Guinard, whose *Contribution à l'étude physiologique de l'apocodéine* was published in 1893, and by Toy (*Journal de médecine de Bordeaux,* 1895, p. 442). Both these authors' observations are summarized by Raviart and Bertin. Apocodeine has generally been regarded as very similar to codeine in its therapeutical properties, and that still seems to be true in respect to its calmative action. It appears to be one of the best of hypnotics, inducing sleep closely resembling normal slumber, never giving rise to nausea or any other unpleasant accompaniment of the awakening, and, if used in moderate doses, quite free from danger.

Its laxative action seems to have been first noted by Toy, and has now been particularly studied by Raviart and Bertin. They found that in twenty-five out of thirty-four cases of constipation proceeding from various causes, a single dose produced an evacuation, sometimes two, and sometimes three. The drug seems to act by increasing all the digestive secretions. For subcutaneous use, the only way in which it seems to have been employed, the usual dose is two cubic centimetres (about thirty minims) of a one-per-cent. solution, which amount is ordinarily sufficient to act upon the bowels, but not large enough to produce more than a very slight hypnotic effect. Raviart and Bertin conclude that apocodeine hydrochloride is always applicable as a remedy for transitory constipation, and often for the habitual affection, without fear of the slightest accident. In almost all cases its action is sure and sufficiently prompt.

CHARITY BEGINS AT HOME.

WE learn from the *Lancet* for February 23d that a judge in the English Court of King's Bench, commenting on the fact that a medical witness had claimed and received a fee of twenty guineas before he would attend to give evidence in a private suit, stated that "it was very hard a plaintiff should be compelled to pay such a sum in order to get his case proved"; and when the witness replied that "he did not wish to come," the judge retorted, "We must have justice, you know." To the witness's further suggestion that there were many young men who would have been glad to come for a smaller fee, the judge said "he would not argue the question, but that it was very hard that a man should have to pay in this way a sum which he could not possibly recover from the defendant."

Such a position is, as the *Lancet* says, as absurd as "to expect that, in order to facilitate the administration of justice, leaders of the bar should forego the high fees which they are accustomed, very properly, to charge."

The absurd *obiter dicta* which occasionally escape the lips of judges in regard to physicians, as, for instance, in the cases commented on in our issues for February 9th and March 9th, seem to indicate a fixed delusion that a physician is a piece of property parcelled out into "whole and undivided parts," as between the several proprietors of which, questions of right and duty

may arise, but who themselves have no rights individually or collectively. It is so easy—and so inexpensive—to be a vicarious philanthropist!

THE DIVISION OF FEES.

Dr. Robert T. Morris writes to the *American Journal of Surgery and Gynæcology* for February to comment on the statement of a surgeon "that he will divide the fee with any physician who sends surgical cases to him, and he believes that no wrong will be done to the physician, to the patient, or to himself." As Dr. Morris says, "it all turns on the division of the fee without the patient's knowledge." The physician must needs give his services in preparation for, and after attendance on, the patient, and deserves to be recompensed therefor. If it is made clear to the patient that this just claim of the attending physician is to be provided for by a stated proportion of the lump sum charged for the operation, and agreed upon between the physician and surgeon, it would seem, as Dr. Morris says, to be "an honorable transaction and in keeping with the best interests of a respected profession"; and, of course, the larger the portion of the fee assigned by the surgeon to the physician, the more likely it is to enhance the patient's respect for his regular medical attendant. But if the division is made as the result of a compact between the doctors unknown to the patient, there can be no doubt of the impropriety of such a transaction, which amounts virtually to a selling of the operation, and at least opens the way for preferring the pecuniary advantages of the physician to the interests of the patient. We are glad to see that the editor of the *American Journal of Surgery and Gynæcology* has given his adhesion, in an editorial comment, to this statement of the case, which he considers "the solution of this much-discussed problem." It will be remembered that the Chicago Medical Society, as reported in an issue for February 23d, recently condemned the "dichotomy" practice as "a subterfuge."

EXTIRPATION OF THE CLITORIS FOR INCONTINENCE OF URINE.

A curious case is cited in the *Gazette hebdomadaire de médecine et de chirurgie* for February 3d from the *Archives médicales d'Angers,* 1900, p. 232. A young woman, twenty-eight years of age, was taken suddenly in August, 1899, with inability to retain her urine, which, from that time on, for a period of four or five months, was passed involuntarily, in small quantities of from twenty to thirty grammes, day and night, awake or asleep, and even when the subject was under morphine. Treatment availed nothing and the unfortunate patient was driven to absolute seclusion. Finally, examination elicited the fact that the clitoris was constantly in a state of erection; and the author, Dr. Tesson, remembering the common innervation of that organ and the bladder, thought that possibly the one erethism depended on the other. He therefore entirely removed the clitoris, with the result that the incontinence at once and permanently disappeared. Information is lacking on the point as to whether the erethism was dependent upon sexual irritation, mental or physical. Did the old saw *casta raro mingit* apply in this case? Some indication is desirable before an epidemic of clitoridectomies for enuresis sets in.

A STRIKE AMONG DOCTORS.

The *Indian Lancet* for February 11th learns from a Vienna correspondent that, at Cracow, a strike has occurred among the doctors consequent upon an attempted introduction of a legal tariff of fees by the legal authorities. All the *modus operandi* of trades-union measures seem to have been employed, including even the refusal of hospital authorities to treat a child fearfully mangled by a tramcar. We can scarcely credit this statement; for while it is undoubtedly right and proper that physicians should stand by one another in protecting those common rights which there is such a disposition in the public to trample upon, even in the strongest personal contention urgency of life and death must ever be neutral, as even civilized warfare now universally allows and enforces. As for an alleged threat that if they were driven to desperation the doctors would wreak a fearful vengeance by letting loose the germs of bubonic plague and other dread diseases in the town, that probably originated, if it has any foundation in fact at all, in the mischievous, but wofully reprehensible, "chaff" of some irresponsible medical student.

THE RIGHT TO WILL ONE'S BODY FOR SCIENTIFIC INVESTIGATION.

The Supreme Court of California, in the case of Enos *versus* Snyder, has laid down a ruling the results of which appear to us to be very regrettable from a scientific point of view. It has decided, in a contest between next of kin, on the one hand, and claimants under a will, on the other hand, for the possession of a corpse, that a man cannot by will dispose of that which, after his death, will be his corpse. The custody of the corpse and the right of burial belong to the next of kin in preference to the administrator. This view is based on the fact that the general English and American legal authorities establish the rule that, in the absence of statutory provisions, there is no property in a dead body. If this ruling is correct, the sooner statutory provisions are obtained enabling a man who feels that a great benefit to humanity will accrue, through increase of medical knowledge, by the continuance *post mortem* of an investigation into his case, or that new light may be shed upon anthropological, psychological, or other scientific problems, to authorize by will such use of his corpse, the better. We commend this subject to the consideration of the Medico-legal Society.

News Items.

Society Meetings for the Coming Week:

MONDAY, *March 25th:* Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, *March 26th:* New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynæcology); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, *March 27th:* New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society.

THURSDAY, *March 28th:* New York Academy of Medicine (Section in Obstetrics and Gynæcology); New York Orthopædic Society; Brooklyn Pathological Society; Brooklyn Society of Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera and plague were reported to the surgeon-general during the week ending March 16, 1901:

Smallpox—United States.

Mobile, Alabama	Mar. 2-9		1 death.
Los Angeles, California	Feb. 24-Mar. 2	5 cases.	
Oakland, California	Feb. 24-Mar. 2	1 case.	
Sacramento, California	Feb. 24-Mar. 2	1 case.	
Chicago, Illinois	Mar. 2-9	7 cases.	
Evansville, Indiana	Feb. 24-Mar. 9	2 cases.	
Wichita, Kansas	Mar. 2-9	23 cases.	
Lexington, Kentucky	Mar. 2-9	1 case.	
New Orleans, Louisiana	Mar. 2-9	14 cases.	3 deaths
Lowell, Massachusetts	Mar. 2-9	1 case.	
Somerville, Massachusetts	Mar. 2-9	1 case.	
Detroit, Michigan	Mar. 2-9	1 case.	
Grand Rapids, Michigan	Mar. 2-9	1 case.	
Minneapolis, Minnesota	Feb. 24-Mar. 2	4 cases.	
Winona, Minnesota	Mar. 2-9	2 cases.	
Manchester, New Hampshire	Mar. 2-9	21 cases.	
New York, New York	Mar. 2-9	54 cases.	10 deaths.
Cincinnati, Ohio	Mar. 2-9	2 cases.	
Cleveland, Ohio	Mar. 2-9	52 cases.	
Portland, Oregon	Feb. 1-28	2 cases.	
Erie, Pennsylvania	Mar. 2-9	2 cases.	
Philadelphia, Pennsylvania	Mar. 2-9	1 case.	
Steelton, Pennsylvania	Mar. 2-9	1 case.	
Jackson, Tennessee	Jan. 1-31	20 cases.	2 deaths.
Memphis, Tennessee	Mar. 2-9	10 cases.	
Nashville, Tennessee	Mar. 2-9	11 cases.	
San Antonio, Tennessee	Feb. 1-28	16 cases.	
Ogden, Utah	Mar. 2-9	18 cases.	
Tacoma, Washington	Feb. 25	6 cases.	
Huntington, West Virginia	Mar. 2-9	11 cases.	
Wheeling, West Virginia	Feb. 24-Mar. 9	4 cases.	
Milwaukee, Wisconsin	Mar. 2-9	2 cases.	

Smallpox—Foreign and Insular.

Prague, Austria	Feb. 9-23	14 cases.	
Vienna, Austria	Feb. 16-23		1 death.
Antwerp, Belgium	Feb. 9-23	2 cases.	
Sudbury, Ontario, Canada	Feb. 22	Prevalent.	
Ceylon	Jan. 26-Feb. 2	1 case.	1 death.
Cairo, Egypt	Jan. 28-Feb. 4	2 cases.	
London, England	Feb. 16-23	1 case.	
Newcastle-on-Tyne, England	Feb. 16-23	1 case.	
Dundee, Scotland	Feb. 16-23	2 cases.	
Edinburgh, Scotland	Feb. 16-23	1 case.	
Glasgow, Scotland	Feb. 22-Mar. 1		13 deaths.
Bombay, India	Jan. 29-Feb. 12		6 deaths.
Calcutta, India	Jan. 26-Feb. 9		235 deaths.
Karachi, India	Jan. 27-Feb. 10	15 cases.	7 deaths.
Madras, India	Jan. 26-Feb. 8		8 deaths.
Naples, Italy	Feb. 20	Present.	
Malta	Feb. 16-28	1 case.	
Progreso, Yucatan, Mexico	Feb. 19-28	16 cases.	4 deaths.
Manila, Philippine Islands	Jan. 5-19	4 cases.	
Moscow, Russia	Feb. 2-16	10 cases.	1 death.
Odessa, Russia	Feb. 8-23	26 cases.	7 deaths.
St. Petersburg, Russia	Feb. 8-16	7 cases.	1 death.
Warsaw, Russia	Feb. 8-16		6 deaths.

Yellow Fever.

Honda, Colombia	Jan. 7	Epidemic.	
Guaduas, Colombia	Jan. 7	Epidemic.	
Cienfuegos, Cuba	Mar. 4		1 death.
Havana, Cuba	Feb. 25-Mar. 4	2 cases.	1 death.
Vera Cruz, Mexico	Feb. 16-23	2 cases.	

Cholera.

Bombay, India	Jan. 29-Feb. 12	12 deaths.
Calcutta, India	Jan. 26-Feb. 9	33 deaths.
Madras, India	Jan. 26-Feb. 8	22 deaths.
Singapore, Straits Settlements	Jan. 12-26	35 deaths.

Plague—Foreign and Insular.

Cape Town, Africa	Feb. 16-26	44 cases.	6 deaths.
Hong Kong, China	Jan. 19-26	2 cases.	2 deaths.
Bombay, India	Jan. 29-Feb. 12		1,711 deaths.
Calcutta, India	Jan. 26-Feb. 9		176 deaths.
Manila, Philippine Islands	Jan. 5-19		2 deaths.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending March 16, 1901:

DISEASES.	Week end'g Mar. 9.		Week end'g Mar. 16.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	22	12	19	10
Scarlet Fever	562	32	608	29
Cerebro-spinal meningitis	0	0	0	5
Measles	274	8	234	6
Diphtheria and croup	261	44	324	58
Small-pox	54	10	37	6
Tuberculosis	320	170	327	189

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for Two Weeks ending March 16, 1901:

DIEHL, O., Surgeon. Ordered to the *Indiana*, March 15th.

EAKINS, O. M., Assistant Surgeon. His resignation has been accepted, to take effect from April 15, 1901.

MCCLANNAHAN, R. K., Assistant Surgeon. Detached from the *Indiana* and ordered home to await orders for sea duty.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from March 9 to March 23, 1901:

BINGHAM, JOHN E., Acting Assistant Surgeon, will report to the commanding officer at Fort Walla Walla, Washington, for duty, to relieve WALTER WHITNEY, Major and Surgeon.

COX, FREDERICK W., Captain and Assistant Surgeon, will proceed to San Francisco for transportation to Manila.

DISNEY, FRANK A. E., Captain and Assistant Surgeon, will report to the commanding general, Department of California, for transportation to Manila.

KEAN, JEFFERSON R., Major and Surgeon, will proceed to Columbia Barracks, Cuba, for duty, relieving ALEXANDER N. STARK, Major and Surgeon.

POND, ARLINGTON, Major and Surgeon, is relieved at Fort Preble, Maine, upon the arrival of ERNEST W. FOWLER, Acting Assistant Surgeon, and then will proceed to San Francisco for transportation to Manila.

Change of Address.—Dr. Horace Laidlaw, to No. 986 Sutter Street, San Francisco.

Dr. S. Weir Mitchell Sails for Japan.—Dr. and Mrs. S. Weir Mitchell left this country on March 15th for a trip to Japan. They expect to return in June, when they will open their cottage at Bar Harbor.

A Physician Mulcted for Allowing Students to Witness an Operation.—Miss Mary Hinman, of Grand Rapids, Mich., who sued Dr. Herrick for $5,000 because he allowed medical students to witness an operation performed upon her, was recently awarded $75 damages by a circuit court jury.

Pottstown (Pa.) Declares Consumption Contagious.—The Pottstown, Pa., board of health has adopted a resolution declaring consumption to be of a contagious and infectious character, and cautions all citizens to treat the disease with the same antiseptic remedies as used in diphtheria and typhoid fever.

Gnats and Mosquitoes.—A new edition of this work by Lieutenant-Colonel Giles, of the Indian Medical Staff, is expected to be ready in May or June, so we are informed by the author in a note from Shahjahanpur, India, the entire first edition of the work having already been exhausted.

Habitual Drunkenness as a Cause for Divorce.—In England the House of Lords has passed a bill that provides special penalties for habitual drunkenness, and also provides that habitual drunkenness shall be treated as persistent cruelty and entitle a wife to divorce. The sale of liquor to inebriates is forbidden.

The Middleton Goldsmith Lecture.—This lecture will be delivered by Dr. Charles Sedgwick Minot, professor of histology and human embryology, Harvard Medical School, at the New York Academy of Medicine, on Tuesday evening, March 26th, at 8.30 P. M. The subject will be The Embryological Basis of Pathology.

Coming Changes at the College of Physicians and Surgeons.—Dr. Francis Delafield will give up the chair of the practice of medicine in the College of Physicians and Surgeons on June 1st. He asked to be relieved of the professorship some time ago, and at the last meeting of the board of trustees of Columbia University, of which the medical college forms a part, his letter of resignation was accepted. At his retirement he will have been a member of the faculty of medicine of the university for twenty-five years. Dr. Walter Belknap James has been appointed lecturer on the practice of medicine at the medical school. His appointment will take effect on June 1st. Dr. Delafield will be emeritus professor of the practice of medicine. His father, the late Dr. Edward Delafield, was president of the College of Physicians and Surgeons from 1858 to 1875.

The State Board of Regents Make Appointments.—At a meeting of the State Board of Regents, held in Albany on March 14th, Joseph P. Creveling, of Auburn, and Eugene Beach, of Gloversville, were reappointed medical examiners to represent the medical society of the State of New York. Willard N. Bell, of Ogdensburg, was reappointed medical examiner to represent the Homœopathic Medical Society of the State of New York, and John B. Garrison, of New York city, to fill the vacancy caused by the expiration of the term of Edward Chapin. In accordance with the recommendations of the Medical Council to secure the fairest representation of the medical schools of the State, Dr. William Gilman Thompson, of Cornell Medical School, and Dr. Willis G. Tucker, of Albany Medical School, were appointed members of the Medical Council for five and three years, respectively, in place of Dr. Mann and Dr. Didama, the members to retire having been selected by lot.

To Erect a Monument to Dr. Ollier.—Committees have been formed in several European countries for the purpose of receiving subscriptions for a monument commemorative of the distinguished scientific services of Professor Leopold Ollier. Among the members of these committees are Lord Lister, Professor von Bergmann, Professor Czerny, Professor Durante, and other leading men. The municipality of the city of Lyons has dedicated an open space adjacent to quarters of the various academic faculties on the border of the Rhone, named in his honor Place Leopold Ollier. A committee has been formed in the United States with a view to cooperating with these committees already formed in Europe for the purpose of receiving funds for the erection of the monument in question. This committee is composed of Dr. Robert Abbe, New York; Dr. William T. Bull, New York; Dr. P. S. Conner, Cincinnati; Dr. A. T. Cabot, Boston; Dr. Howard A. Kelly, Baltimore; Dr. W. W. Keen, Philadelphia; Dr. Rudolph Matas, New Orleans; Dr. William J. Mayo, Rochester; Dr. W. F. McNutt, San Francisco; Dr. Roswell Park, Buffalo; Dr. Clayton Parkhill, Denver; Dr. Maurice H. Richardson, Boston; and Dr. Nicholas Senn, Chicago.

The committee hopes to raise not less than one thousand dollars ($1,000) as a testimonial from the profession in America. Checks should be forwarded to Dr. W. W. Keen, 1729 Chestnut Street, Philadelphia, Pa., and at as early a date as possible.

Small-pox.—Prevalence of the epidemic is reported from Harrisburg, Pa.; Saginaw and Flint, Mich.; Manville, Wis., and in Brooklyn and Manhattan boroughs, New York city. The virulence of the contagion, however, seems to be abating.——The temporary small-pox hospital at Orange, N. J., was destroyed by a mob on March 10th. An unsuccessful attempt had been made to burn it the day before. The health officials have announced their intention of rebuilding the structure, but a contingency has arisen which may defeat their plans. A law passed in 1898 provides that no hospital of this nature may be erected in any municipality without the consent of its governing body. This places the Orange board of health under the necessity of applying to the Orange common council for the required permission, and those who are in a position to know say that it is extremely doubtful if that body will consent. The work of providing for the unfortunate people ill with the disease in a thickly populated neighborhood is now blocked. ——Stephen D. Pierce, an immune nurse of Fishkill Landing, N. Y., was arrested recently for leaving two small-pox patients and visiting his friends about the village before the time of isolation was completed. He was sent to the county jail at Poughkeepsie. He will be prosecuted by the State board of health.——Because he was quarantined at his home in Kansas City, Mo., with a small-pox sign on his house, Henry Harrison has sued Dr. T. C. Unthank and Dr. J. L. Harrington for damages. Harrison alleges that on January 14th, last, the physicians said that William Fouse, a relative who lived with him, had the small-pox. Fouse was taken to the pesthouse, Harrison's residence was quarantined, and the head of the family was kept at home for forty-two days. Harrison alleges that it was not small-pox. It is said that the defendants will be prepared to show that Fouse did have the disease pronounced in the diagnosis. ——When the Pan-American Exposition at Buffalo opens on May 1st, the American Anti-vaccination League will have an exhibit at the big show. It is the intention of the league to make an exhibit of anti-vaccination literature, to consist of books, newspaper articles, pamphlets, charts, diagrams, engravings, etc., illustrative of the "evil" of the use of vaccine virus.

The St. Louis Medical Society of Missouri.—At the last regular meeting, on Saturday evening, the 16th inst., the following papers were read: Our Present Knowledge of Hydrophobia, by Dr. Carl Fisch; and Recent Modifications of the Pasteur Treatment, by Dr. John C. Morfit.

The Floyd County Medical Society met recently at Louisville, Ky., and elected the following officers: President, Dr. Charles Bowman; vice-president, Dr. E. P. Easley; secretary, Dr. C. P. Cook. Dr. Cook and Dr. Easley were elected as delegates to the meeting of the American Medical Association, and Dr. McIntyre and Dr. E. L. Sigmon delegates to the meeting of the State Association.

The Practitioners' Club of Louisville, Ky.—The Practitioners' Club, an organization composed of Louisville physicians, held its annual meeting and banquet at the Louisville Hotel recently. The following officers were elected: Dr. John J. Moren, president; Dr. C. E. Bloch, vice-president; Dr. D. H. Keller, secretary, and Dr. J. E. Windell, historian. After the business meeting a banquet was served.

The Academy of Medicine of Buffalo, N. Y., was addressed recently by Dr. J. H. Waterman, assistant surgeon of the Hospital for the Ruptured and Crippled of New York city, who chose for his subject Tendon Transplantation. Photographic illustrations were shown of many cases operated on by the speaker. Dr. Herman E. Hayd and Dr. Herman Mynter also made reports of surgical cases of special interest to the profession.

The Society of Medical Jurisprudence.—General N. M. Curtis addressed the Society of Medical Jurisprudence, at its regular meeting on March 11th in the Academy of Medicine, on Capital Punishment—Unscientific and Futile. General Curtis said that capital punishment did not act as a deterrent of crime, but as an actual bar to the administration of justice, owing to the disinclination of juries to cause the infliction of the death penalty.

The Richmond (Va.) Academy of Medicine and Surgery.—The regular semimonthly meeting of the Richmond Academy of Medicine and Surgery was held on March 12th at Richmond, Va., the president, Dr. Stuart McGuire, in the chair. Dr. W. A. Deas read an excellent paper on Cyclic Albuminuria, which was discussed by Dr. Michaux, Dr. Hoge, Dr. Robins, and Dr. Garcine. Dr. M. D. Hoge, Jr., read a paper on The Pathology of the Liver.

The Cleveland Medical Society Mourns Professor Von Pettenkofer's Death.—At the last meeting of the Cleveland (O.) German Medical Society the following resolutions of sorrow and respect were adopted regarding the recent death of Professor Max Von Pettenkofer: "*Resolved,* That by the death of Max Von Pettenkofer the scientific world has lost one of the greatest scientists, humanity one of the truest benefactors, and the medical world, whose pride he was, an indefatigable worker and pathfinder, whose great loss is irreparable."

The Tri-state Medical Association, in session recently at Richmond, Va., elected Dr. J. N. Upshur, of Richmond, president, to succeed Dr. Kollack. Asheville, N. C., was selected as the next place of meeting. The other officers elected were: Vice-president for North Carolina, Dr. J. W. Long, of Salisbury; vice-president for South Carolina, Dr. S. C. Baker, of Sumter; vice-president for Virginia, Dr. Hugh M. Taylor, of Richmond; secretary and treasurer, Dr. H. A. Royster, of Raleigh.

Preparing for the Meeting of the American Medical Association.—According to the *St. Paul Medical Journal,* elaborate preparations are under way for the entertainment of the American Medical Association, which meets at that place in June. Dr. J. A. Quinn, chairman of the committee on transportation, hopes to be able to make up a large enough party from the East to come by way of the lakes to induce the steamship line to put on a steamer, though the regular season will not be open by that time.

The Medical Society of the County of Albany.—A regular meeting of the Medical Society of the County of Albany was held on March 11th. The following papers were presented: The Ocular Complications of Influenza, by Dr. C. H. Moore; The Effects of Influenza on the Nasal and Accessory Nasal Cavities, by Dr. Arthur G. Root. The next meeting will be held at Alumni Hall on April 10th. The following papers will be presented: The Relation of the Sympathetic Nervous System to Functional Amblyopia, by Dr. H. S. Pearse; Report of a case in which a scarfpin was swallowed and passed *per rectum* on the seventh day, by Dr. E. A. Vander Veer; a paper, with title to be announced, by Dr. A. Sautter.

The American Laryngological, Rhinological, and Otological Society.—The council of the society have decided that the seventh annual meeting shall be held at the New York Academy of Medicine, in the city of New York, on May 30th and 31st, and June 1st. The constitution of the society requires that all candidates for admission to the society shall be required to present a thesis when requested by the council, and also, if so desired by the council, such thesis shall be read before a general session or before the section in which the candidate resides. Members who propose to contribute papers should send the titles of the proposed essays to the secretary, Dr. Wendell C. Phillips, 350 Madison Avenue, New York city, at the earliest possible date.

The Medical Society of the County of Kings, at its recent stated meeting at its building, discussed The Scope and Support of Hospitals. Dr. J. T. Duryea spoke on City *versus* Independent Hospitals; Dr. John Harrigan on The Advantage to the Public and to the City of the Non-municipal Hospitals; Dr. A. C. Bunn on Our Church Hospitals, and Dr. W. M. Hutchinson on Municipal as Compared with Private Care of Infants and Children.

The Section of Laryngology, Rhinology, and Otology considered at its meeting, Thursday evening, Tuberculosis of Ear, Nose, and Pharynx; Dr. B. C. Collins speaking on that of the ear and W. G. Reynolds on that of the nose and pharynx. The Section on Materia Medica, Therapeutics and Pharmacology listened to a paper by Dr. James W. Ingalls on Dionin and its Uses, which was discussed by Dr. John Scott Wood, David W. Meyer, and others. The Brooklyn Society for Neurology will hear, on Thursday evening of next week, Dr. T. C. Craig

on Tetanus, and Dr. W. Alfred McCorn on Paralytic Dementia and Cerebral Syphilis, and Dr. E. H. Wilson will give a demonstration on Monday, April 1st, 9-10 P. M., on the Bacteriology of Infectious Diseases.

Proposed Legislation against Hypnotists.—Assemblyman Babcock has introduced a bill at Albany which provides that no person shall practise hypnotism, mesmerism, suggestive therapeutics, and allied phenomena after May 1st, unless previously registered and legally authorized, or unless authorized by the regents. No one can practise who has been convicted of a felony. A fee of $50 is to be charged. The following requirements for admission to practise are required: A general education; has studied medicine in a medical school for at least two full school years; any one practising who is not authorized to do so, or who advertises in any newspaper, circular, or any advertising medium that they are competent and authorized to practise or teach these arts, shall be guilty of a misdemeanor, and punishable by a fine of not more than $250 or imprisonment for six months for the first offense; any one who practises under an assumed name shall be guilty of a felony.

The Lorillard Hospital Report Denied.—The report that Mrs. Pierre Lorillard, Jr., contemplated the erection of a hospital on the Riviera for consumptive American women is denied by Mr. Lorillard, in the absence of his wife abroad.

Hospital Changes.—Announcement has been made that Dr. E. Schwarz, president; Dr. M. Seidman, Dr. A. Fischer, Dr. S. Greenbaum, Dr. E. D. Newman, and Adolph Klein have resigned from the directorate of the Newark Hebrew Dispensary and Hospital Association. The trouble that culminated in the resignations arose from the charter members being arrayed against those who became members after by much hard work the organization became firmly established and was recognized as one of the leading Hebrew charities of Newark.

A Memorial Hospital at Cairo to Queen Victoria.—Lord Cromer, the British diplomatic agent in Egypt, and John G. Long, United States consul-general in Cairo, jointly presided on March 8th at an Anglo-American meeting to consider a memorial to Queen Victoria. Both delivered addresses advocating the founding of an Anglo-American hospital, which suggestion was approved by the meeting. Sir Ernest Cassel subscribed £1,000 to the memorial fund, and the subscriptions altogether reached a total of £10,000.

The Annual Report of St. Peter's Hospital, Brooklyn.—St. Peter's Hospital, Brooklyn, has issued its annual report. The hospital is in charge of the Sisters of the Poor of St. Francis, and has been in existence nearly thirty-five years. During the year 3,218 patients were admitted. Of this number 2,559 were discharged and 395 died. The total number of days' service was 89,358. The number of patients treated from the opening of the hospital in 1866 to 1901 was 52,005. Of this total 7,235 were consumptives. The number of consumptives treated last year was 499. Of these 252 were discharged as improved. Six of the hospital wards are set apart for consumptive patients. These contain eighty-four beds.

The Burning of the Orange (N. J.) Pest House Denounced from the Bench.—In his charge to the Essex County Grand Jury, Chief Justice Depue denounced the mob violence displayed at the recent destruction of the Orange pest house. In part, the charge was as follows: "You all know with what horror you read in the newspapers accounts of mobs in the West and South burning at the stake American citizens simply charged with crime, and who were entitled to have a regular trial. The same spirit that prompted these outrages seems to have reached this county. The newspapers report the destruction of property in Orange by the act of a lawless mob. The excuse for this act, that the location of a pest house was injurious to property, is no justification. If this act be overlooked and excused, a precedent will be established, the consequences of which it is impossible to forecast. The investigation of this case is earnestly pressed upon your attention, that the law may be promptly vindicated by the indictment of these offenders." Five arrests have thus far been made in connection with the wrecking.

New York City's Charitable Hospital Allowance is too Small.—The inadequacy of the provision made by the city for the support of the Department of Charities is dwelt on at length in the annual report of the New York County Visiting Committee of the State Charities Aid Association. There was a net decrease in the total appropriation for the year 1901 of $63,706. The total appropriation for charities in the boroughs of Manhattan and the Bronx for 1900 was $1,476,739.97, as compared with $1,590,732 for 1899, a decrease of $103,992.03, or six and one half per cent. The appropriation for 1901 is $1,413,033.97, a decrease of $63,706.76, or four and one third per cent. less than for 1900. In the opinion of the visiting committee, the principal needs of the various hospitals of the city are as follows: Bellevue Hospital.—Larger quarters for house staff; better quarters for employees; completion of the electric plant; better quarters for prison patients; crematory for refuse and dressings; new laundry building; better regulations of the admission of alcoholic patients.

City Hospital.—Better quarters for nurses; new maternity waiting wards; better accommodations for erysipelas and paralytic patients; a new waiting room at the dock.

Metropolitan Hospital.—Electric lighting plant; proper quarters for employees.

Fordham Hospital.—Ward for children; quarters for employees; better water supply; new laundry.

Harlem Hospital.—New hospital and dispensary.

Gouverneur Hospital.—Quarters for employees.

Speaking generally, the committee says that the city should make better provision for the care of consumptives, and that it should build a convalescent hospital and a lodging-house for women and children. Of the Harlem Hospital, the committee says: "The dispensary is a disgrace to the city; it is a small, low, wooden building, and is far too small for the number of patients who go there. The crowded wards necessitate removals when the patients are too ill to be transferred; still, when those come in who are worse, some must go to give room for them."

Hospital Buildings and Endowments.—The Anna Jaques Hospital, at Newburyport, Mass., which for some years has been seriously cramped for room, will have a new and commodious structure through the munificence of the Hon. William C. Todd, who has donated $50,000 for a new building and a site valued at $5,000.——The Free Hospital for Poor Consumptives at Philadelphia has purchased 215 acres of high land in the Pocono regions of Pennsylvania on which to locate a sanitarium.

——By the will of the late State Senator Christopher L. Magee, of Pittsburgh, The Maples, his beautiful home, which was bequeathed to his widow, is left, at her death, or should she at any time decide to leave it, as well as her share in the estate, except her dower interest, for the erection of a free hospital on the site. The hospital is to be known as the Margaret Steel Magee Memorial Hospital, in honor of the mother of Senator Magee. The Mercy Hospital, of which Senator Magee was the president, gets $10,000.——The new building of the New Jersey State Hospital, at Morristown, is completed, after six years of labor and the expenditure of half a million dollars. The formal opening will take place in the spring, when New Jersey's Governor and his staff will be present.——The Chinese consul at New York, Chow Tsy-chi, with others, has started a movement for the establishment in the metropolis of a hospital for Chinese at a cost of about $50,000.——Joseph Van Vleck, of Montclair, N. J., has offered $8,000 toward the erection of a new hospital there.——Over $4,000 is to be spent on extensive improvements at the Sisters' Hospital at Buffalo, N. Y.——The formal opening of the Hospital for Incurables at Atlanta, Ga., took place on March 12th.——T. M. Shepherd, of Northampton, Mass., has given $5,000 for the annex to the Dickinson Hospital in that city.——A contribution of $2,000 has been made to the fund of the new modern hospital planned by the King's Daughters and Sons of Charleston, S. C.——The Hebrew Benevolent and Orphan Asylum Society will build a five-story hospital at Amsterdam Avenue and One Hundred and Thirty-sixth Street, adjoining its present buildings. The cost of construction is estimated at $70,000.——A new site, satisfactory to all concerned, has been selected for the proposed new Hospital for Incurables at Albany, N. Y.——A small-pox hospital is to be built at Brookfield, Me.——A new hospital to cost $25,000 is planned for Milwaukee, Wis.——The sum of $9,101 has been pledged to pay off a $15,000 mortgage on the Huron Street Hospital, Cleveland, O.——The French Benevolent Society has purchased a site at 450 to 456 West Thirty-fourth Street, New York city, on which it is proposed to erect a hospital to cost some $400,000. At present the society is conducting a hospital at Nos. 320 and 322 West Thirty-fourth Street, which, on the completion of the new building, will be abandoned. It is likely that an ambulance district will be given the new hospital, partially relieving Roosevelt Hospital.——Articles of incorporation were filed at Albany, N. Y., on March 18th for the Manhattan Maternity Hospital and Dispensary, the incorporators being named as Daniel S. Lamont, Cornelius Vanderbilt, Frank L. Polk, Henry S. Thompson, and William Thorne, of New York; Moses Taylor, of Mount Kisco, and Percy R. Pyne, of Bernardsville, N. J. It is said that Dr. J. Clifton Edgar will take a prominent part in bringing this philanthropic scheme to successful accomplishment. According to rumor, the hospital will be the gift of a very rich man, who will not only put up and furnish the building, but will also give it a large endowment. Even the matter of site has not been settled, except that the new institution will be somewhere on the East Side, and negotiations are in progress for a site at First Avenue and Seventieth Street, New York city. So large has been the endowment, it is said, that the hospital and other necessary buildings will take up almost a city block. Most of the beds will be free, but there will be pay beds besides. It is reported that Dr. Russell Bellamy and Dr. J. C. Edgar will be attending physicians.——A four-story brick hospital and nurser building is to be erected at 216 East Twentieth Stree for the Wayside Day Nursery. The building will cos $32,000.——The directors of the Bethesda Swedis Lutheran Hospital, of St. Paul, Minn., which recentl wiped out an indebtedness of $20,000, are discussing th advisability of building an addition to their hospita ——By the will of the late Colonel Henry E. Roehr, edi tor and proprietor of the Brooklyn *Freie Presse,* the Ger man Hospital Society of Brooklyn receives a bequest o $1,000.——Amos Churchill, of Quincy, Mass., recentl bequeathed $1,000 to the City Hospital of that city.—— By the will of Stephen Symmes, of Arlington, Mass., th bulk of the property, amounting to about $25,000, is lef to found a hospital and nurses' training school in Arling ton. The Symmes place, two and a half acres of higl land, with a house and farm buildings, is an ideal loca tion for a hospital. It is about a mile from the centre o Arlington. By the terms of the will the property is lef in trust to six citizens of Arlington. These trustees ma found and incorporate a hospital and nurses' home; or in case they wish to give up their trust, they may mak the property over to the town of Arlington, which shal carry out the provisions of the will. It is safe to say tha the trustees will found the hospital and training school The hospital must be started within five years, but th training school need not come for twenty years. Th will provides that the present buildings shall be used but allows the trustees to alter, add to it, and erect new buildings.——The Lancaster County Hospital for th Insane, at Lancaster, Pa., was opened on March 13th.

Births, Marriages, and Deaths.

Born.

East.—In Rochester, on Saturday, March 16th, to Dr and Mrs. Frederick East, a daughter.

Page.—In Plattsburgh Barracks, N. Y., on Tuesday March 12th, to Dr. Henry Page, United States Army, and Mrs. Page, a son.

Married.

Bridgeman—Jones.—In Racine, Wisconsin, on Wednesday, March 6th, Dr. Henry M. Bridgeman, of Cape Town South Africa, and Miss Florence P. Jones.

Hill—LaBarraque.—In Seattle, Washington, on Monday, March 4th, Dr. S. H. Hill and Miss Marie F. LaBarraque.

Hyde—Baker.—In Greenwich, Connecticut, on Thursday March 14th, Dr. Fritz Carleton Hyde, of Grand Rapids Michigan, and Dr. Harriet Virginia Baker.

Wallace—Bours.—In San Francisco, on Monday, March 4th, Dr. Arthur Wallace and Miss Lily Bours.

Died.

Bradley.—In New York, on Friday, March 15th, Dr. Edward Bradley, in the sixty-ninth year of his age.

Busteed.—In Brooklyn, on Monday, March 11th, Dr. John B. Busteed, in the thirty-third year of his age.

Cherrington.—In Salem, Massachusetts, on Monday, March 11th, Dr. Leroy J. Cherrington, in the fifty-sixth year of his age.

Davis.—In Plainfield, Connecticut, on Friday, March 15th, Dr. Emery Hawkins Davis, in the fifty-sixth year of his age.

Moret.—In Henry Barracks, Porto Rico, on Sunday, March 3d, Dr. Gustave Moret, United States Volunteers.

Page.—In Charlottesville, Virginia, on Monday, March 11th, Dr. John Randolph Page, in the seventieth year of his age.

Rogers.—In New York, on Tuesday, March 12th, Dr. James H. Rogers, of East Hampton, Long Island, in the seventieth year of his age.

Smith.—In Escondido, California, on Saturday, March 16th, Dr. Henry M. Smith, in the sixty-sixth year of his age.

Pith of Current Literature.

Medical Record, March 16, 1901.

The Treatment of Gonorrhœa with Frequent Irrigations of Hot Decinormal Salt Solution. By Dr. Charles E. Woodruff.—Considering the germicides added to the water in the modern irrigation treatment, and also their strength, the author is sceptical as to the value of specifics used in this way, and he suggests that plain water would do as well. He assumes that whatever good attaches to the irrigation treatment is attributable to the washing away of the germs and of the toxines, leaving the tissues to destroy the rest. One of the author's patients complained so bitterly of the pain of the germicide that a hot decinormal salt solution was used to soothe the membrane, whereupon the discharge and other symptoms ceased at once. Since then the author has adhered to the use of the salt solution for all cases. His success has been most encouraging, and a report of ninety-eight cases accompanies the text.

A Whistle in the Œsophagus. By Dr. A. E. Isaacs.

The Treatment of Colitis by Valvular Colostomy and Irrigation. By Dr. P. R. Bolton.—The author asserts that, even in favorable cases, only a portion of the mucous membrane of the colon can be reached through the anus, and that to insure contact of the medicating solution with the entire mucous membrane of the colon, fluid must be forced through from the cæcum. He concludes that a simple fistula made in the cæcum would fulfil every indication—one that would admit of the ready introduction of fluids without the annoyance of continuous leakage, and that would finally close spontaneously without requiring any plastic procedure. The plan accredited to Kader he has found best suited to the purpose in view. The case reported justifies the adoption of the principles of the treatment and the method used in the formation of the fistula.

The Ovary; its Relation to Normal Functions and to Pathological States. By Dr. Samuel W. Bandler.—In an extended article the author demonstrates that the relation of the ovary to the normal functions of a special character in women is decidedly clear, and that its relation to pathological states is highly probable. The weaker sex, with its tendency to these affections and to hysteria, will probably in the future be less frequently treated as the possessors of nerves alone. In certain affections he believes that the action of ovarin, verifying, as it does in a measure, the results of animal experimentation, will lead to a more rational treatment of these diseases in the female, both medically and surgically.

The Use of Suprarenal Capsule in Hæmoptysis. By Dr. William B. Kenworthey.

Journal of the American Medical Association, March 16, 1901.

The Study of Anatomy. By Dr. Lewellys F. Barker.—The author concludes that this subject is too wide to be mastered in all its details even when a whole lifetime is devoted exclusively to it. He believes that the scientific anatomist, after familiarizing himself with the main facts and principles of its various subdivisions, does best, in agreement with the great law of division of labor, to direct his efforts toward the acquisition and promulgation of knowledge, in some one portion of it.

Paresis of the External Recti Associated with Irregular Tabes. By Dr. G. Oram Ring.

The Amount of Myopia Corrected by Removal of the Crystalline Lens. By Dr. Edward Jackson.—For a given amount of myopia the effect of removal of the crystalline lens may vary ten D. or more. While statistics indicate that a lengthened anteroposterior axis is the most important cause of very high myopia, other factors of practical importance are variations of corneal curvature, of lens refraction, or of both. These must be considered before we can predict with exactness the effect of an operation. The author urges the more complete and exact study of the ocular refraction and the curvature of the cornea, both before and after the removal of the crystalline lens for high myopia.

On Certain Clinical Features of Epidemic Influenza. By Dr. Howard S. Andrews.—The author points out that the disease has a ferret-like selection for "weak spots"; for the defective strands in the systemic rope, and especially for nerve tissues. He agrees with Huchard that the frequent pulmonary congestions met with indicate lower arterial pressure due to paresis of the vagus and diminished elasticity of the pulmonary vesicles. He adverts to the prominence of suppurative complications, and to the probability of the tonsils being gateways for the entrance of pus staphylococci and streptococci, as well as of the bacilli of Pfeiffer.

Influenzal outbursts are preceded by relatively warm, moist, and calm weather, but prevail with the onset of cold, clear, dry, and windy weather, when the meteorological data show an abnormal increase of the barometric pressure, lower temperature, abnormal temperature ranges, and diminished equability, lower percentage of relative humidity, and increased prevalence of north and northwest winds.

Surgical Circumcision. By Dr. F. C. Valentine.—The author lays stress upon the necessity of observing all the precautions of asepsis and surgical technique. He points out that circumcision, properly performed, is a benefit to the individual and a protection to the community, especially when the prepuce is large, contracted, adherent, or deformed. The operation should be performed by physicians, and the State should protect future generations by compelling the observance of this point. For the sake of religious sentiment, there are many Jewish physicians who could become Mohelim, so that while performing the religious rite, they may conduct it as modern aseptic surgery demands.

Treatment of Laryngeal Tuberculosis at the Montefiore Home for Chronic Invalids. By Dr. W. Freudenthal.—The author emphasizes the fact that there is a pathologic condition which may justly be called pretuberculous laryngitis. Remedies potent in the treatment of laryngeal tuberculosis are: (1) The saccharated suprarenal gland for the induction of preliminary local anæsthesia; (2) the menthol-orthoform emulsion for the production of a longer local anæsthesia, and for its curative effects; (3) olive, almond, or sesame oil, for the relief of the dysphagia; (4) phototherapy; (5) heroine for the relief of bronchial cough. He would dispense with lactic acid as an antiquated and barbarous torture to patients.

Treatment of Atrophic Rhinitis by Electrolysis. And some Experiments to Determine the Efficiency of Needles of Different Metals. By Dr. Carolus M. Cobb.—The action of electrolysis in atrophic rhinitis is curative, in so far as it stops the tendency to crust formation and the odor, in typical cases. Neither the discharge nor the odor will be stopped, if these are caused by empyema. The needles should be placed comparatively

near together, and it makes no difference what metal is used in their composition. The improvement in the condition of the nasal mucous membrane is most noticeable in the area around the positive pole. This improvement is probably due to the liberation of oxygen and chlorine, and the chemical change resulting from the presence of free oxygen and chlorine in the tissues, or the acid reaction produced thereby.

The Nature and Treatment of Vertigo. By Dr. J. Leonard Corning.—According to the author, vertigo is primarily a derangement of perception—expanding the term to include also morbid impulses transmitted through afferent nerves other than those of special sensation. This derangement of perception is always accompanied by some improvement of consciousness due to the confusional conditions engendered in contiguous centres of higher mental action. Vertigo, however, may be engendered by direct impairment of the functional efficiency of the centres of perception, without the intermediation of the afferent nerves. As to treatment, only by obtunding the irritability of the cortex can we hope to render the supervention of vertigo impossible. Those remedies are most effective that exert a pronounced sedative effect upon cerebration.

The Pharmacologic Assay of Drugs and its Importance in Therapeutics. By Dr. E. M. Houghton.

The United States Pharmacopœia of Nineteen Hundred. By Dr. Joseph P. Remington.

Astigmatism, its Detection and Correction. By Dr. H. Bert Ellis.

Ureine. Experiments to Discover the Truth of the Recently Announced Discovery by Moor of the True Cause of Uræmia. By Dr. John Weatherson.

Anastomosis of the Ureters with the Intestine. A Historical and Experimental Research. By Dr. Reuben Peterson.

Abdominal Hysterectomy for Multiple Fibroma with Five-month Gravid Uterus. By Dr. George R. Green.

Medical News, March 16, 1901.

Recent Experiences with Erythremelalgia. By Dr. Henry L. Elsner.—The author assails the position of Dr. Weir Mitchell and others who deny the possibility of the association of gangrene, Raynaud's disease, or of other necrobiotic process with erythremelalgia, and he reports cases in point from his own experience and from that of others, which support his contention. Erythremelalgia cannot be dignified as a disease *per se,* and the great variety of diseases which claim it as an attendant is surprising.

The Treatment of the Heart in Typhoid Fever and other Infectious Diseases. By Dr. Albert Abrams.—While the antipyretic effect of the cold bath is a recognized factor in treatment, it must be regarded as possessing only a secondary influence. Its chief action is on the circulatory system. The author asserts that, whenever an error is perpetrated in the hydrotherapeutic treatment, it is in the direction of misinterpreting the effects to be attained by the use of the cold bath; if cardiac vigor is compromised or fails to be improved, the purpose of hydrotherapy is defeated. Until we are willing to dismiss antipyresis as the great desideratum in the treatment of typhoid fever, we cannot hope to obtain better results than at present. The theory which most cogently appeals to reason is that which assumes that the action of the cold bath is secured by stimulation of the peripheral cutaneous nerves. A procedure recommended by the author, and for convenience called a *friction bath,* is, in practice, as follows: The patient is first rubbed or sponged with alcohol, and this is followed by vigorous cutaneous friction until the skin glows. The results of this method upon the circulatory apparatus and nervous system are very gratifying. The *siphon method* is also suggested by the author for its simplicity and efficiency, and consists in gradually discharging the carbonated liquid from a siphon bottle over the surface of the body, and particularly on the thoracic region.

A Report of Three Cases of Thoracic Aneurysm Treated by Subcutaneous Injections of Gelatin. By Dr. Lewis A. Conner.—Lancereaux states that such injections cause no pain and produce neither local nor general reaction. These statements have not been confirmed by most of the other investigators, and the author's experience would seem to demonstrate that, whatever the curative value of the treatment, its usefulness is seriously impaired by the severe pain that frequently follows the injections.

Observations upon the Amœbæ Coli and Their Staining Reactions. By Dr. Charles F. Craig.—The author's study of the stained specimens seems to demonstrate: (1) That vacuolization is a degenerative process, as the young amœbæ and the full-grown healthy ones show no vacuoles; (2) that the small, round or oval, unstained areas, occurring in all but the degenerate amœbæ, reasoning from analogy, are spores; (3) that peculiar structures occurring in the protoplasm of the amœbæ, and not bacterial in nature, may be certain crystals which occur in the fæces and which have been absorbed by the amœbæ; (4) that degeneration takes place by vacuolization and by fragmentation.

A Preliminary Note on the Relation of the Form of the Tubercle Bacillus to the Clinical Aspects of Pulmonary Tuberculosis. By Dr. Henry Sewall.—The author believes that the form of the tubercle bacillus is an important indication of the virulence of the tuberculous process. The short, deeply-staining rod, or chain of rods, of moderate length, is the usual form in many active cases. The long rods, particularly if irregularly broken, betoken a milder process, and the chains of spore-like beads characterize the very chronic cases. A rather long, slender rod, ill-staining, is found in cases apparently passing on to cure. The bacillary characters of the sputa of the same individual seem at different periods to vary as the state of the disease.

Rhinoscleroma. By Dr. H. Jarecky.

Subglottic Growths; Report of Cases. By Dr. Robert C. Myles.

Philadelphia Medical Journal, March 16, 1901.

Strangulated and Gangrenous Hernia. Kelotomy and Laparotomy in Strangulation, External and Internal; Artificial Anus—Enterostomy, Primary or Secondary Resection—Enterectomy, and End-to-end or Lateral Jointing in Gangrenous Hernia. By Dr. Thomas H. Manley.—In an extended text-book article the author treats of the subjects indicated in the title. He remarks that radical revolutionary methods are adopted, very properly, by the profession, with great reserve, and the more ancient procedures, established and promulgated by eminent authority, are set aside with reluctance. He agrees, however, with Southam that the high mortality in strangulated hernia is due largely to two causes: First, delay in operating; and, secondly, from the injury previously inflicted on the contents of the hernial sac by forcible, prolonged, and repeated taxis.

A strangulated hernia delayed for operation for more than four days shows that there is still much missionary work to be done. With patients, however, averse to radical surgery, or for other cogent reasons, judicious taxis alone, or combined with other resources, will often effect the reduction.

Two interesting cases are given which illustrate a large class of adherent hernias in strangulation, in which consecutive or post-operative symptoms of a grave character may be usually entirely obviated by *limiting our intervention to intestinal liberation* and leaving undisturbed widespread adhesions, through which, in its new abode, the intestine derives its nutritive supply. (*To be continued.*)

Percentage and Laboratory Feeding. By Dr. J. P. Crozer Griffith.—The author is highly in favor of percentage feeding, and he believes that considerable misconception exists as to what percentage feeding really is, and that mistakes arise on that account. One of the secrets of successful percentage feeding, he states, is to begin with low percentages. Though woman's milk contains fat 4 per cent., proteids 1 to 1½ per cent., and sugar 7 per cent., it is by no means advisable to start any baby upon this strength of a milk mixture.

A Contribution to the Technique of the Widal Test. By Dr. A. Robin.—In this test, if the reaction is positive, the author points out that all, or nearly all, the bacilli will be found to gather in clumps of two, three, or a dozen, and will soon lose their motility, while in a pseudoreaction only a few clumps will form. The test can generally be more satisfactorily performed with an oil immersion. The time limit is a very important point, and the author observes that, if within two hours clumping and loss of motility do not take place, the reaction is negative. The dilutions to which this time limit is applied are of the strength of from 1 : 100 to 1 : 500. The skill involved in the application of this test is just such as should be possessed by any intelligent physician who had received his instructions in an up-to-date medical institution.

Rupture of the Rectum and Hernia of the Intestines in an Insane Man. By Dr. A. R. Moulton.

Removal of the Right Upper Cervical Sympathetic Ganglion for the Relief of Glaucoma Simplex. By Dr. D. H. Coover.—From this case the author concludes that the operation is of no service where the vision has been reduced to zero, but it may be of service in arresting the disease in the earlier stages, and preserving vision before atrophic changes have taken place in the nerve, retina, and choroid. The operation in skilful hands is not a dangerous one.

A Synoptical Report of 1,141 Cases of Indigent Visitors Treated at Hot Springs, Arkansas. By Dr. Howard Paxton Collings.

Boston Medical and Surgical Journal, March 14, 1901.

The Story of the Boston Society for Medical Improvement. By Dr. J. G. Mumford.

Notes from the Neurological Department of the Massachusetts General Hospital. By Dr. W. E. Paul.

Intestinal Anastomosis. By Dr. Charles G. Cumston.

A Case of Cæsarean Section. By Dr. Herbert J. Keenan.—The surroundings were those of the poorer sections of South Boston. An oil lamp on the wall supplied light. The instruments used were those of the ordinary pocket-case. The child and placenta were delivered in less than five minutes; the abdominal wound closed, and the patient in bed in fifty minutes. Mother and child did well until the sixth day, when, in a fit of coughing, the wound opened through its entire length and the intestines escaped. Under chloroform the intestines were replaced and the wound was once more closed up, after which recovery was uneventful.

Lancet, March 9, 1901.

Public Health and Housing: The Influence of the Dwelling upon Health in Relation to the Changing Style of Habitation. By Dr. J. F. J. Sykes.—In the second of the Milroy lectures upon this subject, the author continues his discussion of the healthfulness of the various classes of dwellings—tenement-houses, "flat" houses, and underground dwellings. It is curious to note that in houses of six storeys and over the basement is fifth in order of mortality, and not first, as would be expected. Most of the faults of the construction and arrangements of dwellings give rise to impure air and may be classed as air deficiencies and effluvia. The only conditions that may be regarded apart from deficient and impure air are coldness, dampness, deficient light, deficient water supply, and general atmospheric impurity. The various methods for laying out street blocks for dwelling-houses are considered. When houses are constructed in parallel rows, with no houses on the streets at right angles, the square orientation of the street block (*i. e.*, squarely in line with the cardinal points of the compass) provides the maximum of sunshine. But when houses are built around all four sides of rectangular street blocks, the diagonal orientation secures most sunshine. In conclusion, the author describes the various classes of domestic buildings and dwellings, and their internal arrangements for light, air, water supply, etc. It is a mistake to provide large rooms for the poorer classes, as it leads to overcrowding, the placing of more beds in the rooms, and the mixing of the sexes.

The Statistics of Gastric Ulcer, with Special Reference to Gastric Hæmorrhage, its Frequency and Fatality. By Dr. Byrom Bramwell.—The author takes issue with Mayo Robson's conclusions as to the frequency of gastric ulcer, the fatality of gastric ulcer, and the frequency and fatality of hæmorrhage in cases of gastric ulcer. He first points out the inaccuracy and unreliability of the two methods (post-mortem and clinical) of determining the frequency of gastric ulcer in the general community. Robson's estimate of five per cent. is probably excessive. In 17,226 cases of general medical diseases seen by the author, there were 202 cases of gastric ulcer = 1.1 per cent. The total fatality from gastric ulcer is estimated by Robson as 25 per cent. According to this, 81 persons should die annually from gastric ulcer in a city of 500,000 inhabitants. Leeds is such a town, but only 17 deaths from gastric ulcer took place there last year. Most authorities place the total mortality from gastric ulcer at from 8 to 15 per cent. Robson states that hæmorrhage in gastric ulcer, when treated medically, proves fatal in from 3 to 11 per cent. of the cases. The author has seen but one death from hæmorrhage in 126 cases of gastric ulcer (he excludes a case of duodenal ulcer), a percentage of 0.77.

Diseases and Disorders of the Heart and Arteries in Middle and Advanced Life. By Dr. L. M. Bruce.—The first of the Lettsomian lectures. After the age of forty years many of the influences that threaten the heart and arteries with disorder and disease are peculiar to this period of life; that is, peculiar and distinct from the

causes of cardiac and vascular affections in childhood, adolescence, and manhood. These influences are discussed by the author under the following heads: (1) Physical stress in the forms of sudden violent exertion and ordinary laborious occupations; (2) nervous influences, such as overwork, insufficient sleep, etc.; (3) extrinsic poisons, such as alcohol, tobacco, tea, coffee, and lead; (4) disturbances of metabolism, including gout; (5) syphilis; (6) acute diseases, such as rheumatism, influenza, and diphtheria, as well as septicæmia; and (7) chronic diseases such as pernicious anæmia, Graves's disease, etc. One of the most interesting causes of cardiac disease in advanced life is premature old age of the heart and blood-vessels. Degeneration of the muscular and other cells sets in early, reminding one of the essential myopathic paralysis in children. Such cases of premature arterial sclerosis are often hereditary.

Pure Urea in the Treatment of Tuberculosis. By Dr. H. Harper.—During the past nineteen months the author has used pure urea in a large number of cases of different forms of tuberculosis, and believes it to be a remedy of superior value to any that is used for this disease at the present time. He reports nine cases of pulmonary tuberculosis treated with urea, six of which he regards as cured; tubercle bacilli are still present in the sputum of the other three. In all, the diagnosis was confirmed by microscopical examination of the sputum. Nearly all were hopelessly bad cases, such as the author had never before seen to show any signs of improvement. In only two cases was there any increase in the amount of urea excreted. The tubercle bacillus fails to grow in meat broth to which from 1. to .001 per cent. of urea has been added. The urea was given both hypodermically and by mouth, in doses of twenty grains three times a day. On two occasions this treatment has called forth symptoms of gout.

A Case of Pemphigus Neonatorum in an Infant Three Days Old. By Dr. C. J. Glasson.—The author reports a case of pemphigus neonatorum in an infant three days old, in which no history or indication of parental syphilis could be made out. The eruption covered the whole body, consisting of bullæ containing cloudy fluid and surrounded by a bright red ring of inflammation. Each spot was opened with an aseptic needle, the whole body washed in a rainwater bath, and the spots dressed with boric ointment. After three days there was the greatest improvement, and the child never thereafter showed the slightest manifestation of hereditary syphilis. On the ninth day the whole of the outer cuticle began to peel off like a glove, no part of the body escaping. Minimum doses of liquor arsenicalis were given internally throughout.

A Few Cases of Ethyl Chloride Narcosis. By W. J. McCordie, M. B.—The author gives short notes of ten cases in which ethyl chloride was successfully used as an anæsthetic. Anæsthesia is quickly induced (in about two minutes) and as rapidly passes off. Its main disadvantage is that muscular relaxation is not generally complete. Rigidity may be marked in muscular, especially in alcoholic, subjects. The best mask to administer from is that of Breuer. Complications during the induction or continuance of anæsthesia appear to be rare, chiefly of an asphyxial kind and dependent on some mechanical factor. As a preliminary to etherization, ethyl chloride is most successful.

A Further Note on the Production of Local Anæsthesia in the Ear, Nose and Throat. By Dr. A. A. Gray.—The author's method for obtaining local anæsthesia in the ear, nose, and throat is as follows. Two solutions are made: (1) a twenty-per-cent. solution of cocaine in rectified spirit; and (2) a fifteen to twenty-per-cent. solution of eucaine in aniline oil. Before use, the bottle containing solution No. 2 is well shaken up, and ten minims (measured) are poured out; to this are added ten minims of solution No. 1, and the mixture becomes clear in a few seconds. This gives the following formula: Cocaine hydrochlorate 10 parts, β eucaine 10 parts, aniline 50 parts, and rectified spirits 50 parts. In applying the solution (not more than twenty minims of which should be used) the anæsthesia is enhanced if the solution is rubbed gently over the part for a few seconds by means of a pledget of cotton wool on the end of a probe. A period of at least seven minutes should be allowed to elapse, when anæsthesia will be found to be complete. This solution works very satisfactorily in the removal of tonsils, spurs of the sæptum, cauterization, and all ear work.

Two Cases Illustrating the Use of the X-rays in Surgery. By G. P. Newbolt, F. R. C. S., and C. T. Holland, M. R. C. S.—The authors report two cases, illustrating the great value of the x-rays in surgery. In the first case, one of pistol shot wound of the face, in which the bullet could not be located, the skiagram showed it to be beneath the masseter muscle, whence it was easily excised. In the second case, one of difficulty in swallowing, following a fall, the skiagram showed the trouble to be a vulcanite tooth plate which had lodged behind the larynx. It was easily removed with forceps.

British Medical Journal, March 9, 1901.

The Neglect of the Actual Cautery in Surgery and its Value in the Treatment of Pruritus Ani. By Sir W. M. Banks.—The author calls attention to the undeserved neglect into which the use of the actual cautery has fallen. In cases of syphilitic periosteitis and other bone mischief, the cautery, if thoroughly applied, will initiate a cure when everything else has failed. The instrument should be white hot, and should be pressed many times over the same track. In certain conditions of the knee-joint the actual cautery can be applied with immense advantage. Tuberculous disease of the knee is not benefited by it, but in cases of sprains and synovitis in gouty subjects, "firing" with the cautery will almost always do good. In fairly acute inflammatory conditions of the spinal column and the spinal meninges after injury, accompanied by paralysis, actual cauterization has worked wonders in the author's hands. In these cases he burns completely through the skin in three or four places, each having an area of about an inch and a half. But the chief purpose of this article is to call attention to the great value of the actual cautery in pruritus ani. The vast majority of ordinary cases of pruritus are curable by finding out and doing away with what produces them. It is only in severe cases where no reasonable cause can be found that he recommends the use of the cautery. In the last twenty years he has used the cautery for pruritus ani not more than a dozen times. But the very value of the remedy lies in its being unfailingly curative in absolutely intractable cases. The big bulb of the cautery is applied very freely to the anus, the resulting burn healing very quickly.

Diseases and Disorders of the Heart and Arteries in Middle and Advanced Life. By Dr. J. M. Bruce.—The first of the Lettsomian lectures on this subject. See abstract of the *Lancet* for March 9, 1901, in this number of the *Journal*.

The Influence of the Dwelling upon Health. By Dr. J. F. J. Sykes.—The second of the Milroy lectures on this subject. See abstract of the *Lancet* for March 9, 1901, in this number of the *Journal.*

The Histology of the Urinary Tract in its Relationship to Morbid Urinary Deposits. By G. L. Eastes, M. B.—The author has studied the epithelium of the urinary tract in health and disease, and among the conclusions arrived at are the following: In the course of over 6,000 examinations of urine from cases of nephritis, he has never been able to convince himself that he has seen the clear, flattened epithelial cells peculiar to the Malpighian corpuscles; he has, however, recognized in many cases the granular rodded epithelium of the convoluted tubules. The cubical or columnar epithelium of the latter part of the tubules is easily recognized, and is the kind most commonly found when renal epithelium is present. In cancer of the kidney there is usually an abundance of renal epithelium, but the cells are not isolated as in nephritis, but are to be found in clumps, numbering from four to twenty cells. The cells are dovetailed together, and their presence points to rapid proliferation. In cases of buried calculus, the following indications are suggestive: The deposit contains blood, though little, with the characteristics of renally derived blood, a few hyaline casts, and several epithelial cells from the collecting tubules, but no epithelial casts. There is always much free uric acid and a history of tender kidney with reflected pains. The renal pelvis possesses a very distinctive epithelium, belonging to the "transitional" type. These cells are present in the urine in cases of stone in the pelvis of the kidney, and in pyelitis. In these cases the urine contains more albumin than is warranted by the microscopical examination. The renal pelvis may contain neoplasms, usually of the papillomatous variety, and the writer has been able to diagnosticate this condition from an examination of the urinary deposit. Groups of cells and isolated cells in large numbers accompanied by blood, the cells of a most pleomorphic character, but usually tending to a fusiform or spindle shape. The bladder epithelium is also of the "transitional" variety, but the individual cells are much larger than those of the renal pelvis. In cystitis the cells are usually derived from the surface of the epithelium, and there are few of the characteristic pear-shaped cells of the deeper layers. In epithelioma, the cells are more pleomorphic; they come away in groups, are granular, and have large nuclei. In cases of villous growth (malignant papillomata), the cells are of exceptional length and thinnness. Urethral epithelium is usually disorganized when seen in urinary deposits. In gonorrhœa there is much urethral epithelium, but it is swollen and altered in appearance. In the urine of boys between the ages of fourteen and twenty (the period of prostatic growth) the author has found clumps of clear, luminous, pear-shaped cells imbedded in a mucoid material. No such cells occur in the urine of girls, so that he believes them to be of prostatic origin.

Remarks on a Case of Electric Shock. By H. Smurthwaite, M. B.—The author reports the case of a man who received a shock from an alternating current of 2,150 volts, the current passing from the dynamo through a bunch of keys in the man's pocket, through the body, and the right hand, with which he was adjusting the brushes of the machine. The thigh was severely burned, as was also the right hand, the first phalanges of the forefinger and thumb of which had to be amputated. He was unconscious for two hours. An interesting point in the case was the large amount or high pressure of electricity that passed through his body without causing death (2,150 volts). In America, where "electrocution" is practised, 1,500 volts is considered sufficient to kill.

Gazette hebdomadaire de médecine et de chirurgie, February 24, 1901.

Inguinal Adenopathy in Cancer of the Rectum.—M. Charles Viannay records two observations in which true inguinal adenopathy complicated cancer of the rectum. The glands were shown by histological examination to have been invaded by carcinomatous tissue. The invasion of the inguinal glands may be of diagnostic value, as in one of Viannay's cases, in which the enlarged glands were the first cause of complaint. In performing radical operations for the relief of rectal cancer, the inguinal glands must be removed if they are involved.

Presse médicale, March 2, 1901.

Antituberculous Dispensaries in Liège. By M. E. Malvoz.

Myeloid Reaction. By M. H. Dominici.

Wiener klinische Wochenschrift, January 24, 1901.

Ocular Emphysema.—Professor Ernst Fuchs says that emphysema of the lids is the most common form of the condition about the eyes. It occurs less frequently in the orbit or in the connective tissue. It may arise from a communication between the air-containing cavities—most frequently the nose and its accessory chambers—and the orbit, the lids, or the connective tissue, by means of a cleft; or, by the entrance of air from these cavities in forced expiration; or, by the absence of a wound communicating with the external world which would allow the extravasated air an easy exit. It may follow sneezing, for instance, or it may appear spontaneously. The prognosis is good, as the air is usually absorbed in a few days under a pressure bandage, with avoidance of winking and pressing on the patient's part.

Treatment of Typhoid with Jez's "Antityphoid Extract."—Dr. Valentin Jez and Dr. Franz Kluk-Kluczycki observe that the antityphoid extract, originated by Jez, is a specific only against typhoid fever; that it is harmless and produces no disagreeable sequelæ when given in large doses. It is useful in establishing a diagnosis; and, if administered uninterruptedly in a case of typhoid fever, it reduces the temperature and stimulates the pulse. It shortens the course of the disease and diminishes or neutralizes completely the effects of the typhoid toxines. It may be given by mouth and does not then evoke any disagreeable symptoms such as follow its subcutaneous administration.

Echinococcus Disease. By Dr. Heinrich Kokall.—A statistical study.

February 14, 1901.

Transitory Influence upon the Knee-jerk by Cerebral Affections.—Professor A. Pick, in an analysis of four cases of cerebral disease or injury, draws attention to the temporary absence of the knee-jerk and its subsequent appearance. He thinks the phenomenon most easily accounted for by assuming a temporary affection of the cord, either inflammatory or due to pressure of blood from hæmorrhage.

Mechanical Treatment of Certain Forms of Vertigo. (See *New York Medical Journal,* March 9th, Therapeutical Notes.)

Iodipin as a Diagnostic Measure. By Dr. Franz Werner.

Deutsche Medizinal-Zeitung, February 21, 1901.

Chronic Gout.—Dr. C. von Heidler-Heilborn writes of the difficulty of always diagnosticating chronic gout. He speaks of the larvated forms of the disease which manifest themselves in dyspepsias and neuralgias, especially of the sciatic nerve, the tendo Achillis, and the dorsum of the foot. These are often accompanied by changes in the fingers and great toe, which are disclosed only by minute examination. Carefully selected, plain diet, massages, exercise, baths, and alkaline remedies are the means of treatment which the author has found most useful. He does not think highly of colchicum, piperazine, or medicine in chronic gout.

Wiener klinische Rundschau, February 10, 1901.

Thickening of Peripheral Nerves in Neuritis Following Colds.—Dr. Heinrich Popper says that many cases of neuritis date from a cold. The exposed nerves, such as the facial, the cervicobrachial nerves, the crural, and sciatic, are most likely to be affected. Sometimes palpable thickenings are evident, which may appear in single branches only or be symmetrically distributed in the extremities. Occasionally an increased reflex excitability may be noted.

Metabolism in a State of Hunger (*concluded*). By Dr. E. Freund and Dr. O. Freund.

Vegetarianism. By Dr. W. Thurn. (*Continued article.*)

Centralblatt für Chirurgie, February 16, 1901.

Mechanical Treatment of Inguinal and Femoral Hernia.—Dr. H. Wolfermann describes in detail a patented hernia truss of his invention, which, owing to its mechanical principles, holds a hernia well in all postures of the body.

Centralblatt für Gynäkologie, February 23, 1901.

Sensitiveness of the Peritonæum.—Professor K. G. Lennander draws the conclusion from his researches that the parietal peritonæum is richly endowed with nerves of sensation. The stomach, intestines, and mesentery, however, are insensible to pain or to touch, and patients are unable to distinguish between heat and cold applied to these organs. The gall-bladder, liver, and kidneys are equally lacking in sensitiveness. The author explains intestinal colic as due to the pressure upon the parietal peritonæum, of rapidly distended gut. Lennander has operated upon inguinal and femoral hernias and a Meckel's diverticulum under local anæsthesia, using Schleich's solution No. 2, and infiltrating each layer as it is approached. He believes that the anæsthesia of the future for abdominal operations will be a combination of general narcosis and local anæsthesia.

Riforma medica, January 18, 19, 20, and 21, 1901.

A Contribution to the Study of the Histological Changes in the Kidneys in Poisoning by Corrosive Sublimate. By Dr. B. Vasoin.—The author's conclusions are as follows: 1. A dose of corrosive sublimate even smaller than one centigramme can produce well-marked lesions in the epithelium of the uriniferous tubules of the rabbit. These lesions consist in degeneration and necrosis of the epithelial cells, especially in the convoluted tubules. 2. These lesions vary according to the chronicity of the poisoning. 3. Acute poisoning produced by subcutaneous injection results in diffuse hæmorrhages and in a detachment of the epithelium from the basement membrane without altering the cells themselves. 4. In less rapid poisoning the lesions vary according to the mode of entrance to the poison. If the poison enters by the gastric route there is a parenchymatous nephritis; if it enters subcutaneously there is a necrosis of the epithelium of the convoluted tubules and sometimes of the straight tubules. 5. The necrosis has the characteristics of a hyaline coagulation. 6. Deposits of calcium salts are found in the masses of necrotic epithelium; these concretions are probably derived from the small quantity of calcium which normally circulates in the blood. 7. In chronic sublimate poisoning there is an increased amount of glucose in the blood.

January 22 to February 1, 1901.

Extirpation of a Tumor in Broca's Centre. Recovery. By Dr. A. Carle and Dr. B. Pescarolo.—In this case the recovery was so complete, and the time of observation after the operation so protracted, that the authors decided to publish the results. The patient was a man aged thirty-eight years, a baker, without any syphilitic history. In February, 1896, he was seized by what was described as an epileptic attack. He remained unconscious for an hour, and awoke complaining of a severe pain in the head, which persisted in spite of a variety of remedies. This pain was diffuse, but especially marked on the left side. A progressive defect in his intelligence was noticed by his family from that time on, and a difficulty in speech appeared, involving an inability of finding the proper words. He never had any more convulsive attacks, but had frequent moments of unconsciousness or semiconsciousness (*petit mal?*). On examination, it was found that the right hypoglossal nerve was paralyzed, that there was a paresis of the right inferior branches of the facial, together with a slight diminution in the motive power of the right extremities, an increase of the right patellar reflex, the absence of the clonus of the right foot, and a diminution of the cutaneous reflexes on both sides. The eye fundus of the left side showed an œdema of the border of the optic disk which was less marked on the right side. The patient presented the characteristics of melancholia with frequent accesses of stupor. His aphasia was very marked, but varied from day to day. He did not show any word-deafness, but exhibited a type of motor asphasia. The diagnosis of cerebral tumor was made, and the new growth was located in the third (left) frontal convolution. The Rolandic fissure was found by the method of Lucas-Champonnière and osteoplastic resection of the skull was performed in the region thus marked out. A tumor about three centimetres in diameter and ovoid in shape was discovered at the lower part of the third frontal convolution. This was removed as completely as possible. At first it was impossible to replace the bony flap on account of a cerebral hernia which followed the operation, but this hernia disappeared later and the flap was successfully replaced. After the operation there was a rapid recovery from the aphasia, the melancholia, and the paresis.

Changes in the Cellular Protoplasm of the Skin and of the Leucocytes under the Influence of some Poisons. By Dr. Leopoldo Baruchello.

Roseola-like Eruption Due to the Injection of the Salicylate and the Protochloride of Mercury. By Dr.

Vittorio Allgeyer.—The author reports a case of recurring eruption of the roseolous type in a man who had been treated by intramuscular injections of the salicylate and the protochloride of mercury. The patient was in the secondary stage of syphilis. The erythema showed itself in the form of lenticular macules, circular spots, and irregular figures. This erythema appeared six times within a year, each time after an injection of salicylate or of protochloride of mercury (calomel). The fact that these eruptions were not mere signs of a general idiosyncrasy toward mercury was proved by the use of mercury internally and in the form of inunctions, which gave no eruptions, while the injections invariably were followed by the erythema. The author found, further, that five centigrammes of the salicylate could be injected into the skin without producing any eruption, while seven or eight centigrammes were sufficient to cause an erythema.

Concerning Massive Cancer of the Liver. By Dr. Virgillio Bolli.—Primary cancer of the liver is comparatively rare, and may exist as nodular cancer or as a diffuse new growth involving the entire glandular mass of the organ. The name *massive cancer* has been applied to the last class of cases by French physicians. The author reports a case of this kind in a woman aged thirty-five years. He concludes that the diagnosis of diffuse cancer of the liver is extremely difficult because the symptoms which accompany this affection are so similar to those of other diseases of the liver. In the present case there was no hypertrophy of the liver, and the author believes that this is the first reported case of *cancer massif* of the liver in which the organ affected showed no increase in size. In this instance there was a secondary cancer of the stomach which was diagnosticated clinically, and which was the immediate cause of the patient's death.

The Origin and Distribution of the Pathogenic Germs Found in the Water of the Port of Cagliari. By Dr. V. E. Malato Calvino.

Splenic Anæmia as a Morbid Entity. By Dr. Tommaso Guida.—A critical examination of the literature of the subject, together with an analysis of the author's own experience, has enabled him to draw the following conclusions: Splenic anæmia should not be regarded as a disease of childhood, but as a syndrome closely allied to other diseases, such as tuberculosis. The causes of this syndrome may be summed up by the word malnutrition. It may be prevented by careful attention to the nutrition of the child, by noticing certain signs of insufficiency of feeding before they become threatening, especially by watching the weight curve, and by regulating the amount and quality of the food in such a way as to prevent malnutrition. If the nutritive disorders are due to some specific cause, we must recur to other means of treatment. Thus, hereditary syphilis, congenital maldevelopment, insufficient and improper feeding, and lack of proper hygiene, predispose to the syndrome which is known as splenic anæmia. Cases of this affection are becoming more rare of late because the public is becoming more intimately acquainted with the principles of hygiene and infant feeding. It is important to watch the pale color of a child's skin, and if, in addition, we have an enlarged spleen, it is high time to interfere and to improve the feeding. In many cases it is possible to restore the patient to health by these means, but if the spleen continues to enlarge, and the cachexia continues to grow worse, all forms of treatment will probably be in vain.

Gazetta degli ospedali e delle cliniche, January 6, 1901.

Concerning Certain Experimental Researches on Antituberculous Serums by Maffucci and Di Vestea. By Dr. E. Maragliano.—The author criticises the experimental work of Maffucci and Di Vestea, of Pisa, because these observers failed to control their results by injections of a *"test-gift"* in the manner described by Maragliano. The test-poison used by them contained fifty per cent. of glycerin, and the author states that the glycerin alone is capable of killing the guinea-pigs. Hence the use of glycerinized tuberculin as a test-poison is simply a waste of time and animals. If the observers had used tuberculin prepared as Maragliano described they would have to deal only with the toxic power of the tuberculin and their experiments would be of value.

A Case of Epitheliomatous Epulis of the Gingival Mucosa with Telangeiectasic Centres. By Dr. C. Molé.

Small-pox and Immunity after Vaccination. By Dr. F. Ubertis.—An account of the effects of vaccination in an epidemic that occurred recently in Acqui. In Ponzone, a village not far distant from Acqui, there were no cases of small-pox in spite of the close proximity and the freedom with which the inhabitants of the last-named place went to Acqui, the infected village, in the course of their business. In two persons in Ponzone the existence of small-pox was suspected, but they were discharged after a few days' detention. In Cavatore, a commune situated between Ponzone and Acqui, only a fraction of the population was vaccinated when the epidemic broke out, and a number of cases occurred in this village. When the inhabitants had been systematically vaccinated the epidemic was arrested. Although the author vaccinated over one thousand persons, he did not find that, as has been stated, vaccination during an epidemic predisposed to infection. Only a few persons were attacked within a few days after vaccination, and in these the infection probably existed at the time when the preventive inoculation was made. In all these persons the attack was comparatively mild and left few or no scars.

Vratch, January 27, 1901.

The Significance of the So-called Thorax Paralyticus. By Dr. I. G. Gabrilovitch.—The author, who is head physician of the Imperial Sanatorium for Tuberculosis in Chalila, Finland, and whose researches on the value of electricity in the treatment of consumption were abstracted in this column at the time of their appearance, devotes an elaborate article to the consideration of the deformity of the chest known as paralytic thorax. This term was first applied by Engel in the 'forties of the past century to a deformity of the chest characterized by a widening of the intercostal spaces and an elongation of the whole thorax. He supposed that this deformity arose from the paralysis of the intercostal muscles. Rokitansky and others soon afterward described the thorax of tuberculous subjects, and the characteristics of these chests were the same as those of the paralytic thorax, with the addition of the alar scapulæ, the low position of the clavicles, and the alteration of the angle of Ludwig (Freund and Aufrecht). At present the term paralytic thorax is applied as before to chests which show the characteristics described above. The significance of paralytic thorax, however, is not known, as we have no recorded measurements of the chests of consumptive subjects. For this purpose the author undertook a series of measurements so as to find the relation of the elongated thorax to the

predisposition to tuberculosis. He measured the chests of perfectly healthy persons between the ages of twenty and thirty years. In thirty such individuals he found that if the circumference of the chest was taken as 100, the height of the body would be 180; in other words, that the circumference was to the height as 1.0 was to 1.8.

The most favorable ratio between the height of the body and the circumference of the chest was 1.6 : 1.0, while the least favorable figure in normal individuals was found to be the ratio 2.0 : 1.0. The average ratio of the circumference of the abdomen to that of the chest was 0.89 : 1.00. The length of the trunk was measured from the suprasternal notch to the upper border of the pubic symphysis. The ratio between this measurement and the circumference of the chest was found to average 0.62 : 1.00. The ratio between the anteroposterior and the lateral diameter of the chest (at the level of the sternal protuberance for the first, and at the level of the middle axillary line where it crosses the fifth rib for the second) averaged 0.7 : 1.0.

The same measurements were then undertaken in tuberculous subjects, seventy-four in all, and the author gives the results in a series of charts. He concludes that the thorax of the tuberculous subject is characterized by the following peculiarities: It is elongated and narrowed in the lateral diameter, while the circumference is usually one half of the height of the body. The paralytic thorax, as described by most authors, is but rarely seen in consumptives in the first or second stage of the disease, but it is seen in the third stage as the result of the great cachexia. The thorax found in consumptives is probably the result of hereditary predisposition toward an elongated chest.

Corporal Punishment in Russia in the Twentieth Century. By Dr. D. N. Jbankoff. (*Continued.*)—The author gives a number of facts and statistics from the records of the courts and from the accounts of the daily press concerning the prevalence of the barbarous custom of corporal punishment in Russia at the present day. Employers flog their workmen in shops and factories; girls are whipped in dressmaking and millinery establishments, without any authority other than the right of the strong over the weak. Corporal punishment of children by parents and teachers is so common that it excites no comment; only occasionally, when such punishment is followed by disastrous results, does such an affair reach the courts. In the country there is more whipping, beating, and flogging than in the city, because the population is so largely made up of persons of the lower classes, who can be beaten for certain petty offences at the sentence of a court. The husband, who can be flogged at the police station for being found drunk on the highway, beats his wife as much as he pleases. The Russian peasant woman takes blows from her husband as a matter of course, as a part of the conjugal duty. There is even a Russian proverb which says: "If he does not beat, he does not love." The knout is to-day employed as a part of the punishment of those who are condemned to Siberia. These unfortunates, however, are not whipped in Russia; the sentence of the court provides that the blows, numbering from twenty-five to one hundred, shall be given in the prison in Siberia when the prisoner arrives. The Russian officials are ashamed of the barbarism of these sentences. Physicians should at all times refuse to sanction corporal punishment of criminals, and should refuse to give their official approval of such acts, because they are contrary to the spirit of the Hippocratic oath. In Nicolaev the city council has recently asked the cab drivers of that city to abolish the whip as an experiment for three months. How can this be expected, when these drivers themselves may be whipped for petty offences, or even innocently, without hearing or trial before any court? Societies for prevention of cruelty to animals exist in Russia, and yet human beings are treated worse than the lower animals.

Injections of Cinnamate of Sodium in Tuberculosis. By Dr. L. A. Finkelstein.—The author has used these injections in twenty cases of pulmonary tuberculosis which were under his observation in a sanatorium during the entire length of the treatment. In addition to the injections, the usual dietetic and hygienic measures were applied. He used an aqueous solution of sodium cinnamate (containing 0.15 or 0.30 grammes in ten cubic centimetres), and the sites selected for the injections were the interscapular regions, the right and left side being used alternately. The solution was freshly prepared before the injection, and it was rendered sterile before using. The syringe was also sterilized by boiling in soda solution before using. The skin was washed with three-per-cent. carbolic acid before each injection. The injections were always given at two o'clock in the afternoon, every third day, and were followed by slight massage of the parts. (*To be continued.*)

American Journal of Obstetrics, December, 1900.

The American Girl of To-day. The President's Address before the American Gynæcological Society, May, 1900. By Dr. George J. Engelmann.—The author in an exhaustive article considers the American girl and her environment, and more particularly the influence of modern education upon her functional development. He has presented conditions as they exist; and, that they are not what we have a right to expect, he attributes to a misdirected refinement of civilization—*ignorance of* and *disregard of the function*, the crushing out of every question of sex in the girl, who soon learns to ignore, conceal, and deceive. The first step towards betterment is knowledge —*a knowledge of woman's functional life*, its conditions and requirements; an understanding of its nature by physician, educator, and mother, by the girl herself, and to her it must come from the mother. Upon the mother the author would impress, that perfect development of the female function and maintenance of this function, once developed, in a healthy condition, are essential to perfect development of the girl and perfect health of the woman; that self-care, a well-regulated female hygiene, is the foundation of her well-being, and that it is the mother's first duty so to guard herself and so guard her daughter. The *educator* should give heed to the instability and susceptibility of the girl during the functional waves which permeate her entire being; emotional stimulus must be avoided, and decided concessions must be made to the depression, physical and psychical, the lessened inhibition and physiological control during the fluctuation of puberty and menstruation. Let the *physician* take care and guidance of the girl during the great waves of female life, those periods of increased susceptibility and of physiological intensification and depression; and such care is the first and essential step in preventive gynæcology.

Acessory Adrenal Body in the Broad Ligament; Adrenal of Marchand. By Dr. Aldred Scott Warthin.—

Although Aichel's results need further confirmation, it is very probable that his view is the correct one, and that adrenal tissue is a normal constituent of the broad ligament. The practical importance of this is very great, not only to the physiologist and pathologist, but to the clinician and gynæcologist as well. In Marchand's adrenals we have certain anatomical elements which may explain pathologic conditions of the broad ligament and testis heretofore enveloped in mystery. Many tumors and cysts of these regions, whose origin is now unknown to us, may be shown by future observations to be derived from these little organs.

The Treatment of Persistent Occipito-posterior Positions of the Vertex. By Dr. George L. Brodhead.—Prophylactic measures are important. Before labor has begun, where the membranes are intact and engagement has not taken place, it has been recommended by Reynolds to place the patient in the knee-chest position twice each day for the last two weeks of pregnancy, and then in the lateral position. By the use of this method, the position will almost surely become anterior. The conditions which should be fulfilled before the operation of rotation is undertaken are these: (1) the head should be as well flexed as possible; (2) the vertex should be well down in the pelvis and preferably at the vulvar outlet; (3) the membranes must be ruptured; (4) the cervix should be fully dilated or dilatable; (5) the bladder and rectum should be empty; (6) last, but not least, the operator should be positive of his diagnosis of position. The Tucker solid-bladed forceps are preferred by the author.

The Removal of Pelvic Inflammatory Masses by the Abdomen after Bisection of the Uterus. By Dr. Howard A. Kelly.—This article is an illustration of the author's procedure in a case, for example, *where there are pelvic abscesses on both sides, densely adherent to all the surrounding structures.* If the uterus is buried out of view, the bladder is first separated from the rectum and the fundus found; any large abscesses, adherent cysts, or hæmatomata are aspirated; the rest of the abdominal cavity is then well packed off from the pelvis. Each cornu is then seized by a stout Museau forceps, and, as the uterus is bisected, its cornua are pulled up and drawn apart. By keeping two forceps in constant use at the lowest point, the uterus is pulled up; the halves become everted. For a panhysterectomy, the bisection is carried all the way down into the vagina. If it is to be a supravaginal amputation, the Museau forceps are made to grasp the uterus well down in the cervical portion, and the cervix is bisected on one side. As the vaginal and uterine ends pull apart, the uterine vessels, which can be plainly seen, are clamped or tied. The round ligament is subsequently exposed and clamped, and finally a clamp is applied between the cornu of the bisected uterus and the tubo-ovarian mass, and one half of the uterus is removed. The opposite half is also taken away in the same manner.

A Case in which Sexual Feeling First Appeared after Removal of both Ovaries. By Dr. A. Lapthorn Smith.

Remarks on the Technique in Dealing with the Pedicle in the Removal of Intrapelvic Growths and Structures. By Dr. Richard R. Smith.—The faults which are most usually committed, and which the author especially condemns, are these: (1) use of silk; (2) ligating tissues *en masse;* (3) leaving too short a pedicle.

A Case of Congenital Ventral Hernia. By Dr. Eustace L. Fiske.

Medical Chronicle, Manchester, December, 1900.

On Aseptic or Antimicrobic Medicine. By Dr. A. Ransome.—A presidential address.

Some Remarks on the Nature and Origin of Cancer-cells—A Contribution to the General Ætiology and Pathology of Malignant Disease. By P. R. Cooper, M. B.—The object of the present communication is to draw attention to the cellular changes which culminate in the formation of a malignant tumor, and also to point out the probable bearing of certain considerations which arise from the study of these changes, upon the general ætiology and pathology of cancer. It is fairly well established that the cancer-cells are directly derived from preexisting cells of the body, but the direct conversion of a normal into a malignant cell has, however, never been seen under the microscope. The chief facts pointing to this conclusion are: 1. The cancer-cells bear a striking morphological resemblance to the cells which normally constitute the tissues of our bodies, or, to be more exact, to the *embryonic* condition of those cells. 2. The cells of the different kinds of tumors each present a special affinity for the normal tissue cells of the particular part of the body in which the "new growth" first appears. 3. It is possible to observe in tumors of varying degrees of malignancy clearly intermediate forms between the most extreme type of malignant cell on the one hand, and perfectly normal tissue cells on the other. 4. On careful examination the more or less abrupt transition between the normal and cancerous cells can be made out. 5. All secondary or metastatic growths correspond histologically with the primary growth, and therefore with the tissue of origin of the new growth proper, and the occurrence of the secondary growth can invariably be traced to the migration of cells from the primary growth along the blood or lymph channels.

The view most generally held is that the normal tissue cells become directly converted into cancer-cells, but the author inclines to the view that the adult tissue cells first undergo a process of reversion or atavism, whereby they are reduced to an embryonic or mother-cell condition, and it is from these secondarily embryonic or histogenetic cells that the true cancer-cells are formed. The author, from his observations extending over a period of six years, has been forced to the conclusion that the cancer-cells are formed from the histogenetic cells of the body, and are therefore most probably of a primary embryonic nature.

The typical cancer-cell resembles its embryonic prototype, and differs from the fully formed, functionally active tissue cell of the adult in the following chief particulars: (1) its generalized shape, which, although variable and irregular, inclines to be spherical; (2) its comparatively large nucleus, which (3) often exhibits evidence of division; (4) its more or less homogeneous protoplasm; (5) its large proportion of glycogen. It differs, however, from the normal histogenetic cell in (1) its mode of division (direct cell division and endogenous cell formation instead of orderly karyokinesis); (2) its power of movement or migration; (3) its power to englobe or ingest albuminous particles; (4) the frequent presence of certain "intracellular bodies" in its interior; (5) its proneness to undergo degeneration or necrosis, *i. e.*, its feeble resisting powers; (6) its abnormal metabolism, as evidenced by the production of certain toxines which affect the blood and injure the tissues generally.

In cancer the formation of new cells is apparently

without any definite order or direction. The cell increase goes on apparently unchecked, the great numbers produced forcing their way through the normal boundaries and invading the adjoining healthy tissues. In simple tumors, although an excessive production of cells occurs, they undergo adult development and never transgress the normal boundaries. In cancer the departure from the normal seems to be a permanent one. A consideration of the above-mentioned facts seems to warrant the conclusion that the essential change in malignant disease is the failure of development of the cells, and the fault can be primarily traced to the histogenetic cells of the body. Thus failure of development implies a breakdown of the normal "integrating mechanism" of the cells.

Of the causes that determine the departure of the cancer-cells from the healthy condition very little is known. The author holds that the cause of the loss of integrating power of the cancer-cells is congenital. Where the failure is absolute from the beginning of life, we have congenital or embryonic malignant tumors. In other cases the amount of integrating power is perhaps enough for ordinary circumstances but insufficient for any extra demands, and hence are explained cases of acute traumatic sarcoma occurring in early life. In the majority of cases, however, there is a sufficient amount of integrating power both for ordinary purposes and for considerable extra demands; but as age advances, the activity of the nuclear material declines, and at this period exceptional demands are not so readily met, hence the greater frequency of cancer in advanced age. Again, we can see how long-continued irritation, by keeping up cell proliferation and dividing up the nuclear material into minuter and minuter portions, gradually attenuates the integrating power until it is no longer capable of inducing cell development. The causes of long-continued irritation are well known, and amongst these, micro-organisms undoubtedly occupy a prominent place, but in admitting that parasites may in this way be the means of inducing a malignant tumor, we are far from arriving at the conclusion that a parasite is the specific cause, *i. e.*, the *sine qua non* of cancer.

Proceedings of Societies.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Twenty-second Annual Congress, Held (in Conjunction with the Congress of American Physicians and Surgeons) in Washington, on Tuesday, Wednesday, and Thursday, May 1, 2, and 3, 1900.

The President, Dr. SAMUEL JOHNSTON, of Baltimore, in the Chair.

(Continued from page 262.)

Tracheal Injections in the Treatment of Pulmonary Tuberculosis.—Dr. T. MORRIS MURRAY, of Washington, read a paper on this subject (see page 241).

Dr. WILLIAM E. CASSELBERRY, of Chicago: I have had some experience with tracheal injections in the treatment of pulmonary tuberculosis, laryngeal tuberculosis, laryngeal irritation, and bronchial inflammation of various types. As regards the technique of the procedure, it is perfectly feasible, especially with the use of a preliminary brief application by spray of a one- or one-half-per-cent. cocaine solution to the larynx. Patients tolerate the procedure very well indeed after the first or second treatment. They readily become accustomed to it, and the quantity of material that one can introduce into the larynx and trachea without much coughing and expulsion is sometimes astonishing. If we use oil as a menstruum, the material gravitates down the trachea and into the larger bronchial tubes, and possibly in some cases it may reach the smaller bronchial tubes. That there are suitable cases of tuberculosis, associated with secondary infection leading to profuse expectoration, with a good deal of laryngeal and tracheal irritation, which may be benefited by periods of treatment of this sort, there can be no doubt, as the reader of the paper has said, because it lessens the cough, reduces the fever, and conduces generally to the comfort of the patient. But I have no confidence whatever in it as a specific treatment for pulmonary tuberculosis. I think it is stating the case too strongly to maintain that there is much benefit from this method in the long run in cases of pulmonary tuberculosis. From our understanding of the pathology of tuberculosis of the lung, it does not seem plausible that either deep spraying of the bronchial tract or injections of this material can have much effect upon the tuberculous infiltration itself in the lung tissue.

Dr. J. SOLIS-COHEN, of Philadelphia: I have had considerable experience in the use of tracheal injections, dating back nearly forty years. I have had what is known as the Tobold syringe in my possession for nearly that length of time, but I have not always used the solutions that have been referred to. I can also testify that this treatment gives comfort in many cases. Persons with pulmonary tuberculosis feel a sense of comfort in the entire chest after this treatment, and the odor from the menthol is perceptible for a considerable time. I find the most marked benefit from this treatment in an entirely different condition, namely, bronchorrhœa. I believe it is the best remedy to use in this condition. You can use two or three injections twice, one after the other, and direct your applications to one side or the other. If you find that the remedy passes more into one side than the other, you can modify this. You will find in a short time that the secretion will be diminished by forty, fifty, seventy-five, or eighty per cent.

Dr. J. E. LOGAN, of Kansas City: I wish to corroborate what Dr. Casselberry has said with reference to this treatment in pulmonary tuberculosis. I have used tracheal injections with a good deal of success in certain forms of pulmonary diseases, but my experience has not been favorable in the treatment of phthisis. However, my experience in these cases has been limited, and I can understand how it might be possible to afford tuberculous patients great relief at certain stages of the disease. The best results I have had have come from its use in treating cases of bronchitis and bronchorrhœa attended by asthmatic symptoms, and also patients suffering from hay asthma.

I recall a case treated some three years ago, one of bronchiectasis, in which I had a good result. The patient is well, and at least comfortable, at the present time. In cases of bronchorrhœa with excessive secretion, I believe the local application of medicines to the part is apt to be more beneficial than the roundabout way we have of administering them through the general system.

Dr. A. W. DE ROALDÈS, of New Orleans: I have also had some little experience with these tracheal injections. In the treatment of tuberculosis of the lower

air-passages and of pulmonary consumption, beyond a slight temporary improvement, as in the case of other new medications, I cannot say that I have obtained sufficient material benefit to justify me in adopting this method as a standard form of therapeutics.

I recall a case, however, of a very prominent man whose ill health was for several years attributed by different observers to pulmonary consumption, while he himself attributed his sickness to chronic malarial toxæmia. Emaciated and weak, he complained of fever, cough, expectoration, etc. The microscope and a closer study of the symptoms finally cleared up the case, which was diagnosticated as one of bronchiectasis and treated by me with these tracheal injections. The improvement was a surprising one, as after eight or ten injections the patient acknowledged he had not felt so well in many years. These injections had a manifest effect on the temperature, cough, and expectoration, and were instrumental in happily modifying these symptoms, at different periods of his illness, of which he finally died ten years later.

Dr. Murray: In replying to some of the remarks of Dr. Casselberry, I would state distinctly that I do not wish to be understood as having intended to convey the impression that I expected to cure patients who had tuberculosis with intratracheal injections. I do think, however, that if we can reduce the temperature in these cases, if we can lessen the cough so that the patient's rest is not disturbed, if we can increase the appetite, we certainly have a valuable aid to any other treatment which may offer possible curative results, particularly the climatic treatment.

With reference to the influence exerted upon these cases described by Dr. Roaldès and Dr. Logan, my own experience has been exactly the same. My results have been best in cases of bronchorrhœa. One of my cases, which I did not mention in the paper, treated as a case of tuberculosis at first, was such a case. The patient's condition was wretched. Examination disclosed what was supposed to be an involvement of the left apex, but, inasmuch as the man got entirely well, and the microscope did not confirm the diagnosis, I excluded his case from this list.

(To be continued.)

Book Notices.

BOOKS, ETC., RECEIVED.

Operative and Practical Surgery. For the Use of Students and Practitioners. By Thomas Carwardine, M. S. (Lond.), F. R. C. S., Assistant Surgeon, Bristol Royal Infirmary. With 550 Illustrations, most of which are Original Drawings by the Author. Pp. xx-661. Bristol: John Wright and Company, 1900.

Infant Feeding in its Relation to Health and Disease. By Louis Fischer, M. D., Attending Physician to the Children's Service of the New York German Poliklinik, etc. Containing 52 Illustrations, with 23 Charts and Tables, mostly Original. Pp. viii-359. Philadelphia: F. A. Davis & Company, 1901.

The Students' Manual of Venereal Diseases. By F. R. Sturgis, M. D., Sometime Clinical Professor of Venereal Diseases in the Medical Department of the University of the City of New York, etc. Seventh Edition, Revised and in Part Rewritten by F. R. Sturgis, M. D., and Follen Cabot, M. D., Instructor in Genito-urinary and Venereal Diseases in the Cornell University Medical College, etc. Pp. xii-17 to 216. Philadelphia: P. Blakiston's Son & Company, 1901.

Diseases of the Anus and Rectum. By D. H. Goodsall, F. R. C. S. (Eng.), Senior Surgeon to the Metropolitan Hospital, etc., and W. Ernest Miles, F. R. C. S. (Eng.), Assistant Surgeon to the Cancer Hospital, Brompton, etc. In Two Parts. Illustrated. Part I. Pp. 311. London, New York, and Bombay: Longmans, Green & Company, 1901.

The History of Ancient Gynæcology. By W. J. Stewart McKay, M. B., M. Ch., B. Sc., Senior Surgeon to the Lewisham Hospital for Women and Children, Sydney, etc. Pp. xx-302. New York: William Wood & Company, 1901.

The History of Medicine in the United States. A Collection of Facts and Documents relating to the History of Medical Science in this Country, from the Earliest English Colonization to the Year 1800. With a Supplemental Chapter on the Discovery of Anæsthesia. By Francis Randolph Packard, M. D. Illustrated. Pp. 5 to 542. Philadelphia and London: J. B. Lippincott Company, 1901.

Transactions of the Royal Academy of Medicine in Ireland. Volume xviii.

Report relating to the Registration of Births, Marriages, and Deaths in the Province of Ontario. For the Year ending December 31, 1899.

Sixteenth Annual Report of the New York Postgraduate Hospital. For the Year ending October 1, 1900.

Thirty-third Annual Report of the New York Orthopædic Dispensary and Hospital. From October 1, 1899, to October 1, 1900.

Reports of the Trustees and Superintendent of the Butler Hospital for the Insane. Fifty-seventh Annual Meeting, January 23, 1901. Providence, Rhode Island.

Fiftieth Annual Report of the Demilt Dispensary, in the City of New York. For the Year 1900.

Fourteenth Annual Report of the Children's Free Hospital Association. Detroit, Mich.

Twenty-eighth Annual Report of the State Charities Aid Association to the State Board of Charities of the State of New York. November 1, 1900.

Miscellany.

A Phagedænic Chancre Rebellious to Mercury.—Dr. W. J. Collins (*Lancet*, January 5th) reports the case of a young woman, aged nineteen years, a domestic servant, of healthy appearance, with a tuberculous history on her mother's side, who was admitted into the London Temperance Hospital on February 27, 1900, with an ulcerated swelling in the prolabium of the upper lip. The base of the ulcer, which was of trefoil shape, was hard and infiltrated, giving in profile the appearance of a conical projection. The surface of the ulcer secreted a little thin encrusted pus and the edges were sharply defined against the red mucocutaneous surface of the labium. There were enlarged and tender glands below the mandible, more pronounced on the left side; the preauricular lymphatics were unaffected. Dr. Collins made a provisional diagnosis of a syphilitic chancre and ordered mercurial inunctions.

On March 21st the ulceration was noted to be slowly extending and the appearance was that of a phagedænic ulcer destroying the tissues of the lip. An examination

of the blood for organisms gave a negative result. On the 24th the appearance of the ulcer was described as "crateriform." The temperature continued to be elevated, ranging between 99° F. and 100° F. and occasionally reaching 101° F., and there was much pain in moving the lip; otherwise there were no constitutional symptoms. On April 5th an ulcer appeared on the left tonsil, and on the 12th this had extended to the left side of the palate. Despite full doses of mercury externally and internally, the condition of the lip was becoming worse rather than better, and the patient's condition was very deplorable. Ophthalmoscopically, no change was to be seen and no eruption appeared on the skin.

On May 10th Dr. Collins decided to give up mercury in favor of large doses of iodide of potassium. An improvement was soon apparent in the lip, though the palate showed a sloughing appearance. The submaxillary glands became reduced in size and were no longer tender. On May 19th the edges of the ulcer on the upper lip were becoming healthy and a slough had separated. On the 28th there was rapid improvement. Some deformity of the upper lip resulted. The throat was still ulcerated. On June 19th the lip was well and the throat was rapidly healing. There were no skin or ocular symptoms. Her general health was greatly ameliorated. On the 22d the patient was discharged, apparently well. She was ordered to continue the iodide of potassium for a while and to return later for plastic operation on the lip. Six months later the patient was well and the deformity was much less noticeable.

Dr. Collins remarks that the occurrence of phagedæna in a syphilitic sore is to be attributed probably to a secondary local inoculation with a septic organism and not merely to a debilitated condition, which cannot be its sole cause, since when more than one syphilitic ulcer is present some become phagedænic while others often undergo no change. In the case reported, no explanation of the source of infection was forthcoming, though it is difficult to doubt the nature of the disease. The extensive phagedæna, the early implication of the throat, the absence of any skin eruption, the rebelliousness to mercurial treatment, and the rapid improvement under potassium iodide are noteworthy features in the case.

Death by Falling from a Height not Painful.—According to the *Medical Review* for January, Professor Heirn, the geologist of Zurich, an ardent Alpine climber, stated recently in a lecture that life contained few experiences more agreeable and enjoyable than falling over a precipice or slipping into a glacier crevasse. Even the landing after the fall was free from anything of pain or terror. Merely a jar and then unconsciousness. Professor Heirn first cited the sensations described by a Swiss climber, who fell from the top of the Karpfstock, in Switzerland:

"The plunge, which was taken backward, was in nowise accompanied by the anxiety felt when one dreams of falling. I seemed to be borne in the most pleasant manner gently downward, and had complete consciousness during the entire fall. Free from all pain or fear, I contemplated my position and the future of my family, which I knew was assured by the insurance I carried. And this contemplation was accomplished with a rapidity which I had never before known. Of the losing of my breath, of which people talk, there was no suggestion, and only the heavy fall on to the snow-covered ground caused me to lose suddenly and painlessly all consciousness. The bruising of my head and limbs on the rocks as I fell caused me no pain. The reawakening, however, brought with it entirely different and far less agreeable sensations."

Of his own experience of the sensations of falling, Professor Heirn said: "As soon as I stumbled I saw that I should be dashed over the rock, and awaited the shock. I dug my fingers into the snow in the endeavor to stop myself, but merely tore open my finger tips, causing them all to bleed, but feeling no pain from so doing. I plainly heard the striking of my head and back against the rock, and the thud when I landed. Pain, however, I did not feel until half an hour later, when I revived. During the fall came a flood of thought. Every thought and impression was clear, in nowise dreary and confused, and was logically connected with the one which followed. First, I contemplated the probability of my fall, and said to myself: 'The rock over whose edge I shall be dashed evidently descends sheer, for I cannot see the ground on the other side. It becomes, therefore, a question whether or not there is snow at the foot. If so, the snow will be melted near the wall and will form a ledge on which I shall land, and thus escape with my life; if not, then I shall strike on rocks below and death will be unavoidable. If I am not killed and am not unconscious, I must at once take out my little vial of liquor, and drink a few drops of it. My alpenstock I must hold on to, for it may prove of use.' I thought that I should take off my snow glasses and throw them away, for fear they might be broken and the splintered glass get into my eyes; but the position in which I was falling prevented my moving my hands sufficiently to do this. Another train of thought busied itself with the effect my fall would have upon my companions. I said to myself that when I landed, no matter whether I was hurt or not, I must, if possible, call out with all my might, 'I am in nowise injured!' in order that my comrades might rouse themselves from their terror and be able to make the difficult descent necessary for the bringing of assistance to me. I also thought that I should not be able to deliver the lecture which five days later was to mark my entrance into the professorship. I realized how the news of my death would shock my family, and in thought tried to console them.

"Then I saw, as if upon a stage, my entire life pass like a series of tableaux before me. I saw myself as the chief actor. Everything seemed glorified as by some heavenly light, and all was beautiful and free from pain, from anxiety and sorrow. Even the memory of sad events was distinct, but not sad. Exalted and beautiful thoughts dominated and connected the single scenes, and a divine quietude sank like sweet music into my soul. Ever more and more plainly I felt myself surrounded by a heaven of glorious blue, filled with clouds of rose color and of violet. I sank gently and painlessly into it, and saw that I was flying through the air toward a field of snow. Objective observations, reasoning, and subjective feeling were indulged in clearly and simultaneously. Then I heard a dull thud, and my fall was ended. At the same moment it seemed to me that a black object rushed by me, and I called two or three times as loudly as I could: 'I am in nowise injured.' I took some drops of the liquor, I reached out for my snow glasses, which lay unbroken beside me on the snow, I felt my back and my limbs to see that no bones were broken.

"When I struck I lost consciousness. Every sensation, every activity of mind and nerve was annihilated for a half hour. The black object which passed me was the passing of consciousness. And, without realizing this half-hour interruption, thought and activity were resumed exactly where they stopped. Between the stop-

ping and resuming was an absolute blank. The beautiful heavenly visions were noticeable only during the time that I was flying through the air, and could see and think."

Professor Heirn said at the close of his lecture that death by falling is subjectively a pleasant death. Without any previous illness or suffering, it occurs when one is fully conscious, when mental activity is abnormally increased and without any anxiety or pain. The unconscious state is entered suddenly and without suffering.

An Unattached Specialty.—The ancient Egyptians were evidently a point or two ahead of us in other things besides pyramid-building. What says Herodotus (Euterpe, lxxxiv)? "The healing art is thus practised among them. Each physician confines himself to one disease, not more. There is an abundance of physicians. Some of them devote themselves to the eyes, some to the head, some to the teeth; others again to the bowels, and still others to more obscure disorders." It is true that in the present day we are once more approaching their level, but even now our specialization is far from complete. The *Lancet* for February 9th quotes the following amusing verses by "J. B." from the *St. George's Hospital Gazette*, detailing the woes of a titled invalid in search of an appropriate specialist:

A tumor he developed on
  A spot that's quite neglected;
No specialist for just that point
  He anywhere detected.

So curiously was it placed,
  That, search from toe to crown,
You saw it not when he stood up,
  Still less when he sat down.

From day to day the swelling grew,
  So vast became that tumor,
You could not say which was the growth
  And which Sir Francis Boomer.

And so at last it finished him,
  Despite his numerous staff,
And he explained the cause of death
  In this his epitaph:

"My ailment could not treated be,
  The times were out of joint;
There was no specialist upon
  The Perineal point.

"Some doctors find their work before,
  And others theirs behind,
But none devotes attention to
  The spot which I've defined."

The Amended Bell Bill.—The following are the terms of this measure as reported favorably on the 14th inst. to the Assembly:

"Any person shall be regarded as practising medicine who shall for remuneration, charge, fee, gift, bonus, or reward, directly or indirectly, profess to heal, or who shall give treatment to any other person by the use of any means or method whatever, whether with or without the use of any medicine, drug, instrument, or other appliance, for the relief or cure of any wound, fracture, or bodily injury, infirmity, physical or mental, or other defects or diseases.

"This article is not to apply to any person giving treatment to another under the direction or upon the prescription of a physician, duly licensed by the laws of this State. Neither is it to prohibit the manufacture, sale, or use of patent medicines where no diagnosis is made by the maker or seller, or the giving temporary relief in an emergency by a registered pharmacist or any person, or the domestic administration of family remedies; or any person in charge of or employed in any gymnasium from giving suggestions or advice as to form or methods of exercise, or any optician engaged in adapting glasses to the sight, or any rights of chiropodists under existing laws, or the manufacture or construction of optical instruments."

The Psychoses of Puberty.—The *Journal de médecine de Paris* for December 30, 1900, gives three reports on this subject by M. Marro, of Turin; M. J. Voisin, and M. Ziehen, respectively.

M. Marro's Report.—At the period of puberty there is in the two sexes an association of special conditions: increase in the form, development of sexual characters, modification of the voice, growth of hair on the body and of beard in the man, and development of the breasts in the woman. Also the following biological conditions: Development of the capacity for generation, appearance of menstruation, an arrest of the amount of carbonic acid eliminated in respiration and of urea in the urinary secretion, and, in the young man, an increase of vital capacity; growth of emotiveness, and development of new instinctive and affectional impulses.

The immediate consequences of these modifications lie in metabolism, the rapid disappearance of the circulation of albumin and salts, the temporary lessening of the total general resistance, which produces, in the psychical sphere, troubles of conduct and the moral life, all the graver if a preceding weakness from morbid heredity or acquired diseases has rendered the organism less resistant. The effects of the sexual impulses which awaken at this period and from lack of inhibitory power are dangerous, may lend its increment to the dangers and effects of other predisposing causes.

It is in virtue of these conditions that congenital morbid states acquire at this time a gravity and intensity previously lacking, and that from this age many dispositions that reflect themselves in later life take their rise.

Among the psychoses of puberty, hebephrenia may be regarded as specific. Its morbid manifestations and microscopical changes demonstrate that the cerebral cortex and the meninges are the seat of an anatomical morbid process. The symptoms of invasion tend to prove that the cause may be referred, with some probability, to a process of self-intoxication from troubles of the intestinal tract.

M. Voisin's Report.—These psychoses constitute the mental affections that develop from fourteen to twenty-two years of age, a period characterized by sexual maturity and the physical and intellectual development of the individual. Every variety of psychosis may show itself: hebephrenia, as a morbid entity, has no existence, and this term should be reserved for cases of dementia. The psychoses that develop at the beginning of the puerperal evolution are less grave than those that develop in the course, or at the termination, of puberty.

Hereditary predisposition is the predominating cause of these affections; it is the association of complete intellectual development with heredity that gives to the complaint its so-called hebephrenic stamp. Melancholia appears most often in the grave form of stupor, and may be accompanied with mysticism and masturbation.

Mania frequently assumes the characters of moria ["a variety of delirium characterized by imbecility, unreasonableness, or shallowness"], and presents also many impulsive characters. Previous dementia, or hebephrenia, occurs under a grave form, with stupor or catatonia, and a light form or simple precocious dementia, which must be distinguished from general paralysis and from spasmodic epileptic dementia.

Mental confusion presents a delirium of dreams having great analogy with alcoholic delirium; it characterizes the psychoses of self-intoxication, brought about by troubles of nutrition. A cure is attained in about half the cases, and is accompanied by retrogressive and progressive amnesia.

General juvenile paralysis is distinguished from that of the adult by the absence of grandiose ideas and its slower progress. The degenerative psychoses and the neuropsychoses are the most frequent, and reappear generally at adult age.

From a medicolegal point of view [French], no account need be taken of the subject's civil capacity, which does not exist until twenty-one years, while the criminal responsibility begins at sixteen years.

M. Ziehen's Report.—The hereditary taint determines at puberty a greater morbidity. Outside of this, anæmia, bodily and mental overstrain, acute infectious diseases, and sexual excesses play a part. Nearly all the known psychoses are met with at this time, but certain ones especially prevail and show special modifications in both their symptoms and their course. A psychosis special to puberty, and of frequent occurrence, has been erroneously spoken of; the only special one, hebephrenic dementia, furnishes but a small number of cases.

The most frequently observed are: cyclical insanity, mania, melancholia, acute hallucinatory paranoia, and insanities of hysterical or epileptic foundation, and outside of these, the following modifications: Exaggerated weakness of the affective troubles, a discordance between these troubles and mimetic reactions, some incoherence of delirious or normal ideation, the illogical, trivial, and fantastic character of the ideas of delirium, and a tendency to a cyclical course, or to a progressive dementia.

For these reasons, the prognosis in general is worse than that of post-puberal psychoses. There is nothing special in the treatment. Total confinement to bed is only admissible when there is pronounced exhaustion. Regular occupation, both physical and mental, regulated for every hour of the day, is important in most cases. The employment of narcotics should be restricted as much as possible. Great care must be exercised in choosing adult patients with whom pubescents are to be associated in a common ward.

A New Test for Bile.—Professor E. H. Bartley, M. D. (*American Druggist,* March 11th), says that the use of ferric chloride and hydrochloric acid as an oxidizing agent is well known, and is resorted to in the detection of indoxyl in the urine. The method of its use for this purpose is to add to the urine an equal volume of strong hydrochloric acid and then a few drops of the ordinary test solution of ferric chloride. The potassium indoxyl-sulphate is thus decomposed, and the indoxyl is oxidized to indigo blue. The indigo is dissolved out of the solution by shaking with about two cubic centimetres of chloroform, in which it is soluble. As the chloroform separates, it carries down the indigo and forms a blue indigo-chloroform layer at the bottom of the test tube.

If this same test is applied to a urine containing bile coloring matters, the solution assumes, on adding the ferric chloride, a beautiful emerald-green color. This green coloring matter is insoluble in chloroform, and hence does not interfere with the indican test. Bile and indican can therefore be tested for at the same time and in the same solution. The test was first observed by the author in examining fæces, and the test was made as follows: An alcoholic extract of the fæces was made and filtered clear. To this alcoholic solution hydrochloric acid was added and then a few drops of ferric chloride solution. An intense green color was immediately produced. This reaction has been tried upon a great many specimens of urine and no sample not containing bile has been found to give a green color. He believes it to be the best, the most characteristic, and the most delicate test we possess for the presence of bile in urine or fæces. He has not been able to find in the literature any mention of this process for the detection of bile, although it seems strange that it has not been mentioned, as the reagents are commonly used together in the test for indican.

Whistling Spells Following Brain Injury.—Dr. William Krauss (*Journal of Nervous and Mental Diseases,* January) describes the case of a Polish herdsman, twenty-seven years of age, weighing 230 pounds, who, some months previous to an accident, had suffered from apoplexy resulting in left hemiplegia. He was slowly regaining the use of his arm and leg, when he was struck by a train, and was found unconscious on the track with three scalp wounds. There was a depressed fracture of the skull three inches above and one inch behind the left ear. No other important injuries were found. He was immediately trephined and the depressed bone removed. It was found necessary to strap his arms, as he constantly tried to remove the bandages with his right arm or waved it up and down, not resting quietly. There was complete loss of control over the bladder and rectum, no increased temperature; pulse slightly lowered. He was put on milk diet and given stimulants in abundance.

About ten o'clock at night he began to whistle, not, however, the "popular songs of the day," but the whistle calls he was accustomed to use in calling or driving his flocks. He would continue whistling for about one minute, then would cease for five or ten minutes, and kept this up at regular intervals until he died, January 3, 1899, at 10.30 P. M. At no time was it possible to distinguish any melody. The sounds were of the same pitch and intensity and of the same character. They were audible throughout the ward and attracted the attention of patients and attendants. To the physicians in attendance it was a strange experience to hear these whistle calls coming from a patient in a state of unconsciousness. It was impossible to rouse the patient at any time before or after the accident, and he died, whistling a few minutes before death.

Fœtal Rhachitis.—Dr. F. Fede, director of the Clinical Institute for Diseases of Children of the Royal University of Naples, and his assistant, Dr. G. Finizio (*Revue mensuelle des maladies de l'enfance,* March), conclude from their investigations that fœtal rhachitis is very rare, which conclusion they consider established on a sound basis by their microscopical researches. From these they feel justified in stating that large fontanelles and widely separated sutures in the newly-born are not always indicative of rhachitism, and that in most cases they imply simply retarded ossification.

Original Communications.

CONGENITAL DISLOCATION OF THE SHOULDER, WITH REPORT OF TWO CASES OF DISLOCATION POSTERIORLY.

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(Concluded from page 445.)

One of the illustrations shown is that of a baby suffering from obstetrical paralysis. I exhibit it in this connection to show the almost exact similarity of the position of the paralyzed limb and of the arms in the cases of congenital dislocation of the shoulder. In these cases no operative measure is indicated. In my opinion, at least fifteen per cent. of the cases of so-called obstetrical paralysis can be proved to be instances of congenital dislocation, and can be greatly benefited by the operation I have described.

The prognosis in this dislocation is even better than in congenital dislocation of the hip.

Küster's case, operated upon before the days of antiseptic surgery, resulted fatally, from what reason he does not state. All of the other cases that I have been able to trace have been much benefited by the operation, and in nearly every instance the results have been brilliant. In Scudder's cases nothing was done; and, in these two of my own, the parents of the patients, having been repeatedly advised that the cases were incurable, are still loath to leave their children in the hospital for operative treatment.

The number of cases thus far reported as operated upon, with the names of the respective surgeons, are, so far as I am able to find:

Phelps, since April, 1895, four cases.
Eve, since August, 1895, one case.
Küster, one case, fatal result.
Stimson, one.
Post, one, 1881.
Gerster, one.
Schede, one.
Stone, one.

Gaillard's case was reduced without operation. Phelps has also had two cases of this sort, in infants, in which the reduction was performed under an anæsthetic, without resorting to the knife.

In those cases which are found reducible without operative procedure, the reduction can, so far as I have observed, be easily maintained by appropriate dressings of adhesive plaster. I can, however, readily see that, in cases where destruction of a part of the joint has occurred from disease, this might be difficult, as was the case with Gaillard's patient. Such cases should be operated upon. In stating the conclusions that I have drawn, I will say:

I. It is of the utmost importance to distinguish between cases of dislocation and true obstetrical paralysis.

II. The treatment of the former condition is immediate reduction; by manipulation if possible, otherwise, operative.

III. Every infant should be carefully examined at birth, for it is at this time that reduction is easiest performed.

IV. From the facts that a fracture of the glenoid cavity was found in three of Dr. Phelps's cases, and that the history of nearly all cases shows difficult labor, I am led to believe that these cases are not of paralytic origin, or due to non-development, as affirmed by Scudder, but

Fig. 12.—Patient suffering from true obstetrical paralysis. No operation indicated. Picture shows the similarity of this deformity to those of congenital dislocation.

are due to traction made in the axilla by the finger or vectis, or to the arm being caught in some unusual position and dislocated by the contraction of the uterus. Paralysis may be coincident, but it cannot be a primary factor in causing dislocation posteriorly.

V. The prognosis of the operative treatment is excellent. The earlier the operation the more hopeful the outlook.

FIG. 11.—A Röntgen picture of a case of congenital dislocation of the shoulder, afterward operated upon, in which a fragment of glenoid border was found attached to the capsule, demonstrating trauma as the cause of the deformity.

FIG. 13.—Third case of Phelps before operation.

FIG. 14.—Third case of Phelps after operation. Can place hand to mouth.

VI. Like congenital dislocation of the hip, these cases of the shoulder are little benefited by mechanical treatment.

In connection with the description of the operation here advocated for this deformity, I wish to present for your examination the new excavator of Dijon, which will be found almost indispensable in the process of cleaning out the glenoid cavity for the reception of the head of the humerus. It is also of value in the open operation for the reduction of congenital dislocation of the hip. The instrument is made in three sizes, and consists of a cylindrical steel tube, conical at one end, furnished with

FIG. 15.—Phelps's third case, patient viewed posteriorly (after operation).

cutting edges like the old-time pot auger used by carpenters. These instruments leave the glenoid cavity with perfectly smooth and regular edges.

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FIG. 16.—Compare this (third case of Phelps's operation) with the picture of Scudder's case. Intra-articular examination here found a fragment of the glenoid border imbedded in the capsule.

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THE PATHOLOGY OF INTRA-UTERINE DEATH.

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(Continued from page 500.)

Diseases of the Chorion.—The chorion and the amnion are essentially fœtal envelopes, and, before considering the various derangements of these membranes, a short description of their formation and relation may be desirable.

The chorion is the outermost of the fœtal membranes and is developed from the fusion of the zona pellucida, the false amnion, and the allantois, from which it derives its blood supply. When the ovum begins to form, the vitelline membrane becomes very much attenuated and gradually blends with the outer layers forming the future chorion. In the formation of the amnion there are two layers formed from the reduplication of the mesoblast and epiblast. The innermost of these, and the one which surrounds the embryo, is the *true amnion* and forms the *amniotic cavity.* The other is known as the false amnion, and lies adjacent to, and eventually becomes blended with, the internal surface of the zona pellucida. (Plate I, 1-6; and Fig. 1.) The chorion in an early period of gestation is covered over on its external surface with innumerable small cellular processes. These are the villi which soon become so important in the nourishment of the embryo. At first they cover the whole surface of the chorion. When, however, the young placenta begins to form, that part of the chorion which participates in its development takes on a greater activ-

ity, so far as the villi are concerned, but in that part that is not concerned in the formation of the placenta, the villi cease growing and eventually almost entirely disappear. (See Plate II, Figs. 1 and 2.)

In the human embryo, the umbilical vesicle is important during the earliest periods of development, as it is from this organ that the ovum derives its nourishment. When the allantois becomes developed, the umbilical vesicle retrogrades, and the allantois assumes the function of supplying the ovum with the necessary nutriment. This in turn is succeeded by the placenta as the nourishing medium.

At birth it is difficult to distinguish these various membranes from one another. They are intimately blended together by the gradual pressure of the amniotic fluid. This fluid gradually increases in quantity, and by about the end of the sixth month it has pressed the amniotic sac everywhere against the chorion. The chorion in turn presses against the decidua reflexa, and this decidua, from the constant and increasing pressure, is, in turn, forced against the decidua vera. By the end of gestation all these membranes are united into one.

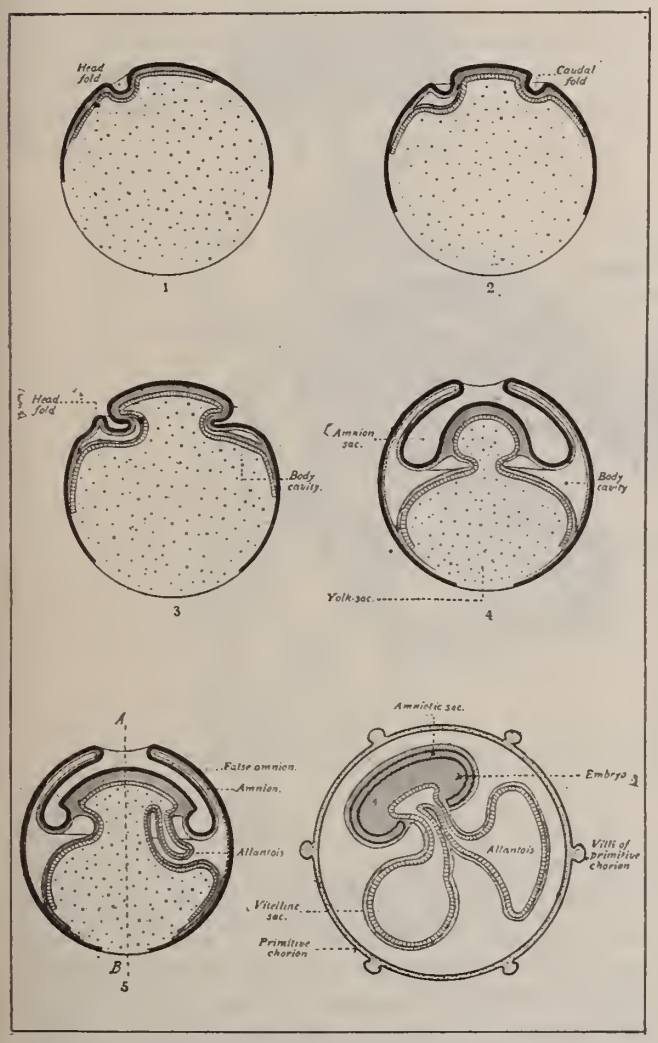

PLATE I.—Diagrams illustrating the formation of the mammalian fœtal membranes (modified from Roule).

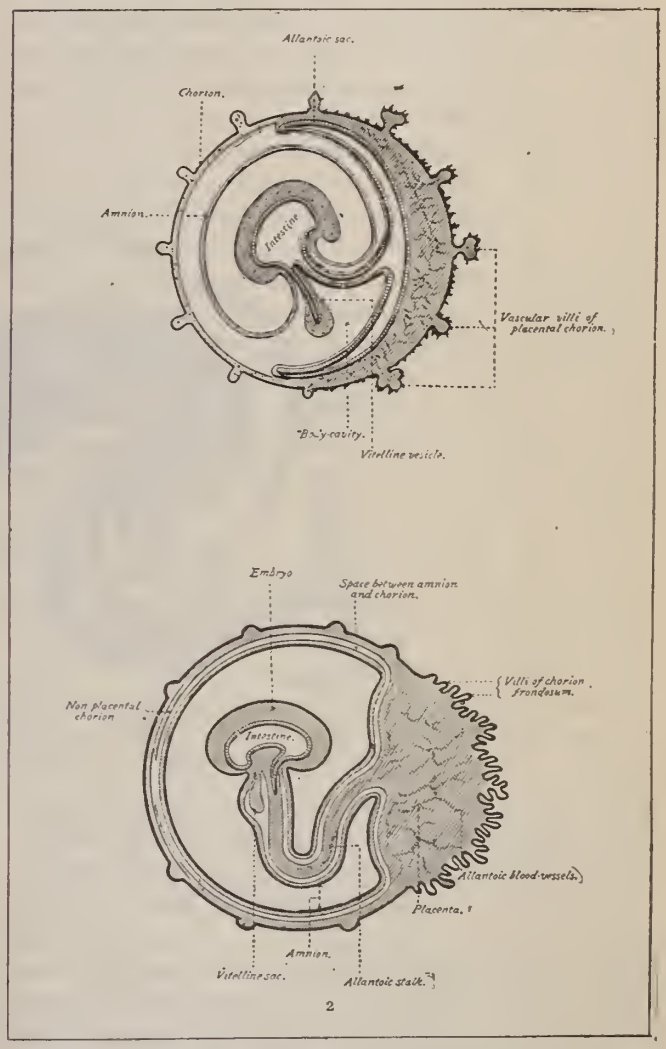

PLATE II.—Diagrams illustrating the later stages of the formation of the mammalian fœtal membranes (modified from Roule).

The chorion occasionally takes on a peculiar pathological condition, and one that has received considerable attention. In this affection, and at varying intervals during pregnancy, small cysts are found coming away from the uterus. It is usually called hydatid, cystic, or vesicular degeneration. Just how frequent this disease is, we are not in a position to say. Judging from reports, it is more common than is generally believed. Most physicians who have a large midwifery practice have encountered it. There are various stages and degrees of this affection. Sometimes the condition may pass unnoticed. As the cysts come down the uterus they may be so pressed upon that they rupture and their contents alone escape. Between this, and the expulsion of so large a quantity of cysts as to fill a large basin, there are all degrees. The size of these vesicles varies from that of a pea to that of a large grape. In appearance they resemble a bunch of grapes, although each vesicle does not possess an independent pedicle; occasionally they are found attached to one another, but some of them at times have independent stems. (See Fig. 2 on p. 535.) The name uterine hydatids was given to this discharge

a long time ago under the belief that they were genuine hydatids. We now know that they are not echinococcus cysts, but the name still clings to them. By many of the older writers these bunches of enlarged villi were taken for small ova, and strange opinions of them were frequently entertained. Paré, who was reckoned one of the eminent authorities of his day, was one of these. In his *Surgery* he relates that the Countess Margaret, daughter of Florent IV, on Good Friday of the year 1276, gave birth to 365 immature children. Of this number, 182 were said to be boys, 182 were girls, and the odd one was an hermaphrodite. They were all solemnly baptized, the boys by the name of John and the girls Elizabeth. What name was given to the supposed hermaphrodite is not recorded. For a long time this delusion was accepted, but there is now no doubt that these immature infants were nothing more than 365 large cysts of a diseased chorion.

No disease of the fœtal membranes has received so much attention as those of the chorion, and many excellent monographs have been published upon the subject. All the modern authorities seem to be in unison as to the morbid pathological processes that give rise to this peculiar disease. They regard it as arising from some kind of derangement of the villi. Occasionally, even now, a writer is found to lapse back to the old hydatid theory, and to regard the bladder-like cysts of the chorion as true acephalocysts; but it has been clearly demonstrated that these cysts possess none of the characteristic hooklets of the true hydatids. For a time after the hydatid theory of these growths was exploded, pathologists regarded these minute structures as due to the accumulation of cystic fluid within the villi. It was Velpeau who first maintained that they should not be considered as genuine vesicles. His opinion of them was that they were enlarged chorionic villi, and that their terminal extremities became swollen and club-shaped by distention from fluid. Others clung to the theory that there was a true hypertrophy of the main elements of the villi with œdema of the terminal bulbs. So it remained until the talented and celebrated Virchow investigated the subject with characteristic energy and accuracy. He announced that the difficulty that had existed in coming to accurate deductions on this important question was owing to lack of information as to the real character of a normal chorionic villus. He pointed out that these villi were composed of two entirely different parts—an outer covering, consisting of an epithelial covering, and a body which was composed of mucous tissue. In discussing this subject, it must be remembered that during the development of these villi, and for a certain time afterward, they are not supplied with blood-vessels. After they mature, small blood-vessels zigzag their way in and around them like webs. It is probable that at no time does any important change take place in the epithelium. It is in the body of these villi that pathological changes take place. As already stated, this is composed of mucus, and very probably this mucus will be found to be similar to that in the gelatin of Wharton in the cord. Priestley's investigations confirm the theories advocated by Virchow. He pointed out that these cysts were not mere dropsical swellings of the villi, but that the secretion that caused the distention came from very thin-walled cells in the centre of the villi. The results of a minute microscopic examination are here reproduced, in his own words: "Placing a terminal branch under the microscope, which seemed to the naked eye nearest to the normal condition, it was seen to be enveloped by a granular covering, probably derived from the altered decidua; the club-shaped extremities were observed to be distended with large nucleated cells, and bearing little resemblance to the small and more uniform cellules composing a terminal villus in a healthy state. By compression the envelope bounding the villus could be ruptured and gave egress to the cells. The fully developed cysts had two coats, like a normal

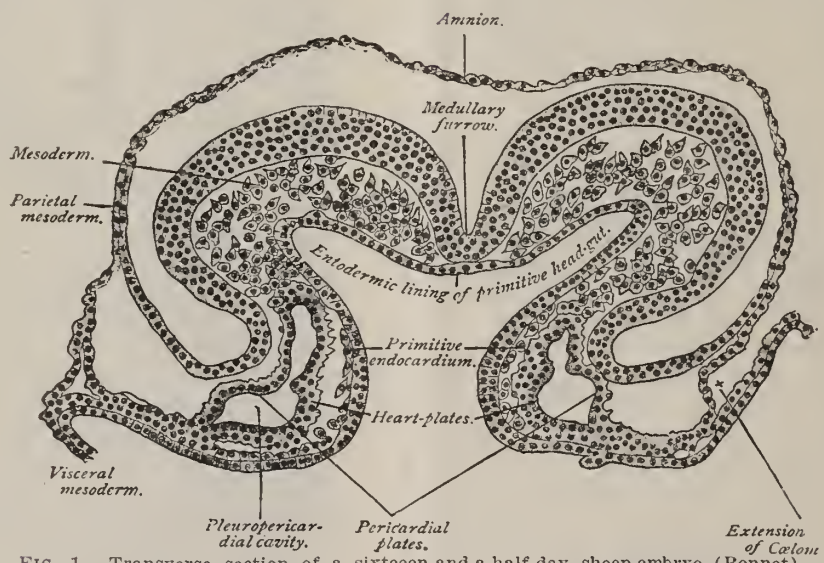

FIG. 1.—Transverse section of a sixteen-and-a-half-day sheep-embryo (Bonnet).

villus, the external epithelial, the internal delicately fibrous, but firm and dense. An incision being made through these, what appeared to be a viscous or gelatinous fluid escaped from the aperture, and this was found to be contained in large, transparent cells, with walls of extreme tenuity, assuming the polyhedral form from the pressure to which they had been subjected. The entire contents had much the appearance of the vitreous humor of the eye, which has transparent partitions running across, separating the fluid into compartments; the presence of a nucleus, however, in each compartment clearly proved it to consist of largely developed thin-

FIG. 2.—A portion of cystic chorion as seen with the naked eye. The arrangement of the vesicles is seen and also their attachments to the chorion membrane (Ercolani).

walled cells. The narrow stems uniting the cysts were fibrous, with cellular covering, and sometimes enclosed a small vessel full of blood. Fat granules were copiously deposited in the texture of both stems and vesicles."

Ercolani, whose researches on this subject are well known, disagrees entirely with both Virchow and Priestley as to the pathology of cystic chorion. He does not believe in its myxomatous origin and he disapproves of the appellation. He does admit, however, that he coincides absolutely with those who assert that a villus is composed of two parts, but he believes that the parenchymatous, or internal portion, loses its outer, or epithelial, covering just so soon as the villi become embedded in the decidua. From some perversion or pathological condition, this epithelial covering of these villi may not disappear, but undergo certain changes and ultimately develop into cystic growths. These are interesting speculations, but for our present purpose we shall not pursue them further.

The degenerative process in these diseased villi generally begins in an early period of pregnancy; usually before the placenta has begun to form. In such cases the whole superficies of the chorion participates in the diseased condition. When the onset of the affection is delayed, the disease is then limited to that part of the chorion which takes part in the formation of the placenta. The epithelium remains unchanged, except in being increased in quantity. It is in the connective tissue stroma that the earliest manifestations of the affection appear first. The small spaces that are normally found here gradually become increased in size from an accumulation of fluid. This distention continues until the villi are so thinned out that nothing remains but their epithelial covering filled with fluid. By this time the chorion will have lost the greater part of its blood-vessels, but nutrition may be maintained to a certain extent by its connection with the decidua. Sometimes this attachment to the decidua is so firm that the mass is intimately adherent to the uterine wall. They have even been known to penetrate well into the wall of the uterus. The disease is essentially one of pregnancy, and there are no grounds for asserting that it may occur independently of conception, as has several times been maintained. There are two points in this connection that should steadfastly be borne in mind. The first is, that very often these diseased villi do not come away at once. Detached portions may be passed from time to time for an almost indefinite period. In the case of a woman becoming a widow while these vesicles are forming and coming away at intervals, it can readily be understood how unjust suspicion might reflect upon her chastity. Again, it should not be forgotten that genuine hydatids may affect the substance of the uterus and be expelled by the vagina. The heads and hooklets of the echinococci can be discovered by the microscope, while the hydatids of the chorion possess no such heads or hooks.

There are so many varieties in degree in the different stages of this disease that it is extremely difficult to make accurate classifications. This being so, it is not to be wondered at that the different appearance of the mass expelled has given rise to so much confusion. The vesicles may be so small as to be no larger than the head of a pin, or they may be as large as a cherry. The fluid may be small in amount and quite clear. In such instances it may be impossible to see the cyst wall. They burst their contents, which come dribbling away, and the thin wall may remain in the uterus for an indefinite time, or become dissolved. From clear fluid they may vary in all shades of color up to dark brown or red. When clear or of a pellucid consistency, these cysts are frequently called "vesicular moles." There may be en-

tangled up with the cyst a certain amount of the deciduous membrane and organized clot, which gives the mass a fleshy appearance. This is called a "carneous mole," but should not be confused with the carneous mole so frequently found associated with discased conditions of the decidua.

The symptoms accompanying cystic chorion are not well defined or constant. In the beginning there are no symptoms of sufficient importance to call for medical aid. There may be vague and uncertain ailments that are unusual. As pregnancy progresses, it does not continue in a normal course. Reflex disturbances may be more prominent and vomiting quite persistent. When the vesicles increase in size there will be a proportionate enlargement of the uterus. This, however, should not be considered as diagnostic, for other conditions may cause the uterus to be larger in size than normal. The first sign of any practical importance will be the discharge of a watery or sanguineous fluid from the womb. This is frequently clear, but is often of the consistence and color of currant juice. Parts of the cysts can occasionally be found mixed with the discharge, and this is the only positive diagnostic proof of the disease. On making very careful examination of the uterus, there may be discovered an irregular bulging or a soft or boggy feeling. When cystic disease begins it is generally at the time when the young placenta is beginning to form and the villi of the chorion are getting ready to dip into its sinuses. Before this time, the villi over the whole surface of the decidua are of about equal growth, and all may be equally affected. There would then be a more luxuriant growth of vesicles. After the beginning of the placenta, the villi of that part of the chorion which is not concerned in the development of the placenta cease to mature further and gradually disappear, although by a microscopic examination their presence can be discriminated up to a late period of gestation. The importance of recognizing this peculiar action of the villi lies in the fact that, when the disease does not begin until after the third month, it is almost certain to be limited to the region of the placenta. Should it commence previously to this time, the villi, scattered over the whole surface, take on increased activity and the disease becomes general. A modified form of this condition occurs when localized areas of the chorion become so involved that there may not be sufficient disturbance to the nutrition to interfere with the vitality of the fœtus, and pregnancy advances to the full term of gestation uninterrupted. There are many instances on record where fœtuses have been born alive but the placentæ have been in a state of partial degeneration due to the villi of the chorion being first involved. Rarer instances may be found recorded through medical literature where twin fœtuses have perished, and a third child living has been born with its particular placenta in a perfectly healthy condition. So far as the subject affects us here, the practical question is whether the cystic disease of the chorion antedates the death of the embryo, or whether the degeneration follows as a result of the death of the embryo. The general consensus of authorities maintains that the degenerative process is the first to be established, and that this so vitiates the elements necessary for the nutrition of the fœtus as to bring about its death and expulsion. The remote cause of the disease is a difficult one to fathom. Many interesting opinions have from time to time been advanced upon this subject. Virchow, who has given this matter a great deal of attention, believes that the remote cause, or starting point, lies in the decidua. He asserts that the endometrium, previously to pregnancy, becomes inflamed and thickened to such an extent that the chorionic villi are incapable of becoming properly embedded in its substance. The villi in such a case cannot properly take root, and the fœtus does not receive sufficient nourishment for its normal growth and full development.

In parting from this subject we again emphasize the point that cystic chorion may be retained in the uterus for an indefinite length of time without giving rise to any important symptoms, and they then may give occasion for suspicion as to the chastity of these women. Dr. McClintock calls attention to this fact, and says that "Hydatids may be retained in the uterus for many months, or even years, or a portion only may be expelled, and the residue may throw out a fresh crop of vesicles to be discharged at a future occasion."

Great caution should be taken in curetting the uterus after it has retained these vesicles for a time. They have the faculty of penetrating into its muscular substance and of making it so soft and friable that a sharp curette is liable to penetrate through into the peritoneal cavity if the operation is improperly performed.

Morbid Conditions of the Amnion.—The amnion is the innermost of the true fœtal membranes. Its formation is intimately associated with that of the chorion and there is a close interdependence between them. When describing the anatomy of the chorion the method of development of the amnion was referred to. In its earliest days an embryo resembles in shape a canoe turned upside down, and consists of a longitudinal axis, a neural canal, and an alimentary canal. At either extremity a small crescentic depression takes place, caused by a puckering of the blastoderm. From these depressions the somatopleure, which is lined by epiblast, gradually arches up from the two extremities and sides of the embryo. By degrees these two folds approach each other and coalesce as they converge. In this manner the amnion is formed. At first it lies in close contact with the embryo, but, as development advances, it gradually becomes distended with fluid. This fluid in appearance is clear and contains traces of albumin, urea, and grape sugar. It increases in quantity during the first six months of pregnancy and then gradually diminishes. The source of the liquor amnii has long been a debatable question and conflicting views have been

held in regard to it. The older writers maintained that it was derived from the mother and was the result of exhalation. Recent authorities prefer the theory that it is an exudation from both the fœtal and maternal blood-vessels. In the later months, when the bladder is fully formed, it is supposed that the urine of the fœtus is evacuated into the amnionic cavity. This is probably correct, for cases have been recorded, by perfectly reliable authorities, in which the death of the fœtus has occurred *in utero* from rupture of the bladder as a consequence of overdistention when there was an imperforate urethra. There are remarkable variations in the quantity that may be present. This is constantly demonstrated during normal labor. Occasionally the amount of fluid is so slight as to be scarcely noticed. This constitutes the "dry labor" of the laity. Its function is purely mechanical. It serves as a protection against concussions or injuries during gestation; during the early stages of labor, by gentle and uniform pressure it aids very materially in opening the mouth of the womb. Although so wonderfully protected, the amnion does not always escape from the effects of injuries. Sudden jumps, falls, blows, or knocks may be sufficient to cause its detachment or to rupture the delicate membrane and cause the expulsion of the fœtus. It would seem that this may occur more readily at certain times than at others. In the early weeks of pregnancy we have already seen that extravasations are quite frequent in the decidual membrane; occasionally they are so sudden and violent as to crush through both the chorion and amnion into the amnionic cavity. The amnion is then torn from its moorings, and the result is the inevitable destruction of the fœtus. The earlier in the stage of pregnancy such an extravasation takes place the more liable is the amnion to be affected. Its structures are then frail and delicate, and any unusual local disturbance is quite sufficient to cause its detachment or rupture. What may be sufficient to cause such a disaster in one instance may not in another. This is to be explained by the difference of texture and durability in different membranes, for they are not all of a uniform thickness. Sometimes we find the walls of the amnion so thin that the least pressure or uterine contraction will cause them to give way; on the other hand, they are sometimes found so tough and durable as to interfere with the progress of labor and they may readily resist violent interference. The question as to whether a true inflammation of the amnion can take place is variously estimated. The general consensus of opinion appears to be in the negative. It is true that after peritonitis, kicks, and blows, the blood-vessels of the amnion are found to be congested and tortuous, but it does not therefore necessarily follow that an inflammation has taken place.

The pathological condition that most frequently affects the amnion, and the one that is most familiar to us, is that of hydramnios. It is characterized by a superabundance of liquor amnii. Just what constitutes a normal secretion of liquor amnii is difficult to determine in many instances. Generally speaking, it is considered an excess when the amount is over two quarts. The exact cause of hydramnios is not definitely understood. Some authorities attribute the condition to an excessive secretion on the part of the amnion, while others maintain that in all probability it is due to an inflammation of that membrane. Various other opinions have been promulgated as to its ætiology, but none of them are considered as adding much to our definite knowledge of this peculiar subject. There is a probability amounting almost to a certainty that it is of fœtal origin. There does not appear to be found any deviation from health on the part of the mother in this disease. That it is of local origin is inferred from the fact that, when hydramnios is present in twin pregnancies, one ovum only is affected. An impediment to the fœtal circulation through the heart or liver would seem to be the most probable cause. Congenital defects in the heart or syphilitic conditions of the liver would lead to a passive congestion that might give rise to mechanical obstruction sufficient to cause the excessive secretion of the liquor amnii. So far as the mother is concerned, its effects are mainly mechanical. It is usually toward the last months of pregnancy that the disease manifests itself. Gradually the abdomen begins to enlarge at a greater rate than in ordinary pregnancy and the mother begins to think that she is to have twins or triplets. The distress is frequently very troublesome. The enlarged uterus so distends the abdomen as to press the diaphragm upwards to such an extent as to interfere seriously with respiration.

The effect upon the child is generally serious. It is ill-developed, and, should it survive until the period of birth, it is too feeble to survive for long. Such children are often affected with dropsy, hydrocephalus, or other congenital defects, indicating that the condition is of fœtal origin.

(To be continued.)

THE COMPARATIVE PATHOLOGY OF THE JEWS.

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The influence of race and nationality on the susceptibility, and comparative (because we know of no absolute) immunity to the various diseases that afflict mankind, is at present well recognized by the medical profession. The physicians of the United States have especially studied the comparative pathology of the negro race, owing to the fact that these people are to be found in relatively great numbers, particularly in the Southern States. The total number of Jews in the United States at present is estimated to be 1,058,135 (1); and it is quite surprising that, on consulting the most important

medical journals published in the United States, I have been unable to find any article on the comparative pathology of these people, excepting a few scattered notes and remarks. The literature on this subject in Europe is also very meagre, and many difficulties have been met with while collecting the materials for the following paper.

All over Europe, wherever tested, the Jews have been found, in spite of their frail physical aspect, to live longer than the Christians. Thus we find that in Budapest, Hungary, the average duration of life of the Christian population in the city is twenty-six years; that of the Jews, thirty-seven years. The Christians between the ages of one and fifty have a death rate of 14 per cent., the Jews one of only 10 per cent. Among the Christian population 50 per cent. of all new-born children will reach the age of thirty years; from the Jewish population, 50 per cent. will reach the age of fifty years. Eight per cent. of Jews reach the age of from eighty-five to ninety years, while only 2.4 per cent. of the Christians reach this age. Twelve per cent. of the Jewish population have reached the age of from sixty to seventy years, while only 9.8 per cent. of Christians have reached this age (2).

In Prussia, according to Mulhall (3), the death rate has been found to be yearly per 1,000 population:

TABLE I.

	Christians.		Jews.	
Years.	*Males.*	*Females.*	*Males.*	*Females.*
1822—40.....	28.7	27.0	22.1	19.1
1841—66.....	30.2	28.2	19.8	17.9

In Austria the number of births among the Jews has been calculated to exceed that of the deaths in 30.80 per cent., and among the rest of the population as only 28.30 per cent. (4).

In Amsterdam the mortality of children under five years of age has been found to be: among Christians, 11.52 per cent.; among the Jews, only 8.85 per cent. The death rate of adults, of the ages between twenty and fifty years, for Christians, 5.98 per cent.; for Jews, only 3.06 per cent. (5).

Table II shows the relation of births and deaths among Jews. In Algiers we find that in 1856 there were (6):

TABLE II.

	Europeans.	*Mussulmans.*	*Jews.*
Births.....	1,234	331	211
Deaths.....	1,553	514	187

The excess of births over deaths among the Jews is quite evident.

In Roumania, where the Jews are found to be in numbers almost equal to that of the Christians, we find that (7) during three years the births and deaths were as in Table III:

TABLE III.

	Births.		Deaths.	
Years.	*Jews.*	*Orthodox.*	*Jews.*	*Orthodox.*
1884....	9,729	185,000	4,626	114,300
1885....	9,542	197,000	5,036	114,000
1886....	9,458	196,000	5,194	124,500

We see from these figures, that in 1884 the proportion of births among the Jews was 2.10 to one death; while the births among Christians were only 1.62 to one death. Almost a similar proportion can be reduced from the other figures given above.

We thus see that, almost all over Europe, the Jews enjoy an unprecedented tenacity of life, showing a lower death rate and an excess of the number of births over deaths. Another important fact is that, almost everywhere, the Jews, at present, show a proportionately smaller marriage rate, and produce relatively a less number of children to each marriage than Christians. This fact goes to prove that it is his longevity that gives the Jew his unprecedented tenacity of life over that of the Christians, and not the number of marriages and births. Thus, in Prussia, the Jewish population, from 1822 to 1840, increased 34.5 per cent., while, in the same lapse of time, the Christians augmented only 28 per cent., increase by immigration being about the same. There was one birth to every twenty-eight Jews, one to every twenty-five Christians; one marriage among every 139 Jews, one among 112 Christians; one death among forty Jews, one in thirty-four Christians (8).

At Furth, an average for twenty-five years gives one marriage to every 128 Christians, while Jews number 149 to one marriage. Among Christians it required but twenty-nine inhabitants to recruit one birth, while among Jews it required thirty-five (9).

For the United States we find that Billings states, in an analysis of the vital statistics of 10,618 Jewish families living in the United States, that there occurred during five years 6,038 births. "The total average birth rate for the whole population," as Dr. Billings remarks (10), "was 20.81 per 1,000, which is at least 10 per 1,000 lower than the average birth rate among the general population (of the United States). A fairer means of comparison, however, is the ratio of births with the reference to the number of women of child-bearing ages present, viz., those between fifteen and forty-nine years of age, inclusive." As Billings shows by statistics, "this rate was 72.87 per 1,000. The corresponding rate in 1880 in Massachusetts was 82.9, and in Rhode Island 86. The birth rate among the Jews," continues Dr. Billings, "is therefore decidedly lower than it is among the average population." There are similar statistics in many European countries where large numbers of Jews live. "To make up for this smaller number of births," says A. Leroy-Beaulieu (11), "they lose almost everywhere a perceptibly smaller number of children by deaths. They bring fewer children into the world, but they bring more of them to maturity. It would seem as if, with their characteristic cleverness at calculations, they had

instinctively solved the difficult problem of population in the manner most advantageous to themselves and most satisfactory to the economists."

Dr. Stallard, in his work on *London Pauperism,* states that the mortality among Jewish children from one to five years of age is only 10 per cent., while among the Christians it is 14 per cent. The average duration of life of the Christians in London is thirty-seven years; of the Jews, forty-nine years.

In the United States the Jews show a similar unprecedented tenacity of life. The reports on vital statistics from the eleventh census prove conclusively that the American Jews are not behind their European brethren in their resistance to death.

W. L. Ripley, considering this subject, says that the tenacity of life in the Jew "far exceeds, especially in the United States, that of any other known people. This we may illustrate by the following example: Suppose two groups of one hundred infants each, one Jewish, one of average American parentage (Massachusetts), to be born on the same day. In spite of all the disparity of social conditions in favor of the latter, the chances, determined by statistical means, are that one half of the Americans will die within forty-seven years; while the first half of the Jews will not succumb to disease or accident before the expiration of seventy-one years. The death rate is really but little over half that of the average American population. This holds good in infancy and in middle age" (12).

On consulting the *Report on Vital Statistics of the Eleventh Census,* prepared by Dr. John S. Billings, we find that the population in 1890, during the census year in New York city, contained 334,725 Americans, 55,572 English and Welsh, 399,348 Irish, 19,627 Scotch, 16,239 French, 403,784 Germans, 80,235 Russians and Poles (mostly Jews), 9,647 Canadians, 13,311 Scandinavians, 15,555 Hungarians, 12,287 Bohemians, 54,334 Italians, and 74,963 other foreigners or persons of unknown race. We see from these figures that New York is unsurpassed by any other city in the world to show us the death rates of the Jews as compared with other nations.

In Table IV, taken from the *Report of Vital Statistics of New York City,* the death rate per 1,000 of the population during six years ending May 31, 1890, is clearly shown, with distinction of the birthplaces of mothers. The birthplace of the mother is the best means at our command for the indication of the probable race of a given individual.

TABLE IV.

MORTALITY PER 1,000 POPULATION.

Birthplace of mother.	*All ages.*	*Under 15 years.*	*15 Years and over.*
United States.....	32.43	54.01	15.91
England and Wales....	27.67	50.53	20.78
Ireland.....	32.51	50.87	28.01
France.....	23.28	47.01	17.86
Germany.....	24.27	46.97	17.04
Russia and Poland.....	14.85	28.67	6.21
Hungary.....	22.43	47.21	8.45
Bohemia.....	43.57	82.57	20.31
Italy.....	35.29	76.41	12.27

From this table it is seen that the death rate of those whose mothers were born in Russia and Poland is lower than that of almost any other nationality. These Russians and Poles were nearly all Jews, living in poverty, and overcrowding in packed tenements of the lower East Side of the city. Moreover, their low death rate, as Dr. Billings states, does not fully appear in these figures, because a considerable number of those whose mothers were born in Hungary and Germany are also Jews with low death rates. If it were possible to separate them, the death rates of the Germans and Hungarians would stand at much higher figures.

Then, again, there were among those registered as Russians and Poles a certain number of non-Jews, especially of the Poles. If we could separate these non-Jewish Poles in a separate group, the mortality of the Jews would be much lower.

This can be done with a fair degree of accuracy by observing the death rates in the districts in New York city the population of which consists mostly of Russian and Polish Jews. The most important of these districts is the Tenth ward, which had, at the time of the eleventh census, a total population of 57,596, the great majority of whom consisted of Jews from Russia and Poland. It is also important to note that this was also the most densely populated ward in the city, the average number of persons to an acre being 543.36, with 38.50 persons to each dwelling. This ward is divided into two sanitary districts, "A" and "B." The comparative death rates of the various nationalities living in these districts can be seen from Table V:

TABLE V.

DEATH RATES PER 1,000 PERSONS WHOSE MOTHERS WERE BORN IN:

AREAS.	UNITED STATES (WHITE).		IRELAND.		GERMANY.		RUSSIA AND POLAND.		OTHER FOREIGN COUNTRIES.	
	Under 15 years...	*15 Years and over*	*Under 15 years...*	*15 Years and over.*	*Under 15 years...*	*15 Years and over.*	*Under 15 years...*	*15 Years and over.*	*Under 15 years...*	*15 Years and over.*
The City.....	54.01	15.91	50.87	28.01	46.97	17.04	28.67	6.21	40.68	13.00
District A.....	136.73	43.57	103.88	63.57	74.21	37.25	31.94	6.18	73.30	14.26
District B.....	77.52	23.37	98.71	51.22	60.36	23.36	26.36	4.39	30.20	6.86

From this table we see clearly that those whose mothers were born in Russia and Poland, and who were almost exclusively Jews, have the lowest death rate; and that, while the overcrowding in tenements and unsanitary conditions had a great influence in raising the death rates of the non-Jewish population of this ward in comparison with that of their average in the city, the Jewish death rate was almost unaffected. This is another proof of the comparative power of resistance to the noxious effects of diseases, and of the great tenacity of life of the Jews.

We arrive at the same conclusion when we study the report of the census in New York in the Seventh and Thirteenth wards, which is well depicted in Table VI, compiled by Hoffman (13), which is here appended.

Table showing the death rates per 1,000 population in the Seventh, Tenth, and Thirteenth wards of New York city, 1890, by birth place of mother:

TABLE VI.

Ages.	*Total.*	*United States (includes colored).*	*Ireland.*	*Germany.*	*Russia and Poland (mostly Jews).*
Total	26.25	45.18	36.04	22.14	16.71
Under 15 years	41.28	62.25	40.71	30.38	32.31
15 to 25 years	7.55	9.43	15.15	7.14	2.53
25 to 65 years	21.64	25.92	39.51	21.20	7.99
65 years and over	104.72	105.96	120.92	88.51	84.51

But while the unsanitary conditions, poverty, and want did not materially increase the death rates of the Jews living in New York, the death rate of the Jews in the country is decidedly lower than that of those in the city. Thus we find in an analysis of the vital statistics of 10,618 Jewish families, including 60,630 persons living in the various parts of the United States, who were, in the average, in a better economic condition, that they have a death rate of only 7.11 per 1,000 (14), as against 14.85 per 1,000 of the Russian and Polish Jews in New York, and 16.71 of those living in the Seventh, Tenth, and Thirteenth wards of New York.

On carefully considering the above facts and figures, we are forced to agree with W. L. Ripley, that the Jews show an "unprecedented tenacity of life." This is more forcibly depicted by Dr. John S. Billings in his *Report on the Vital Statistics of the Jews in the United States* (15) by a table of the expectation of life of the Jews in the United States, as compared with that for England and the average American population of Massachusetts. From that table we find that a young Jewish child of five years would have, on an average, about sixty-two years more to live; the average Americans of Massachusetts, only fifty-three years; a Jew at the age of twenty-five would have, on an average, forty-five more years to live; an American, only thirty-nine years, etc.

The experience of European observers about the low death rate of the Jews, as compared with that of non-Jews, is thus fairly well sustained by the United States census. It is only surprising that very few physicians of those who practise among these people are aware of this fact.

Dr. Glatter (16), the director of the statistical bureau of Vienna, gives the following table (VII) illustrating the relative frequency of disease among different races in the same locality:

TABLE VII.

	Number ill.	*Number to 1,000 Inhabitants.*
Magyars	6,034	534
Germans	3,806	223
Slavonians	1,522	182
Servians	252	28
Jews	1,540	32

These figures show that the Jews are relatively less liable to be attacked by disease.

When we turn again to the causes of death among the Jews, we find that the most dangerous diseases, as tuberculosis, pneumonia, nephritis, typhoid, malaria, etc. (except diabetes), claim a proportionately smaller number of victims from among the Jews than from among non-Jews. The testimony of many European physicians proves, also, that most of the epidemic diseases kill, proportionately, a smaller number of Jews than of non-Jews. Thus the mortality of children from small-pox in Posen during twenty-six years was: Catholics, 3.13 per cent.; Protestants, 2.26 per cent.; Jews, only 0.9 per cent. (17).

This may be due to the fact that the Jews submit more readily to vaccination than non-Jews (as can be readily seen even in New York, where they flock to the health board for that purpose proportionately more frequently than Christians); but on consulting the reports of epidemics of other diseases we arrive to almost the same results. For instance, Tschudi, in speaking of the plague in 1346, says that this disease did not affect the Jews of any country. Fracastor mentions the fact that the Jews escaped completely the epidemic of typhus of 1505. Rau mentions the same immunity from typhus observed at Langeons in 1824. Ramazzini insisted on the immunity of Jews from the intermittent fevers observed in Rome in 1691. Degner says that the Jews escaped, in 1736, the epidemic of dysentery of Nimegue. Michael Levy remarks that this immunity was manifest at the same time in the French and in the Israelites (18).

During the epidemic of cholera in Budapest, in 1851, there was a mortality of 1.85 per cent. among the Christian population, while the Jews succumbed only to the extent of 0.257 per cent.—*i. e.*, seven times less (19); a writer in the *Revue scientifique* (20) states that during the epidemic of cholera in London, in the 'seventies, the Jews remained almost not at all affected. Again, in Algiers, notwithstanding the fact that the Jews are crowded in small and dark dwellings, often in basements, they still are more resistant to the effects of contagious diseases than non-Jews, as can be seen from the follow-

ing figures (21). During the epidemic of cholera the mortality was found to be as in Table VIII:

TABLE VIII.

MORTALITY PER 1,000 POPULATION DURING THE CHOLERA EPIDEMIC IN ALGIERS:

	1844.	*1845.*
Europeans	42.9	45.5
Mussulmans	32.4	40.8
Jews	21.6	36.1

This peculiar resistance of the Jews to the noxious effects of contagious disease has been noted already in the middle ages, especially during the great epidemics in Europe of the plague known then as the "Black Death." At that time they suffered severely, because of the fact that they were affected by the pestilence to a less degree and had a proportionately smaller mortality than the Christians. The Jews were accused of being the special emissaries of Satan in causing the plague; it was said that their immunity was due to a special protection by Satan as a compensation for the services they rendered him by their wholesale poisoning of the wells; the use of poisoned water was thought the cause of the Christians being attacked by plague. By torturing and murdering the Jews, and especially by confiscating their property, it was thought that the Almighty might be propitiated, the terrible scourge driven from good Christian countries, and Satan thwarted. As a result of this, hundreds of thousands of Jews were burned or otherwise killed. The plague disappeared in due time—of course only after killing 25,000,000, a quarter of the population of Europe at that period.

Such immunity of the Jews to contagious diseases is not observed at the present time; during the late epidemic of cholera in 1892-1894, in Russia, it has been observed that the Jews were no more spared by the pestilence than their non-Jewish neighbors, and that in some cities the Jews were even more affected than the Christians. But the percentage of deaths from a given number of cases has, as a rule, been smaller among the Jews than among non-Jews. Thus, Dr. Barazhnikoff reported to the St. Petersburg Medical Society, in 1894, that, during the epidemic of cholera in the government Mogileff, the morbidity among the Jews was greater, and the disease, as a rule, ran a severer course, than among the Christians. But the percentage of mortality was smaller among the Jews. He adds that the fact must not be forgotten that the Jews in that locality are more intelligent than the Christians and take more care of their health, although they are generally poorer (22).

Turning now to the causes of death among the Jews in the United States, we find that the Jews show a smaller mortality than the Christians from the most formidable diseases, as tuberculosis, pneumonia, malaria, typhoid, etc. Thus, in the *Report on Vital Statistics of the Eleventh Census,* we find that in New York city the death rates from consumption during the six years ending May 31, 1890, were, for each 100,000 of population of each of the following nationalities:

Colored, 744.4; mothers born in Ireland, 645.73; in Bohemia, 499.13; Scotland, 384.12; Scandinavia, 357.00; Canada, 352.32; Germany, 328.80; France, 324.98; England and Wales, 322.50; Italy, 233.85; United States (white), 205.14; Hungary (mostly Jews), 155.05; Russia and Poland (almost all Jews), 98.21. These figures show us that the Jews in New York die from consumption about seven times less than the negroes, six times less than the Irish, five times less than the Bohemians, etc. In the analysis of the vital statistics of 10,000 Jewish families by Dr. J. S. Billings, referred to above, we find that the death rate from consumption in 1,000 total deaths among these Jews was, for males 36.57, for females 34.02, while that of the United States (1880) was 108.79 for males and 146.12 for females, and of Massachusetts (1888), for males 129.22, and 146.97 for females (23). These figures, again, show that the general population of the United States suffers more than three times as much from consumption as the Jews, and that the population of Massachusetts suffers nearly four times more than the Jews. The best proof as to the low death rate from tuberculosis among Jews, however, can be found, on taking the vital statistics for the six years ending May 31, 1890, in the most densely populated spot of New York—that is, the Seventh, Tenth, and Thirteenth wards, the tenement-houses of which are inhabited mostly by Jews, under the most unsanitary conditions, in poverty and want. We find that, in these districts, the percentage of consumption was lower among the Russian and Polish Jews than among most of the other nationalities except the native-born population.

During the six years ending May 31, 1890, the death rate among the following nationalities living in these wards was found to be as in Table IX:

TABLE IX.

Mothers born in	*Deaths due to all causes.*	*Deaths due to consumption.*
Ireland	6,224	1,210
Germany	5,691	804
England and Wales	437	57
Russia and Poland	4,687	270
United States	4,826	267

From these figures we see that the mortality due to consumption reached among the Irish 19.44 per cent. of the death rate due to all causes; among the Germans, 14.12 per cent.; among the English, 13.04 per cent.; among the Russian and Polish Jews, 5.76 per cent.; among those whose mothers were born in the United States (a great number of these in those districts were Jews), 5.53 per cent.

We thus find that the Jews succumb comparatively less than Christians to the white plague—consumption. This fact has also been repeatedly observed in various European countries. In London, according to the testimony of Dr. Behrend (24), consumption is less frequent among the Jews in the most squalid dens of Whitechapel than among the Christians. The latest communication

on this subject can be found in the *Revue d'hygiène et de police sanitaire,* by Tostivint and Remlinger, that only 34 of the entire number of 2,744 deaths among the Jews of Tunis in the five years from 1895 to 1899 were due to tuberculosis—*i. e.,* 1.24 per cent. It is further estimated that the average annual mortality from tuberculosis among the Mussulman Arabs, between the years 1894 and 1900, was 11.30 per 1,000; among the Europeans, 5.13 per 1,000, and among Jews, only 0.75 per 1,000 (25).

The various other acute infectious diseases, diseases of the respiratory and urinary systems, of the liver, and nervous system, according to the *Report on Vital Statistics of the Eleventh Census of the United States,* claim a proportionately smaller number of deaths from among the Jews than from among the non-Jews. And, according to Dr. John S. Billings's *Report on Vital Statistics of the Jews in the United States,* we find that "the Jews have suffered a relatively greater loss than their neighbors, by deaths from diphtheria, diarrhœal diseases, diseases of the nervous system (and especially diseases of the spinal cord), of the circulatory system, bones and joints, and of the skin, while their mortality has been relatively less from the tubercular diseases, including consumption, scrofula, tabes, and hydrocephalus, than the other people with whom they are compared."

Alcoholism and syphilis are diseases that are very rare among Jews. During the six years ending May 31, 1890, alcoholism caused in each 100,000 persons, of each race in New York, 31 deaths annually among the Irish, 10 among the Germans, 9 among the Americans, 6 among the negroes, 3 among the Italians, and only 1 among the Russian and Polish (Jews). This may give us a clue to the reason why the Jews suffered such a small loss through nephritis, as the following figures show: During the same six years nephritis caused in each 100,000 persons of each race in New York, 142 deaths among the Irish, 67 among the Germans, 54 among the Americans, 27 among the Italians, and 18 among the Russian and Polish (Jews).

That syphilis is relatively infrequent among the Jews has been observed almost all over Europe. Thus, according to Mr. Jonathan Hutchinson, syphilis is less common among Jews than among Christians; at the Metropolitan Free Hospital, in the Jews' quarter of London, in 1854, the proportion of Jews to Christians among the outpatients was nearly one to three, yet the ratio of cases of syphilis in the former to those in the latter was only one to fifteen, and that this difference was not due to their superior chastity was evident from the fact that the Jews furnished nearly one half of the cases of gonorrhœa that were treated during the same period (26).

Dr. A. Cohen, late senior house surgeon of the Metropolitan Free Hospital in London, has, at the request of Mr. Joseph Jacobs, collected the statistics of venereal diseases that came to this hospital during his service in 1882-1883, and has found that the proportion of Christian to Jewish patients affected with syphilis has been as three to one (27).

We have not exact statistics as to the frequency of syphilis among the Jews in the United States, but the testimony of physicians practising among this people goes to show that, while among the Jews syphilis is often met with, it is not so frequently encountered as among non-Jews.

The fact that the Jews are not very often attacked by alcoholism and syphilis has a very important bearing upon the comparative pathology of their people. Besides the fact that this is one of the reasons that nephritis and diseases of the liver (especially cirrhosis) are less commonly met with, the varieties of nervous diseases to which the Jews are most liable are also determined by these factors, as we shall see later in this paper.

A disease from which the Jews suffer more than any other nationality is diabetes. It is extremely frequent among the Jews in large cities, according to Bordier (28); out of 400 patients suffering from diabetes, Frerichs found that 100 were Jews—*i. e.,* twenty-five per cent. Osler (29), Strumpell (30), Naunyn (31), Saundby (32), and most other observers, say that the Jews are especially prone to this disease.

Dr. Heinrich Stern (33), in an exhaustive analysis of the mortality from diabetes in the city of New York in 1899, states that "the Hebrews, no doubt, are more commonly affected with chronic glycosuria than natives among whom they dwell. Out of the total of 202 deaths (from diabetes in New York city in 1899), fifty-four—that is, twenty-five per cent.—occurred in Jews. Of these, twenty-one were males, and thirty-three females." Dr. Stern further intimates that while "mental exertion, the characteristic modes of living, gluttony, alcoholic intoxication, etc., might be considered predisposing factors in the production of the diabetic state," it is his opinion that "the cardinal predisposing cause is the breeding in and in to which, in a very pronounced measure, the Jewish, as well as the Irish, race still adheres."

Dr. R. Saundby, again, states that the frequency of diabetes among the Jews is to be ascribed to the following cause: "The Jew raises himself easily, by his superior mental ability, to a comfortable social position, and notoriously avoids all kinds of bodily exercises" (34). This cause cannot hold good for the mortality from diabetes of the Jews in New York. As Dr. H. Stern has shown, twenty-five per cent. of the deaths from diabetes in New York are found to be in Jews; and, examining the original death certificates in New York city for 1899, "almost seventy per cent. of deaths occurred in tenement-houses, fifteen per cent. occurred in hospital practice and coroner's cases, and only fifteen per cent. in private houses. This tends to show that the malady has virtually little to do with high living" (35). Furthermore, the New York Jews living in tenements are hard working people—working long hours in sweatshops, having a sufficient amount of bodily exercise, so that the cause

that Saundby assigns for the prevalence of diabetes is not operative among them.

C. Van Noorden, in a recent paper on diabetes (36), states that it is his belief that the cause of the frequency of diabetes among Jews is the close intermarriage among them. Consanguineous marriages are really more frequent among Jews than among Christians (37), and this fact has been very much exploited by medical writers, who have attributed to it all the ills the Jews are liable to. We shall return to this question later in this article.

As to the other diseases to which the Jews are more or less predisposed, the various nervous and mental diseases stand out preeminently; after these come the diseases of metabolism, called by French authors arthritism and herpetism—for instance, gout, gall-stones and nephrolithiasis, chronic rheumatism, some forms of neuralgia and migraine, asthma, pulmonary emphysema, varicose veins, and especially hæmorrhoids, arteriosclerosis, and some diseases of the skin. Finally, some authors state that blindness, color blindness, myopia, trachoma, glaucoma, and almost all the skin diseases, are more frequent among the Jews than among the non-Jews.

Concerning the frequency of nervous and mental diseases among the Jews, the evidence is overwhelmingly abundant. It appears that the ancient Hebrews were already great sufferers of hysteria and insanity, as can be seen by many statements in the Bible, particularly in the New Testament, where it is mentioned that numbers of people "possessed with devils," lunatics, "men with unclean spirits," etc., called upon Christ for relief and that He cured them (see particularly St. Matthew, viii, 16; ix, 32; xii, 22; xvii, 15; St. Mark, v, 2; St. Luke, viii, 27; xiii, 11, and in many other places).

In modern times Charcot, Lancereaux, Oppenheim, Erb, Strumpel, Jolly, Möbius, Krafft-Ebing, Löwenfeld, Müller, Binswanger, Putnam, Collins, and many others, have observed this fact and speak of it in their textbooks and monographs. Neurasthenia and hysteria are mostly found among the Jews. Some authors have even stated that the majority of the Jews are neurasthenics and that most of the women are hysterical. Thus Raymond (38) states that hysteria is frequent among both men and women in Warsaw (Poland). The Jewish population of that city alone is almost exclusively the inexhaustible source for the supply of hysterical males for the whole continent. "Among the European nations," says Dr. Binswanger (39), "the Jews supply, relatively, the largest contingent of neurasthenics"; according to Dr. Jolly (40), "the Jews have a hysterical and especially nervous disposition to an overwhelming degree." "Nervous diseases, especially neurasthenia," says Krafft-Ebing (41), "affect the Jews with exceptional severity."

Dr. James J. Putnam (42) states that "the psychoneuroses in general are particularly common in the Latin and Hebrew races." Dr. Joseph Collins and Dr. C. Philips (43), analyzing 333 cases of neurasthenia which came under their observation, have found that more than forty per cent. of the patients were of the Jewish race, although "their *clientèle* was not conspicuously foreign."

(To be concluded.)

THE CAUSES AND THE SIGNIFICANCE OF THE OBSTETRIC HÆMORRHAGES.*

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Obstetric metrorrhagia can, I believe, be most conveniently discussed by dividing the subject into three divisions, namely:

I. *The metrorrhagia of pregnancy or ante-partum hæmorrhages.*

II. *The metrorrhagia of labor or intra-partum hæmorrhages;* and,

III. *Puerperal metrorrhagia proper or secondary post-partum hæmorrhages.*

I. The Metrorrhagia of Pregnancy; Ante-partum Hæmorrhages.—Uterine hæmorrhage, moderate or severe, occurring during the forty weeks of pregnancy naturally suggests to our minds the six queries:

1. Is it a simple abortion or miscarriage?
2. Is it a case of placenta prævia?
3. Is it a premature separation of a normally situated placenta (accidental hæmorrhage)?
4. Is it one of ectopic gestation?
5. Is it a traumatic or spontaneous rupture of the uterus?
6. Is it menstruation occurring during gestation?

These are the principal ætiological factors in ante-partum hæmorrhage; still, it should always be remembered that the diagnosis must be confirmed by a careful consideration of the symptoms and signs present, since we observe, although less frequently, ante-partum hæmorrhage due to (*a*) the fever and local hyperæmia of the (1) exanthemata—as variola, scarlatina, and measles; (*b*) conditions of the heart, liver, and abdominal viscera producing obstructed venous return; (*c*) hæmatosalpinx; (*d*) sarcoma, fibroma, and polypus of the uterine body; and (*e*) to polypus and epithelioma of the cervix.

Less frequently still, ante-partum hæmorrhage, local in character, but non-uterine in origin, has been mistaken for one of the six main causes just stated. These hæmorrhages, usually slight in amount, come from (*a*) the urethra, due to causes in the urinary tract; (*b*) rupture of vaginal or vulvar varicose veins; (*c*) cancer of the vagina or vulva; and (*d*) anomalies of the intestines or anus, a common one being hæmorrhoids.

Most frequent and most important of the ante-

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partum hæmorrhages is the bleeding indicative of a threatened or inevitable abortion, which is due to a partial separation of the fœtal structures before the complete formation of the placenta. All the manifold and varied causes of abortion and miscarriage have to do with this variety of hæmorrhage.

The possibility of menstruation continuing into pregnancy must also be granted. While it is true that menstruation is nearly always suspended during the whole period of gestation, returning from six to eight weeks after the birth of the child, still, exceptions to the condition of suspended menstruation in pregnancy occur now and then during the early months, and are explained by the fact that the uterine cavity is not obliterated by the fusion of the decidua reflexa and decidua vera until the close of the fourth month.

If the menses continue throughout pregnancy—a very rare condition indeed—there is probably an abnormal and incomplete fusion of the deciduæ. Some cases have been reported of women who menstruated only during pregnancy. Such reports should be carefully criticised, as such cases probably depend, without exception, on pathological conditions of the cervical canal.

From an examination of a large number of membranes and placentæ, the result of interruptions of pregnancy in the third, fourth, fifth, and sixth months, I am convinced that hæmorrhage due to a low situation of the placenta is much more common than is usually supposed.

I mean, by this, that a large portion of the supposedly simple abortions and miscarriages are really instances of the implantation of the placenta in the lower uterine segment, with resulting hæmorrhage and evacuation of the uterus as a consequence of partial separation of the abnormally situated placenta, due to changes in the shape of the lower uterine segment dependent upon the growth of the uterus.

It is generally thought, and usually taught, that hæmorrhage from a placenta prævia does not show itself until the twenty-eighth or thirty-second week of gestation. I have in my collection a uterus with the fœtus and membranes intact, and a central placenta prævia, from a woman who died within a few hours from the first hæmorrhage, which occurred at the sixteenth week of pregnancy. A careful autopsy showed that death was due to acute anæmia produced by the hæmorrhage from the partial separation of the central placenta prævia.

Further, I am convinced that a careful study of the site of rupture of the membranes in instances of supposedly accidental hæmorrhage, will prove that hæmorrhage during pregnancy, and also during parturition, from the premature separation of a normally situated placenta, is a very, very rare condition indeed.

I have found that several cases of presumedly accidental hæmorrhage were really those of lateral placenta prævia; a more complete examination after fuller dilatation, and the examination of the rupture in the membranes *post partum,* indicating the condition that caused the hæmorrhage.

Severe hæmorrhage from the partial separation of a normally situated placenta I believe to be a very rare condition; severe hæmorrhage from a low implantation of the placenta I believe to be much more common than is generally thought.

II. THE METRORRHAGIA OF LABOR; PARTUM OR INTRA-PARTUM HÆMORRHAGE.—For convenience sake, I am accustomed to describe intra-partum hæmorrhages as those of—

1. The first and second stages; and,
2. Of the third stage.

1. *Intra-partum Hæmorrhage of the First and Second Stages.*—This is due principally to (*a*) *premature separation of a normally or abnormally situated placenta;* (*b*) ruptures of the uterus or cervix; and (*c*) fibroid tumors, malignant disease of the genital tract, or rupture of varicose veins.

2. *Intra-partum Hæmorrhage of the Third Stage.*—Here, first and foremost, stands, (*a*) *uterine inertia* as the most important ætiological factor; uterine inertia occurring with a partial or complete separation of the placenta. Next in importance comes (*b*) *lacerations of the genital tract,* namely, of the lower uterine segment, the cervix, vagina, and perinæum. Another important cause, not often taken into account, is (*c*) *insufficient contraction of the lower uterine segment in cases of low implantation of the placenta.* Here, while the fundus contracts firmly and completely, an imperfectly contracted lower segment permits of fatal hæmorrhage from the open blood-vessels of the low-situated placental site. (*d*) *Partial or complete inversion,* although a most infrequent cause, must be enumerated; and the likelihood of *fibroids* of the uterus or *cancer* of the genital tract must be borne in mind.

III. PUERPERAL METRORRHAGIA PROPER, OR THE POST-PARTUM HÆMORRHAGES.—Puerperal hæmorrhages are those occurring between six hours after the completion of the third stage of labor and the completion of the normal period of involution, namely, six weeks.

These hæmorrhages depend almost wholly upon the proper management of the second and third stages of labor and on the care the woman receives during the first few hours or days of the lying-in state.

The amount of the lochial discharge varies in different women. In some it always continues longer and is more abundant than in others, yet not long or abundant enough to justify us in calling the case one of secondary post-partum hæmorrhage.

As in intra-partum hæmorrhages, so in post-partum, the hæmorrhage may come on in so sudden, so unexpected a manner that there will be no premonitory symptoms of the accident, the external flow of blood being the first symptom.

The causes are *general* and *local.*

1. *Among the general causes are:*

(*a*) Mental emotions, as shock, anger, fright, fear; (*b*) disturbances of the general circulation, as from abuse of stimulants, the excessive use of chloroform, and certain conditions of the heart and liver which interfere with the return circulation; (*c*) certain blood conditions, as extreme malarial poisoning, albuminuria, and puerperal sepsis; (*d*) the acute infectious diseases.

2. *Among the local causes are:*

1. Anything which interferes with the proper contraction of the uterus during the puerperium, as (*a*) retained blood-clots, portions of placenta, or membranes; (*b*) a secondary placenta; (*c*) a distended bladder or rectum; (*d*) retroflexion; (*e*) inversion; (*f*) fibroid and polypoid tumors; (*g*) cervical lacerations; (*h*) malignant disease of the uterus; (*i*) simple subinvolution.

2. Causes inducing pelvic hyperæmia, as (*a*) assuming the upright position too soon after delivery; (*b*) too early sexual intercourse.

3. Thrombi which close the uterine sinuses may be dislodged by sudden exertion, or by septic processes in uterine phlebitis.

Uterine inertia or relaxation as a cause of hæmorrhage after the third day of the puerperium is of rare occurrence; retained blood-clots are more frequent in multiparæ, and may usually be prevented by careful attention to the uterus during the hour following the completion of the third stage, known as "the physician's hour." Hæmorrhage from retained placental fragments and membranes is due to an incomplete third stage, and may be prevented by careful examination of placenta and membranes at the time of expulsion and by removal of retained fragments.

The retention of small pieces of membrane, it must be remembered, does not necessarily induce puerperal hæmorrhage or other complication.

TROPICAL DYSENTERIES.*

By STEPHEN M. LONG, M. D.,

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Strange as it may seem, you will find that many of our profession regard the ground of dysentery as pretty well covered, and the literature as quite exhaustive! To my mind it is just the reverse. Dysentery is a disease that ought to take the first place in our researches and be well studied, since it is unclassified and covers, under a vague name, four or five, or more, different types. Some may complain of the difficulties of its study, as it is mostly confined to tropical and semitropical countries; that, however, is no excuse for not going to the seat of the scourge and fighting it there, the more so in that, being a disease of war and famine, it has been for centuries the greatest and deadliest enemy that any nation or people can encounter. It is rumored that England is going to have bullet-proof armor for her troops. If she only could enable the medical profession to devise a medicine that should make men dysentery-proof she would be seventy per cent. better off than with any bullet-proof armor she can devise.

Look at the war statistics and see the records of death from bullets or wounds, and those from dysentery. Yet, what has medical science found to check such a terrific disease? Very little. To-night I shall present to you the different forms of the disease as we actually see them in the Philippine Islands, with a brief description of their ætiology, symptoms, pathology, sequelæ, prophylaxis, and treatment.

The *first type* that I will consider is fulminating catarrhal dysentery. This is the most fatal of all dysenteries that I have seen. Nothing can be done to save the patients, and they generally die in from four to seven or eleven days. Its causation, up to the present time, has been ascribed to Shega's bacillus. The attack is very sudden, with a high temperature, rapid pulse, flushed face, tongue heavily coated, great prostration, and rapid emaciation; about fifty or more bowel movements a day, first watery, gradually becoming bloody and slimy. There is great tenderness all over the abdomen, with tenesmus in the rectal region. There is sometimes vomiting, which is very persistent. The symptoms of the disease are acute from start to finish. At the autopsy table we find the stomach generally inflamed, or predigested. The ileum and jejunum often do not present anything abnormal, except that the lower end of the ileum is sometimes inflamed. The mesenteric glands are always enlarged and hæmorrhagic. The disease is really confined to the large intestines, so that the whole tract from the ileocæcal valve to the anus seems to be one homogeneous necrotic mass. The lumen of the bowel is very much narrowed, but the calibre is enlarged three or four times, and measures from twelve to fifteen inches in circumference. The outer surface of the gut looks almost normal, but its inside is purple-red in color and inflamed through and through. The solitary glands are abolished, and no ulcers can be seen macroscopically. The whole thing represents a necrotic process in its acute stage.

As to its treatment, everything has been tried to save the patients, but without avail.

The *second type* that we often meet is simple acute dysentery. It is a disease that starts as a diarrhœa, and is often associated in the same subject with malarial fever. In the beginning, these cases are very easy to cure; yet they are the ones that hang over the patients for a long time and become chronic. There is no rise of temperature to speak of. The tenderness is very slight over the abdomen. There is some tenesmus, and the stools become bloody two or three days after the attack.

The *third type,* generally called the amœbic type, can be divided into four different classes: (*a*) the amœbic, (*b*) the trichomonadic, (*c*) the cercomonadic, and (*d*)

*Read before the medical officers, U. S. A. General Hospital, Presidio, Cal., May 4, 1900.

the mixed. As all of you know, the amœbic dysentery is the one most prevalent in tropical and semitropical countries. It gives no warning, and, when once established, it is a very hard task to dislodge it. While not very fatal in the start, in the long run, my impression is that it is the worst type, "the fulminating type excepted," of all the dysenteries, becoming the mixed type in its chronic stage. It is specially prone to cause liver abscesses. It has a tendency to become chronic and to kill the patients, either by its numerous ulcers perforating or producing excess of toxine in the system, by metastatic abscesses in other organs, especially the lungs, by paralysis of the intestines, or from inanition.

In the trichomonadic class, we find the infusorium *trichomonas intestinalis,* generally predominating in the stools. It is very obstinate to treatment and often becomes chronic.

In the cercomonadic class we find the *Cercomonas intestinalis* in the stools. When associated with the streptococcus, it is found to be very deadly.

The mixed class, so called, is the one that presents in the stools, besides the amœba, the *Bacillus pyocyaneus,* the staphylococcus, both aureus and albus, and the streptococcus. This type, as I have said, is very fatal on account of its complications.

All these classes are generally chronic and fatal in the long run, and the medical literature on these different types is practically *nil.* From the foregoing classes we get the following types:

The *Fourth Type.*—The chronic dysentery, so called, though mostly a sequela of the acute and amœbic forms, should nevertheless be regarded as a class by itself and treated accordingly.

The *Fifth Type.*—The gangrenous and diphtheritic are met with occasionally. They are generally fatal, either from perforation, from general peritonitis following, or from toxæmia. In these cases we find the patients passing big shreds of membranes. I had one patient that passed a tube cast of the internal lining membrane of the colon about fourteen inches long, and the specimen is preserved in the pathological laboratory of the First Reserve Hospital, Manila. The patient lived three or four days after its passage, and finally died from general peritonitis due to perforation of some ulcers at the ileocæcal valve. In such cases there is a very weak and rapid pulse, the expression is very anxious, and the temperature rises in the evening up to 104° F.; there is also persistent vomiting, with an agonizing pain and tenderness over the abdominal region. The bowels move very frequently, passing blood and mucus in small amounts.

The sequelæ of dysentery met with in the Philippine Islands are many.

1. Its chronicity; 2, chronic gastritis and indigestion; 3, obstinate constipation; 4, paralysis (partial) of the large intestines, due either to obliteration of the glands and lack of secretion or to lack of innervation and blood supply; 5, anæmia, from lack of assimilation of food; 6, the association with it of malarial fever; 7, typhoid fever; 8, neuritis; 9, atrophic cirrhosis of the liver; 10, chronic parenchymatous nephritis; 11, abscess of the liver; 12, metastatic abscesses of other organs, as of the lungs and kidneys; 13, inanition; 14, toxæmia; 15, dilatation of the stomach and intestines.

Somehow most of our liver abscess patients in Manila died, whether operated upon or not. The majority of cases represented multiple abscesses.

From the foregoing we must not infer, however, that in every case of abscess of the liver the patient dies. While I was at Cairo, Egypt, I saw many cases recovering after operation.

Prophylaxis.—I have very little doubt that dysentery is an infectious disease, being carried by the food or drink through the mouth. There is no word to express how much cleanliness is necessary to keep away from this scourge. If you ask me what is the best thing to do to avoid this disease, I should say, Don't touch anything which has not seen the baptism of fire.

Before I forget, let me mention that alcoholic drinks should not be regarded as prophylactic against the disease, but the reverse. In the Philippine Islands our hospitals have been using a great deal of brandy and whiskey, but I think the patients would be better off with blackberry brandy, sherry, or claret, in the chronic stages of the disease, if used cautiously. In warm climates, one thing we ought to remember is to take a purgative once every fortnight, if the bowels are sluggish and constipated. Exposure to the sun ought to be avoided between 10 A. M. and 5 P. M., if possible; also exposure to the night air. Shower baths or any other baths are always beneficial.

Treatment.—The treatment of dysentery is one of the most difficult problems to deal with, as it requires not only great knowledge of the therapeutical and physiological action of many drugs, but also a practical acquaintance with them and with the technique of administering them *per os* or *per rectum.* It requires, also, the knowledge of the different types of the disease. Here comes in the necessity of knowing how to use the microscope and of an acquaintance with the different methods of discovering the bacteria causing the disease. In time of war, and away from civilized countries, our task is often augmented by the physician being thrown on his own resources to deal with all these cases. The question, then, is how to simplify the matter and make our treatment the most valuable possible, using few drugs in a short space of time and under adverse circumstances. It is all right to experiment with new drugs in large city hospitals, but in time of war, or in epidemics, we must cure our patients with routine treatment and as quickly as possible. So I am going to mention to you only four drugs that can be obtained in any part of the world, and can be carried with the least possible inconvenience, besides having the sanction of the profession in general.

Eighty per cent., if not more, of the dysentery patients will be cured with one or more of these drugs, while the disease is yet in its infancy. So, when we get a case of dysentery or diarrhœa a day or two old, the first and right thing is to put the patient at once into bed, giving him an ounce of sulphate of magnesium in half a glass of warm water before breakfast, repeating it the same day if necessary. You will be surprised to see how many men will get well soon and report for duty. Calomel, one sixth, one quarter, or one half of a grain, given every hour, until four or six doses have been taken, and followed four hours later with half an ounce of salts, may answer the same purpose, but if there is any doubt as to the cure of the case, we can put the patient on another treatment. You have heard of the miracles as well as the failures of this great drug—ipecacuanha. This drug will often succeed if administered in the following manner: Put the patient to bed, and, while his stomach is empty, administer from fifteen to twenty drops of tincture of opium; then, fifteen minutes later, put an ice-bag on his head, apply a mustard plaster on his stomach, and give a hypodermic injection of morphine, one quarter of a grain (to give him a chance to sleep), and administer not less than forty grains of ipecacuanha by the mouth; at the same time give instructions to the patient or to the nurse that he is to remain quiet on his back for four hours without moving or taking anything by the mouth, and that, should the saliva increase in the mouth, it is not to be swallowed, but to be spit out. Out of ten patients, you will find that eight will retain it, and out of the eight who have retained the medicine, only one or two will need a second dose. So, from sixty to seventy per cent. will be cured by one administration, from ten to twenty per cent. will be cured by a second dose, and twenty per cent. will require some other kind of treatment.

This brings us to another class of medicine—I mean bismuth subnitrate. When I say bismuth subnitrate, I mean that preparation of bismuth only. The other preparations of bismuth have their own place in medicine, but it is not here. The bismuth subnitrate should be given in very large doses, if we expect good results. Forty or sixty grains every three or four hours is a very moderate dose, and if bismuth alone is not enough to check the trouble, then comes the mixed treatment, when the fourth drug steps in—that is, the great pain-killer, the comfort as well as the pacifier of so many sufferers—opium. This medicine should never be omitted from the list in treating diarrhœas or dysenteries, whether acute or chronic. There are several ways of administering it, as with camphor, ipecacuanha, as in Dover's powder, or with Squibb's mixture, etc. My way has been to give forty grains of bismuth subnitrate and five grains of Dover's powder, well mixed, every three or four hours, as the case may indicate. I have forgotten to mention another and easy way of administering ipecacuanha—that is, in one-grain or half-grain doses every hour, for two or three days; this often gives good results. I prefer, though, the first method. It is of no use going astray and trying other medicines, such as benzonaphthol, betanaphthol, salicylate of bismuth, bismuth subgallate, etc. All these medicines are good antiseptics, but most of them break up in the animal economy into different compounds and lose their antiseptic value. They have received a good trial, and have been proved inferior to our everyday medicines, bismuth, Dover's powder, and ipecacuanha. Sometimes, if the stomach gets out of order, bicarbonate of sodium in ten-grain doses, combined with bismuth and Dover's powder, acts like magic.

Allow me now to open another chapter of treatment which has not yet gained either the confidence or the sanction of the profession at large. There is a great struggle between the two schools, one advocating the internal administration, the other the topical application, of the drugs, either by injections, suppositories, or enemata. I have given the use of enemata a fair trial, and in some cases it is a life-saving treatment which should not be neglected. You will now and then come across cases in which all internal medicines will prove a failure, but which enemata will cure. Here, again, there is some diversity of opinion as to cold or hot water enemata. Well, in a few cases the cold water may be the best; but, in my estimation, the hot should be preferred for the following reasons: First, it is a better solvent than cold water; secondly, it is cleansing, clearing the bowels from slime and mucus; thirdly, it is aseptic; fourthly, it is absorbed by the tissues quickly; and, fifthly, it is well borne by many. Now, as to what medicines can be used with the enemata: I prefer, of all the antiseptics and germicides, silver nitrate, twenty grains to the pint, or quinine for amœbic cases. But let me mention one point in this connection: Do not forget to clean the bowels of the patient with a soapsuds enema before administering the medicated enema. The knee-chest or dorsal position can be tried. As to instruments for giving the enema, never use a hard-rubber catheter or the bulb syringe, as, when the ulcers are in the rectal region, alarming results may follow. A rubber bag or fountain syringe with a soft rectal rubber tube attached to it is all that is necessary for the operation. In this connection, let me mention two more drugs that have of late come into extensive use. One is the tincture of the chloride of iron, one drachm to the pint of hot water, mostly used by the English profession in India; and the second, peroxide of hydrogen. In this country, the tincture of iron, if tried, will be found to give as good results as nitrate of silver, but peroxide has few advocates yet. Normal salt solution enemata, laudanum, and starch-water enemata are also good and beneficial.

As to the question of treating chronic dysenteries of long standing in patients coming to us from the Philippine Islands, half starved and half dead, it is a very hard matter to deal with. But I should judge that a very highly nutritious and easily digestible food, administered

in small amounts at short intervals, or by rectal alimentation, thus giving rest to the stomach and intestines, might be tried, with as little drugging as possible. Milk should never be given as such, but always diluted with rice water, barley water, mineral, or lime water. Kumyss and allied preparations ought to be tried as articles of diet in such cases; fresh meat juice, also, in the shape of beef-tea, is invaluable. Now and then, saline enemata should not be forgotten, as they give tone to the bowels and afford the patient a chance to have them cleaned from the *débris*. Massaging of the abdominal region and the application of turpentine stupes or hot fomentations should not be forgotten.

ALCATRAZ ISLAND, CAL.

A DRESSING FOR COLLES'S FRACTURE.

BY CHARLES L. DE MERITT, M. D.,

WEST HOBOKEN, N. J.,

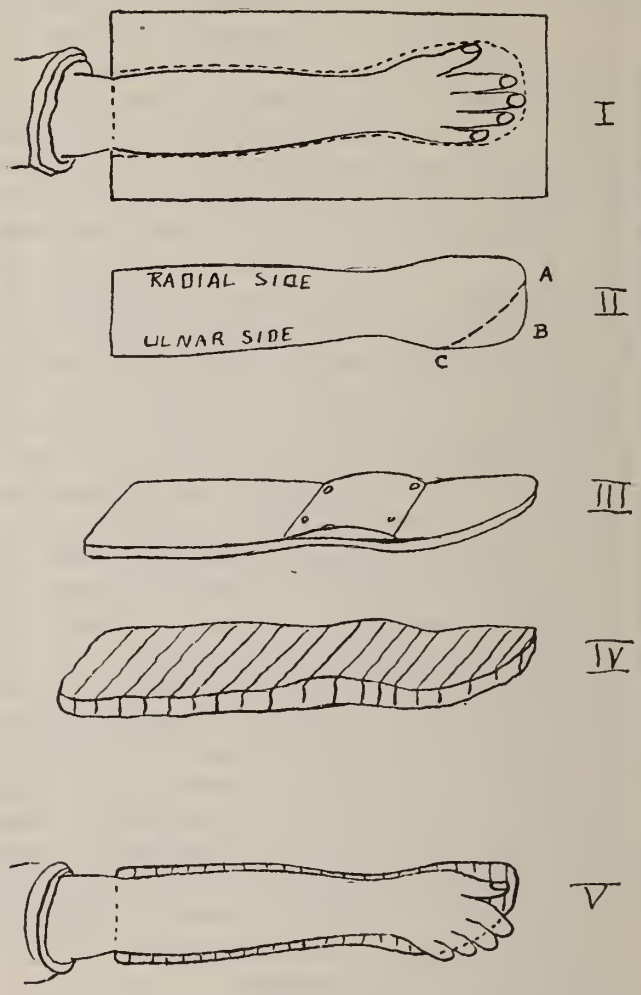
ATTENDING PHYSICIAN TO CHRIST HOSPITAL (JERSEY CITY) DISPENSARY.

THIS splint is made from a thin piece of board, of one quarter or three eighths inch stuff, such as can be got by breaking up a soap box. Lay the pronated extremity on the board and outline it with a pencil, as shown in Fig. 1, from the finger tips to the elbow. Whittle out this pattern, which gives a board shaped as in Fig. 2. This should be done carefully to get the exact outline of the part. If measurement from the injured arm is too painful, use the sound one, and reverse the board, which amounts to the same thing. Mark the ulnar and radial borders of the splint so that they can be distinguished.

Round off the ulnar side of the distal end of the splint by cutting away the area A B C (Fig. 2). This gives the ulnar deviation of the hand, as hereafter described.

When the prone forearm and hand lie on a flat surface there is a marked subcarpal hollow. To fill this up, take a piece of three eighths or one half inch board, four inches long for an adult, from two to three inches for children, and round the upper surface longitudinally (Fig. 3). Tack this to the splint so as to fit the hollow of the wrist and trim its sides to fit the contour of the splint. Pad the upper surface of the splint with a double layer of absorbent cotton and cover the whole with a muslin roller (Fig. 4).

Wrap the fractured wrist with a few turns of gauze bandage, and over this take two or three turns of adhesive plaster. Palmar and dorsal pads are not needed. When the splint is applied the thumb lies extended on its upper flat surface and the fingers naturally fall around and clasp the rounded ulnar edge before mentioned, giving moderate, but sufficient, ulnar deviation. Bind on the splint with a gauze roller and a muslin roller over it. The bandaging is carried down to a line extending between the distal ends of the first and fifth metacarpal bones; with the hand in ulnar deviation, this line will be at right angles to the long axis of the forearm. An ordinary sling is used. Tension of the



bandages must be carefully regulated till swelling subsides, then they are to be tightened and passive motion of the fingers begun. After two weeks, remove the splint to wash the arm, then reapply it for two weeks more. During this latter period slight active motion of the fingers is to be encouraged.

In my practice, this simple device has proved entirely efficient. It can be made in a few minutes, with a saw and pocket-knife, of materials procurable anywhere. And not the least of its advantages is the fact that, being "made to order" for each case, it is always an exact fit, a point not always sufficiently appreciated in the treatment of fractures.

302 SHIPPEN STREET.

American Laryngological Association.—The twenty-third annual congress of the association will be held at New Haven, Conn., Monday, Tuesday, and Wednesday, May 27th to 29th. The president of the congress is Dr. Henry L. Swain, of New Haven.

A REQUISITE TO INCREASE THE USEFULNESS OF AMBULANCES.

By FREDERIC GRIFFITH, M. D.,
NEW YORK,
SURGEON, BELLEVUE DISPENSARY.

THE treatment of shock is one which confronts the ambulance surgeon more often than any other condition in emergency work. True, it is associated with causative factors, but its importance cannot be overestimated so long as early death following accidents is so common from this source. Passing by the internal treatment of shock, of all the external measures employed to combat its action the application of heat is the most valuable.

The following suggestions are made with the object of having this therapeutic agent applied to patients while in ambulances *en route* to hospital.

The construction of ambulances is faulty in that they are too open for use in the freezing weather common to our New York winters. They should be fitted, front and back, with doors made with due attention to light and ventilation-slides, and removable for summer work. By the use of asbestos or some other non-conductor of heat, placed in the frame of the top, bottom, side-walls, and doors the loss of heat would be minimized.

Apparatus suitable for equipping the new models of automobile ambulances will vary according to the motive power. Where steam is used, the exhaust pipe may readily be turned into a coil running along the sides of the interior, and fitted with valves to turn the steam out when not needed. Where electric storage motive power is employed, heat coils similarly fixed—some portable with protected wire connections and kept in racks to be used as are hot-water bags—will be adequate. In the horse ambulances a source of heat must be supplied, and this is readily obtainable by the many forms of car stoves in vogue, and placed under the seat or body of the vehicle, coal being preferable to oil or gas as a fuel on account of its greater safety.

In addition, sand-bags made of canvas, long and narrow, and filled with bar-sand, should be kept constantly hot at the stable by means of a heating-plate attached to the steam pipes or stove in the building. Just before leaving on a "call," three or four may be placed in the ambulance, to be laid beside the patient.

The accompanying physician might well have his place in front, where he could direct the movements of his ambulance, as well as give any needed attention to the patient.

Ambulance calls do not reduce the mortality reports of hospitals; and a measure which, in any degree, will affect the vital statistics of such institutions on the credit side is worthy of serious consideration.

By these means, namely, a thermometer and a heat appliance, fitted to all ambulances, with little cost or trouble for maintenance, incalculable good would ensue to shocked patients, and especially in those cases which demand immediate operation. Patients would stand a better chance of recovery, and surgeons would often be saved the chagrin of table deaths.

805 MADISON AVENUE.

Therapeutical Notes.

For Superficial Cancerous Growths.—According to *Ἰατρικὴ Πρόοδος* for January, Dr. Hue had employed the following for some time prior to the publication of Czerny's method:

℞ Arsenious acid. . . . . 3 grains;
Cocaine. . . . . 15 "
Boiled water. . . . . .1,500 minims.
M.

From two to three cubic centimetres to be injected daily.

The author has seen many cures with this treatment.

The Aperient Action of the Persulphate and the Metavanadate of Sodium.—*Journal des praticiens* for February 16th says that these drugs seem to have given good results in tuberculosis, probably because of the increase of appetite caused by them. This aperitive action may be utilized in many morbid conditions: simple or tuberculous dyspepsia, cancer of the stomach, etc. M. Robin employs the following formula:

℞ Sodium persulphate. . . . . 30 grains;
Water. . . . . 9½ ounces.
M.

A soupspoonful before each of the two principal meals. To be continued for six days and then suspended.

Metavanadate of sodium has the same properties, but is employed in smaller doses:

℞ Metavanadate of sodium. . $\frac{45}{100}$ths of a grain;
Distilled water. . . . . 4½ ounces.
M.

A coffeespoonful half an hour before the two principal meals, or $\frac{1}{32}$d of a grain. The treatment should be suspended at the end of four days.

For Chronic Otorrhœa.—The following is taken from No. 10 of *Medicinische Woche:*

℞ Iodide of potassium. . . . . 30 grains;
Tincture of iodine. . . . . 6 drachms;
Alcohol. . . . . 1 ounce;
Glycerin. . . . . 6 drachms;
Iodoform. . . . . 30 grains.
M. Sig. Inject into the outer ear.

Salicylate of Methyl for Chordee.—Dr. Baratier (*Journal des maladies cutanées et de syphiligraphie; Gazette hebdomadaire de médecine et de chirurgie,* December 9, 1900) has used the following method with great success in cases of gonorrhœa with painful nocturnal erections. He prescribes hot baths and large doses of Vichy water, followed by inunctions to the penis for some minutes with the following:

℞ Salicylate of methyl. . . . . 15 grains;
Petrolatum. . . . . .150 "

The penis is then surrounded with a layer of cotton. Pain is said to disappear very quickly under this treatment.

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VARICOCELE AS A CAUSE OF DISABILITY.

EXPERIENCED surgeons, we think, must generally have come to the conclusion that varicocele is, in the great majority of instances, more of a blemish than a serious departure from the normal state. But that is not the opinion of the laity, and probably it is not the conviction of the younger members of the profession. The surgeon-general of the army, as we learn from *Circular No. 3,* dated February 27, 1901, adheres to the rule laid down in Tripler's *Manual* for the guidance of medical officers in the examination of recruits. According to this rule, a candidate for enlistment should be rejected if he has a varicocele which is larger than the sound testicle; if, however, after his enlistment has been accepted, he is found to have a varicocele as large as the sound testicle or larger, and complains of disability arising from it, the facts call, not for his discharge, but for surgical treatment of the varicocele. And to this the soldier is compelled to submit under a decision published in *Circular No. 11,* adjutant-general's office, dated December 10, 1884, as follows: "Except in case of a capital operation involving the risk of life, a soldier cannot refuse to submit to medical treatment or surgical operation without subjecting himself to trial by court-martial for wilfully avoiding treatment the purpose of which is to enable him to perform the duties for which he enlisted."

The examination of recruits on a large scale has confirmed even so experienced a surgeon as Dr. Nicholas Senn in his opinion as to the general innocuousness of varicocele. *Circular No. 3* gives extracts from a paper by Dr. Senn in which he states that for years he has been convinced that too many operations were being performed for varicocele, and adds that he has always advised his pupils to restrict operative intervention to the exceptional cases in which well-marked symptoms independent of sexual neurasthenia fostered by quack literature were present. In the course of a single month, on the outbreak of the Spanish-American war, Dr. Senn had occasion to examine 9,815 recruits for the volunteer service, and he took special pains to investigate varicocele as a cause of disability. He was surprised at the prevalence of the affection—almost one out of every four men between eighteen and thirty years of age had it—and to find that in more than half the cases the men themselves were ignorant of the fact. He found it more frequent in men who were robust than in those of slight build. In most instances the men were otherwise in excellent condition, and atrophy of the testicle was seldom noted. When the varicocele was large, the men were invariably questioned as to the existence of resulting pain or discomfort, and in not more than three or four cases was the reply in the affirmative. Nearly forty years ago the late Dr. Willard Parker declared in a clinical lecture that varicocele generally disappeared at about the age of thirty-five years. We have not been able to substantiate this statement, but we are convinced that at about that age the varicosity, as a rule, ceases to grow more pronounced.

On the other hand, it must be admitted that there are occasional cases of varicocele that call for surgical intervention—not, however, by the crude methods in vogue before the days of antiseptic surgery, such as curtailment of the redundant scrotum and the uncertain subcutaneous ligation of the varicose veins, a procedure in which the spermatic artery and the vas deferens were by no means sure to be spared. All this is convincingly set forth in *Circular No. 3,* in which several medical officers of the army record their experience with the high operation, that, namely, of opening the inguinal canal by an incision an inch and a half long, bringing out the varicose veins, ligating all but one of them *en masse* at the two ends of the incision, and excising the intervening portion. This is an open operation, one easy of performance and sure in its results, without danger of consecutive atrophy of the testicle. Moreover, it involves only the pubic region, one readily rendered aseptic, and not the corrugated scrotum, with its quasi-vermicular contractions, which is uncommonly difficult of sterilization.

A HYBRID OF TYPHOID FEVER AND DYSENTERY.

OF the quick supervention of dysentery upon typhoid fever, or of typhoid fever upon dysentery, there is no

lack of examples, and the expression "typhoid dysentery" figures in medical literature, Aitken, for example, in his *Science and Practice of Medicine,* describing under that appellation a form of dysentery accompanied by some of the phenomena of typhoid fever. But a closer association of the two diseases, one quite as close indeed as that maintained with regard to malarial poisoning and typhoid infection by those who uphold the existence of "typhomalarial fever," has recently been insisted upon by a European military physician, Dr. Paul Remlinger, subdirector of the Imperial Institute of Bacteriology of Constantinople (*Revue de médecine,* March), who gives observations to substantiate those of Torti and those of Kelsch and Kiener. The "fusion" of dothienenteritis and dysentery, he remarks, may be very intimate. The two affections make their appearance simultaneously, and there results a clinical type in which for some time the diagnosis halts between the two.

This hybrid, according to Remlinger, is a very fatal affection, the mortality amounting to fifty per cent. The dysenteric symptoms are the greenish color of the dejecta, straining, tenesmus, and pain and tenderness in the course of the large intestine, while the typhoid symptoms are the course of the temperature, the saburral state, headache, insomnia, and feebleness of the circulation. Post mortem, he says, it has always been easy to distinguish the lesions of dysentery and those of typhoid fever, the first being strictly limited to the large intestine and the second to the small intestine—the lesions do not blend as the symptoms do, although it is conceivable that those of either disease may pass the limit of the ileocæcal valve, giving rise to dysentery of the distal portion of the ileum or typhoid lesions of the large intestine. If this should occur, he adds, it would be very difficult to assign to each infection its true part in the evolution of the disease; but we see no advantage in forecasting the perplexity that might result from an occurrence that has never been observed and, it seems to us, is hardly imaginable.

THE CINEMATOGRAPH IN MEDICINE.

In our issue for September 3, 1898, we commented on a suggestion by M. Marcel Baudouin that the cinematograph might with great advantage be employed in the teaching of medicine. M. Baudouin then lamented that the "sinews of war" were not forthcoming to enable him to put into execution his purpose of employing the apparatus in Professor Terrier's laboratory at the Paris School of Medicine, first, for registering the successive steps in operative procedures, especially with a view to demonstrating how far current practice was at variance with theoretical teaching; and, secondly, "in the study of operations called rapid." Dr. Mount Bleyer, of New York, subsequently informed us that he had presented to the French Academy of Medicine a communication on the subject so far back as February 28, 1895.

The *Indian Lancet* for February 11th of the current year, publishes, however, a translation of a Lecture on the Cinematograph and the Teaching of Surgery (from what source is not mentioned), by Professor E. Doyen, of Paris. At the meeting of the British Medical Association at Edinburgh, so far back as July, 1898, Professor Doyen actually showed three films on the screen, representing, respectively, the manipulation of his operating table, an abdominal hysterectomy, and a craniectomy. The exhibition was regarded as very satisfactory and was repeated by request.

The advantages of the cinematograph include not only demonstrations of actual operations to students in such a way that the whole class can see what, at the operation itself, only a few of those nearest can see, but also a means of bringing before the profession in every part of the world the actual work of its great masters in all countries; the preservation to the future of records such as we would gladly have, were they available, of the prowess of the great surgeons of the past; a permanent visible record of the progress of surgery; and, last, but by no means least, the holding up of a mirror to the operator himself, whereby he can be a looker on at his own work—and "lookers on," as the proverb tells us, "see most of the game." From this he can learn wherein details of technique that have seemed satisfactory are defective, how deficiencies in his method may be supplied, and how redundancies may be lopped off. Professor Doyen states that the hours he has spent with M. Clement Maurice and with his own assistants, studying his technique with the help of the cinematograph, have been of the greatest interest and value to him.

The nurse, too, and the anæsthetist can learn much by seeing themselves as the cinematograph makes them appear. Even the general public, Professor Doyen thinks, might materially benefit, in these days when all classes of society follow with such keen interest the progress of surgery, by the use of other means of getting information than the absurdly inaccurate and misleading statements that the daily press will continue to

spread abroad. "Those who have seen operations as shown by the cinematograph," says M. Doyen, "admit that the calmness of the surgeon, the precision of his movements, and the perfection of the operative technique tend to diminish, rather than increase, the unknown horrors of an operation."

Professor Doyen states that since the meeting at Edinburgh he has added to his collection of films, which will be issued in a few months for use in the teaching faculties, each film being accompanied with a full description, clinical and pathological; and he adds that surgeons who may wish to use the cinematograph themselves, whether in operating or in teaching, are welcome to ask him for any details that may spare them errors or expense.

THE *UNIVERSITY OF PENNSYLVANIA MEDICAL BULLETIN.*

THIS is the new title of the *University Medical Magazine,* beginning with the first number of Volume xiv, and a far more appropriate title than the old, since it is distinctive. The periodical has been changed in form as well as in name, having large, double-columned pages, fewer in number. It is edited by Dr. Charles H. Frazier.

THE *REDUCTIO AD ABSURDUM* OF SPECIAL LEGISLATION.

ASSEMBLYMAN SCHNEIDER, of the county of Erie, is reported as having said recently that two of his friends had told him that a certain citizen of Buffalo, a Mr. Vogelgesang, "had discovered a peculiar remedy by which he said he had effected many cures of rheumatism," and that in their opinion he ought therefore to be licensed to practise medicine. Accordingly, Mr. Schneider introduced into the Assembly of the State of New York a bill given to him by his two friends authorizing the said Vogelgesang to practise medicine, "except of [*sic*] surgical operations and narcotic remedies." Even legislators, let us hope, are likely soon to see the absurd and dangerous character of some of the bills they good-naturedly undertake to father.

THE SANITARY CONDITION OF HAVANA.

THE report of Major W. C. Gorgas, surgeon United States army, chief sanitary officer of Havana, is calculated to arouse feelings of considerable satisfaction, as evidencing the benefits conferred, not only upon Cuba itself, but also upon the world in general and this continent in particular, by the American administration of the city, for the world at large is a gainer by any administration of any country which reduces the foci of infectious disease. Yellow fever has now been reduced to the eighth place on the mortality list as a consequence of the vigorous and effective sanitation in force, and its further reduction may be confidently looked for. That the disease has occurred principally among "white males" is explained by the fact that a large proportion of the inhabitants are foreign immigrants, who are almost entirely of the male sex, causing the male population of the city to be greatly in excess of the female.

SAUSAGE POISONING ON A LARGE SCALE.

A NOTEWOTHY instance of sausage poisoning affecting a large body of men is recorded by Pfuhl (*Zeitschrift für Hygiene und Infectionskrankheiten,* xxxv, 2; *Wiener klinische Wochenschrift,* February 21st). Eighty-one soldiers fell ill with symptoms of acute gastric catarrh after having eaten "Rinderwurst" the day before. Chemical examination revealed nothing positive, but there was found a species of *Proteus* which, administered to mice and rats, produced death.

THE MORTALITY OF MEDICAL TUTORS.

STATISTICIANS, as is well known, do not accord great length of years to the members of our craft. Few if any of us are greatly perturbed over this fact; indeed, we take but a mild interest in the figures that are now and then published. Among the most recent are those promulgated by Moeglich, of Berlin (*Deutsche Aerzte-Zeitung,* 1900, No. 22; *Wiener klinische Wochenschrift,* February 14th), who finds, not only that the mortality of physicians is high, but that it is highest among *Docenten.* What young man, however, will hesitate to become a *Docent?*

THE LOW TEMPERATURE OF THE GOORKHA.

THE bodily temperature in a state of health is generally accepted as among the most constant of physiological phenomena. It seems, however, that the normal temperature of the Goorkha Sepoy is below that of the generality of mankind. In the February number of the *Indian Medical Gazette* this fact is set forth by N. P. O'G. Lalor, M. B., B. Ch., a captain in the British Indian Medical Service. Captain Lalor, reasoning that this must be due to defective metabolism, tested his theory by administering sugar, about six ounces daily, for a period of eleven days, to six healthy men of a Goorkha regiment. Their average temperature for eleven days preceding the administration of the sugar was 97.1° F., for the period of its administration 97.4°, and for the eleven days following the cessation of the saccharine treatment 97.2°. The temperature rose in every case during the period of feeding with sugar.

News Items.

Society Meetings for the Coming Week:

MONDAY, *April 1st:* New York Academy of Medicine (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association (annual); Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society (annual).

TUESDAY, *April 2d:* New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Societies of the Counties of Broome (quarterly) and Niagara (quarterly), N. Y.; Essex (annual), Hudson, and Union (annual), N. J., County Medical Societies; Androscoggin, Maine, County Medical Association (Lewiston); Chittenden, Vermont, County Medical Society; Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, *April 3d:* New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY, *April 4th:* New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Washington, Vermont, County Medical Society; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, *April 5th:* Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, *April 6th:* Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for Two Weeks ending March 23, 1901:

BOGERT, E. S., Medical Director, retired. Detached from the marine recruiting rendezvous, New York, and ordered home.

BRANSFORD, J. F., Surgeon. Retired in accordance with the Act of Congress, approved February 5, 1901.

CRAWFORD, M. H., Surgeon. Detached from the marine recruiting rendezvous, Buffalo, and ordered to the marine recruiting rendezvous, New York.

GROVE, W. B., Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the Naval Hospital, Norfolk, Virginia.

HAAS, H. H., Assistant Surgeon. Ordered to the Naval Hospital, New York.

HIGH, W. E. G., Assistant Surgeon. Detached from the *Oregon* and ordered to the *Kentucky*.

LEACH, P., Surgeon. Detached from the *Oregon* and ordered to the *Monocacy*.

MARMION, R. A., Medical Director. Detached from the Naval Home, Philadelphia, and ordered to the Washington Navy Yard, as president of the examining boards.

MOORE, J. M., Passed Assistant Surgeon. Detached from Port Royal Naval Station and ordered to the *Franklin*.

ORVIS, R. T., Assistant Surgeon. Detached from the *Adams* and ordered to the Naval Hospital, Mare Island, California.

PARKER, J. B., Medical Director. Detached from duty as president of medical examining boards, Washington, and ordered to the Naval Home, Philadelphia.

RODMAN, S. S., Assistant Surgeon. Detached from the Naval Hospital, Mare Island, California, and ordered to the *Adams*.

SHIFFERT, H. O., Assistant Surgeon. Detached from the *Franklin* and ordered to the *Solace* for duty at the Asiatic Station.

THOMPSON, E., Assistant Surgeon. Detached from the *Nashville* and ordered to the *Solace* upon arrival in Asiatic waters.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera and plague were reported to the surgeon-general during the week ending March 23, 1901:

Small-pox—United States and Insular.

Washington, District of Columbia	Mar. 2-16	10 cases.	
Jacksonville, Florida	Mar. 9-16	4 cases.	
Chicago, Illinois	Mar. 9-16	8 cases.	
Terre Haute, Indiana	Feb. 4-11	2 cases.	
Wichita, Kansas	Mar. 8-16	15 cases.	
Lexington, Kentucky	Mar. 8-16	1 case.	
New Orleans, Louisiana	Mar. 8-16	14 cases.	4 deaths.
Baltimore, Maryland	Mar. 8-16	1 case.	
Bay City, Michigan	Mar. 8-16	2 cases.	
Detroit, Michigan	Mar. 8-16	4 cases.	
West Bay City, Michigan	Mar. 1-16	1 case.	
Minneapolis, Minnesota	Mar. 2-16	11 cases.	
Winona, Minnesota	Mar. 8-16	26 cases.	
Omaha, Nebraska	Mar. 2-9	5 cases.	
Manchester, New Hampshire	Mar. 8-16	3 cases.	
Elmira, New York	Mar. 2-9	1 case.	
New York, New York	Mar. 8-16	37 cases.	6 deaths.
Cleveland, Ohio	Mar. 8-16	46 cases.	
Toledo, Ohio	Mar. 2-16	3 cases.	
Erie, Pennsylvania	Mar. 8-16	1 case.	
McKeesport, Pennsylvania	Mar. 8-16	3 cases.	
Pittsburgh, Pennsylvania	Mar. 8-16	2 cases.	
Steelton, Pennsylvania	Mar. 8-16	5 cases.	
Memphis, Tennessee	Mar. 8-16	20 cases.	
Nashville, Tennessee	Mar. 8-16	14 cases.	
Salt Lake City, Utah	Mar. 2-16	97 cases.	
Aguas Buenas, Porto Rico	Feb. 8—Mar. 5	2 cases.	
Bayamon, Porto Rico	Feb. 8—Mar. 5	2 cases.	
Caguas, Porto Rico	Feb. 8—Mar. 5	2 cases.	
Ciales, Porto Rico	Feb. 8—Mar. 5	2 cases.	
Morovis, Porto Rico	Feb. 8—Mar. 5	2 cases.	
Ponce, Porto Rico	Feb. 8—Mar. 5	98 cases.	1 death.
Quebradillas, Porto Rico	Feb. 8—Mar. 5	4 cases.	
Rio Piedars, Porto Rico	Feb. 8—Mar. 5	1 case.	
San Juan, Porto Rico	Feb. 8—Mar. 5	7 cases.	
Manila, Philippines	Jan. 29—Feb. 9	11 cases.	

Small-pox—Foreign.

Pernambuco, Brazil	Jan. 17-31		25 deaths.
Rio de Janeiro, Brazil	Feb. 16-28		36 deaths.
Bracebridge, Canada	Mar. 2	2 cases.	
Georgian Bay, Canada	Mar. 2	Prevalent.	
Orillia, Canada	Mar. 2	1 case.	
Penetanguishine, Canada	Mar. 2	1 case.	
Toronto, Canada	Mar. 2	4 cases.	
Cairo, Egypt	Feb. 11-25		3 deaths.
Paris, France	Feb. 8—Mar. 2		21 deaths.
London, England	Feb. 23—Mar. 2	1 case.	
Glasgow, Scotland	Mar. 1-8	46 cases.	12 deaths.
Bombay, India	Feb. 12-19		7 deaths.
Madras, India	Feb. 9-15		5 deaths.
Tuxpan, Mexico	Feb. 25—Mar. 4		1 death.
Moscow, Russia	Feb. 14-23	4 cases.	
St. Petersburg, Russia	Feb. 16-23	3 cases.	
Moscow, Russia	Feb. 16-23	12 cases.	
Barcelona, Spain	Jan. 1—Mar. 2		253 deaths.
Corunna, Spain	Feb. 23—Mar. 2		1 death.
Valencia, Spain	Feb. 8-24	1 case.	

Yellow Fever.

Havana, Cuba	Mar. 4-11	1 case.	

Cholera.

Bombay, India	Feb. 12-19		3 deaths.
Madras, India	Feb. 9-16		12 deatbs.
Singapore, Straits Settlement	Jan. 26—Feb. 2		10 deaths.

Plague.

Cape Town, Africa	Feb. 16-26	44 cases.	6 deaths.
Bombay, India	Feb. 12-19		897 deaths.
Manila, Philippines	Jan. 19—Feb. 9	7 cases.	4 deaths.
Singapore, Straits Settlement	Jan. 26—Feb. 2		1 death.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from March 16 to March 23, 1901:

BAILEY, GUY G., Captain and Assistant Surgeon, will proceed to the Presidio of San Francisco for temporary duty.

BRATTON, THOMAS S., Captain and Assistant Surgeon, will

report to the commanding officer of the transport *Indiana* for duty in charge of convalescents and sick while *en route* to San Francisco, and return to this division.

CARR, LAWRENCE C., Major and Surgeon, is appointed chief surgeon of the District of Santiago, relieving IRA A. SHIMER, First Lieutenant and Assistant Surgeon.

GRISWOLD, RICHARD S., First Lieutenant and Assistant Surgeon, will proceed to Manila and report to the president of the Army Medical Board for examination for appointment as assistant surgeon.

PLUMMER, GEORGE R., Captain and Assistant Surgeon, will proceed to San Francisco for transportation to Manila.

WILLIAMS, ADRIAN D., Acting Assistant Surgeon, will report to the commanding officer, First Battalion, Eleventh Infantry, at Fort Columbus, N. Y., to accompany that battalion to the Philippine Islands.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending March 23, 1901:

DISEASES.	Week end'g Mar. 16.		Week end'g Mar. 23.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	19	10	23	5
Scarlet Fever	608	29	607	40
Cerebro-spinal meningitis	0	5	0	4
Measles	234	6	316	4
Diphtheria and croup	324	58	300	59
Small-pox	37	6	41	6
Tuberculosis	327	189	278	165

A Reception to Dr. Charles L. Dana was tendered by the Medical Club of Philadelphia, at the Hotel Bellevue, on the evening of March 29th.

New York School of Clinical Medicine.—Dr. Heinrich Stern has been elected professor of internal medicine at this institution.

Change of Address.—Dr. John Milton Holt, from the United States Marine-Hospital Service, Cairo, Illinois, to the United States Marine-Hospital Service, Chicago.

The First Woman Medical Graduate of Peru is said by the *Woman's Medical Journal* for February, on the authority of the *Cronica medica,* of Lima, to be Señorita Laura Rodriguez, who graduated in 1900.

The American Congress of Tuberculosis.—The second annual meeting of the American Congress of Tuberculosis will be held at the Grand Central Palace on May 15th and 16th, in joint session with the Medico-legal Society of New York. A dinner will be given for the members and guests.

The Date of Trial Set for the Bellevue Hospital Nurses.—Clinton L. Marshall and Edward O. Dean, the Bellevue nurses under indictment for manslaughter in connection with the death of Louis J. Hilliard in the insane pavilion of Bellevue Hospital, will be placed on trial on the first Monday in May.

Another Attempt Made to Burn a Pest House.—The new isolation hospital at Mason City, Iowa, which would have been ready for occupancy in a few days, was set on fire recently. Owing to the damp condition of the material the loss was not heavy. The city council has offered a reward of $2,000 for the arrest or apprehension of the criminal.

The Russian Student Riots Affect the Women Medical Students.—As a result of the recent student riots at St. Petersburg, Russia, all the higher courses for women in the Medical Institute of the University of St. Petersburg have been closed indefinitely by official orders.

The State Commission Lunacy Bill a Law.—Governor Odell, of New York, has signed Senator Brackett's bill providing that the president of the State commission in lunacy shall be a physician of ten years' experience, who has had five years' experience in the treatment of mental and nervous diseases or two years' experience in the treatment of committed insane.

The Milwaukee Medical Colleges Seek Tax Exemption.—In the Wisconsin legislature the Assembly committee on assessment and collection of taxes is considering the matter of exempting from taxation the real estate of medical colleges in first-class cities. Under the present law the Milwaukee Medical College's property is exempt. There is another college in Milwaukee—the Physicians and Surgeons'—which does not come under the law.

An Addition to the Medical Building of McGill University.—Another large addition is to be made to the medical building of McGill University at Montreal, Ont., which, when completed, will greatly increase the lecture room and laboratory accommodation of the building. The addition will take the form of a wing. It will be four stories in height, with suitable basement, and will contain a large number of lecture theatres, museums, and chemical laboratories.

A Syrian Doctor Gets an Army Appointment.—Dr. Najib Said Taqy-ud-Din, who took his degree at the Maryland University last year, has been appointed acting assistant surgeon in the United States army and stationed at Columbus Barracks, Ohio. The Protestant Syrian College annually sends to the Maryland University two or three students. Dr. George D. Anawati, who is also a Syrian and who graduated with Dr. Taqy-ud-Din, returned to the Orient and is now practising his profession in Egypt.

Minnesota Prohibits the Marriage of the Insane, the Epileptic, and the Idiotic.—The State Senate of Minnesota has passed Senator Chilton's bill prohibiting the marriage of insane, epileptic, and idiotic persons and requiring a medical certificate for all applicants for marriage licenses. Amendments were adopted making the physician's certificate not quite so sweeping as they had been originally and to permit the marriage of any feeble-minded person over forty-five, the bill originally having extended such permission only to women.

The Bell Bill Dead.—On the motion of the author, the Bell bill, which was drawn up by a committee of the New York Academy of Medicine, with a view to preventing the illegal practice of medicine by Christian Scientists and similar charlatans, was laid aside in the Senate of the New York legislature. This is looked upon as a virtual admission that if pressed to a vote the measure would be defeated. It is possible, however, for the bill to be called up and passed later. The adherents of Christian Science regard the action taken by Senator Bell as an admission of defeat.

Commencement Exercises.—One of the first of the medical colleges to close the student year is the Medico-chirurgical College of Kansas City, Mo., the commencement exercises of which took place on March 20th. The graduating class numbered fourteen. The faculty address was delivered by Dr. J. M. Lansdale.——Forty-three students graduated from the Kansas City Medical College on March 22d, attending the annual college dinner in the evening.——The graduating exercises of the Woman's Medical College at Kansas City were held on March 21st, the class numbering nine.

New York City's Ice Crop Contaminated.—A menace to the health of New York was proclaimed at the meeting of the Manufacturers' Association, Brooklyn, on March 18th, in the report of Professor William P. Mason, who declared that the ice supply coming from the Hudson River above Albany was contaminated with sewage. Professor Mason was engaged some time ago by the association to investigate the purity of the ice. He presented a map of the Hudson River between Cohoes and Albany. This district, he said, contained from sixty-five to seventy icehouses, and ice taken from below the juncture of the Hudson and the Mohawk contained the *Bacillus coli,* showing the presence of sewage. Professor Mason said that the sewage of many towns and cities entered the river along this stretch, and it was inevitable that contamination of the water and ice should follow. After some discussion a resolution was adopted asking the State board of health to investigate the report.

Leprosy in the Philippines.—Marine-Hospital Surgeon Perry, chief quarantine officer for the Philippines, has forwarded to Washington an official report on leprosy in the Philippines. He says: "Leprosy is widely prevalent over the entire archipelago, but the greatest number of cases exists in southern Luzon and the southern islands. It is quite prevalent in Cebu, the number of lepers being estimated at 2,000. The total number of cases in the islands is estimated at 20,000. The cases in Manila and surrounding country are isolated in a substantial hospital, under the auspices of the Manila board of health. There is also a leper hospital at Cebu. An attempt at segregation and isolation of the lepers in the islands has been made by the army officials, and several months ago orders were issued directing that a hospital in each district be set aside for the isolation of the lepers, and a board of army officers was detailed recently to investigate several islands for the purpose of selecting a suitable one for a leper colony."

Foreign University News.—Professor Anton Freiherr von Eiselsberg, of Königsberg, has been selected to succeed the late Dr. Édouard Albert as professor of surgery at Vienna. Professor Eiselsberg studied under Billroth and has held professorships at Utrecht and Königsberg, and has been a frequent contributor to surgical literature.——Professor Albrecht Kössel, of Marburg, has been nominated professor of physiology in the Heidelberg University.——Dr. Yewetzky, of Moscow, has been nominated professor of ophthalmology at the University of Dorpat.——On the 14th of January the new dermatological clinic was opened at Leipzig. The lecture hall has seats for eighty-two students, and contains all the latest forms of projection apparatus for demonstration.——Dr. Andreas Michel has been chosen to act as director of the dental institute, which was formerly a private institution, but which has been incorporated into the University of Würzburg.——Dr. J. Fibinger has been nominated professor of pathological anatomy at Copenhagen, caused by the death of Professor Lange.——Dr. P. A. Minakow has been made extraordinary professor of legal medicine at the University of Moscow.

Foreign News Notes.—Dr. Franziska Tiburtius, the oldest female practitioner of medicine in Berlin, recently celebrated the twenty-fifth anniversary of her graduation as doctor of medicine. She studied at Zurich from 1871 to 1876, and for half a year was with Professor Winckel at Dresden. She has practised in Berlin ever since 1877.——Professor Grassi has received the decoration of the Order of the Golden Crown from the Society of Italian Agriculturists in recognition of his valuable work on malaria.——The thirtieth congress of the German Surgical Society will be held in Berlin from the 10th to the 13th of April, the preliminary exercises occurring on Tuesday evening, April 9th, at the "Spartenbrau, 172 Friederich Strasse." The congress will be presided over by Dr. Czerny, of Heidelberg.——Dr. Dubrueil, formerly professor of surgery at Montpelier, is dead.——Dr. Duclos, formerly professor of internal medicine at the University of Tours, died recently.——Dr. Patrick Manson gave a dinner on March 6th to the teachers of the London School of Tropical Medicine, when a testimonial and address were presented by the teachers to Dr. D. C. Rees, who has recently resigned the office of medical tutor of the school.——Professor Nothnagel has been elected an honorary member of the Society for Internal Medicine of Berlin.——Dr. von Heusinger, professor of forensic medicine at Marburg, died recently.——Dr. H. A. Schapiro, one of the most popular physicians of St. Petersburg and a professor in the clinical institute of Princess Helene Palowna, is dead at the age of forty-eight.——During the examination year of 1899-1900 1,384 physicians were licensed, as against 1,364 for the preceding year. The number of licenses to practice issued in 1880-81 was 556, the number rising in 1890-91 to 1,570, and then gradually declining to 1,294 in 1896-97.——The death of Dr. Emil Kammerer, chief physician to the city of Vienna, occurred on March 6th, in the fifty-fifth year of his age. At one time he was private assistant to Dr. Billroth, and contributed many valuable papers to the medical press on hygiene and related topics.

The Nineteenth Congress for Internal Medicine will be held in Berlin from the 16th to the 19th of April under the presidency of Dr. Senator, of Berlin. A large number of leading authorities in medicine have agreed to take part in the proceedings of the association.

The New York Academy of Medicine will meet on April 4th, when papers will be presented on The Duty of the Public to the Medical Profession, by Dr. D. B. St. John Roosa and Dr. W. H. Thomson. Dr. A. H. Smith, Dr. F. R. Sturgis, Dr. A. Jacobi, Dr. F. P. Kinnicutt, and others will take part in the discussion of the papers.

Officers Elected by the New York Medico-surgical Society.—At the recent annual meeting of the New York Medical-surgical Society the following officers were elected: President, Dr. Robert A. Murray; vice-president, Dr. A. R. Robinson; member of the executive committee, Dr. W. Duff-Bullard; secretary, Dr. J. Arthur Booth.

The St. Louis Medical Society of Missouri.—At the last regular meeting, on Saturday evening, the 23d inst., the following papers were read: A Preliminary Report of a Case of Total Extirpation of the Stomach, with presentation of specimen, by Dr. N. B. Carson, and The Physiological and Clinical Aspects of Dr. Carson's Case of Gasterectomy, by Dr. Jesse S. Myer.

The Fifth Triennial International Congress of Physiologists will be held at Turin from the 17th to the 23d of next September. The University Institute of Physiology will be used as the headquarters. Professor Sherrington, of the Thompson-Yates laboratories, University College, Liverpool, is the general secretary for the English-speaking countries, and will furnish any information desired as to the programme of the congress.

Medical Experts Discussed at Medico-legal Society Meeting.—Members of the Medico-legal Society declared themselves against the medical expert at the meeting on March 20th, held at the Hotel St. Andrews. R. L. Prichard read a paper registering an emphatic protest against the admission of testimony of experts. Stiles Judson, Jr., of the Bridgeport bar, read a paper on Law and Medicine, and Amnesia was the subject of an essay by L. J. Rosenberg and N. E. Aronstam, of Detroit.

The American Laryngological, Rhinological, and Otological Society, which, as announced in our last issue, was to meet at the New York Academy of Medicine from May 30th to June 1st, has decided to change the dates of its meeting to May 23d, 24th, and 25th, so as to avoid having the meeting occur on the same dates as have been selected by the American Climatological Society. Those desirous of presenting papers should lose no time in forwarding the titles to the secretary, Dr. Wendell C. Phillips, 350 Madison Avenue, so that he may be able to include them in the printed programme.

The Kings County Medical Society.—The Medical Society of the County of Kings, at a recent meeting, listened with interest to several addresses under the head of The Scope and Support of Hospitals. Dr. John Harrigan spoke on The Advantages to the Public and to the City of the Non-municipal Hospital. Dr. J. T. Duryea spoke on the subject City *versus* Independent Hospitals, and other speakers were Dr. A. C. Bunn, who spoke on Church Hospitals, and Dr. W. M. Hutchinson, who spoke on Municipal as Compared with the Private Care of Infants and Children. After the several addresses had been made there was a discussion of the subject in general by Dr. A. S. Ambler, Dr. F. Weisbrod, Dr. W. C. Wood, Dr. J. M. Van Cott, and others.

The Medical Society and its Work of Reforming New York's Milk Dealers.—The milk commission of the Medical Society of the County of New York held a meeting on March 20th at the New York Academy of Medicine. Notices had been sent to all milk dealers in the city, inviting them to be present, and about forty were there. Dr. Henry Dwight Chapin, the chairman, explained the proposition which the commission had to lay before the trade, as the result of investigations extending over a considerable period. The other members of the commission are Dr. Walter Lester Carr, Dr. Abraham Jacobi, and Dr. Joseph E. Winters. The commission has decided to give labels to such dealers as submit their premises to inspection by experts employed by the commission and maintain the required standards.

An International Congress to Discuss Yellow Fever.—Quite an extensive project is likely to take form in a few days for an international congress of representative scientists, sanitarians, and doctors of the United States, Central and South America for the purpose of considering plans for the eradication of yellow fever, not so much by cure as by prevention. The plan took shape recently at the medical congress at Havana, when the Argentine minister at Washington, Dr. Wilde, suggested an international congress of that character. As part of the project, he suggested the raising of a common fund, to be assigned to various localities, to carry on the work of sanitation. He urged that by joint effort of all western countries the disease could be removed entirely. As an instance of this, he cited Buenos Ayres, where a system of sanitation has been adopted which does away with all fear of yellow fever. The medical congress by unanimous vote approved Dr. Wilde's plan, and steps are now being taken for a practical realization of the proposed congress.

The Medical Society of the Missouri Valley.—The thirteenth semi-annual meeting of the Medical Society of the Missouri Valley was held in Omaha, March 21st. In the evening a banquet was given. Dr. V. L. Treynor, of Council Bluffs, is president of the society, and the other officers are as follows: Dr. B. B. Davis, Omaha, first vice-president; Dr. F. E. Sampson, Creston, second vice-president; Dr. T. B. Lacey, Council Bluffs, treasurer; Charles Wood Fassett, St. Joseph, secretary. Papers on medical subjects were read by the following: Dr. A. B. Somers, Dr. J. Cameron Anderson, Dr. J. M. Aikin, Dr. Millard Langfeld, Dr. D. C. Bryant, Dr. J. E. Summers, Jr., Dr. Charles C. Allison, Dr. H. Gifford, Dr. H. P. Hamilton, Omaha; Dr. E. A. King, Blockton, Ia.; Dr. H. D. Jerowitz, Kansas City, Mo.; Dr. C. H. Wallace, Dr. Daniel Morton, Dr. O. B. Campbell, Dr. M. F. Weymann, St. Joseph; Dr. J. W. Kime, Fort Dodge, Ia.; Dr. J. W. Cokenower, Des Moines; Dr. A. L. Wright, Carroll, Ia.; Dr. Inez C. Philbrick, Lincoln; Dr. Emma Warner Demaree, Roca, Neb.

The New York County Medical Society.—Dr. George B. Fowler, president of the New York County Medical Society, announced at the meeting of that organization held at the Academy of Medicine on March 25th, that each member was expected to write a letter to the Assemblyman of his district requesting him to support the Bell bill. Resolutions were adopted protesting against the sanctioning by the legislature of "any measure giving the right to treat disease unless a compliance with the medical laws of the State is a prerequisite." The reason for these resolutions, as stated in the preamble thereto, is the recent introduction of bills legalizing the practice of osteopathy and the giving of the right to treat disease to "a class of masseurs." Dr. William K. Kubin read a paper on The Importance of Aseptic Vaccination. This was followed by a discussion on the same subject by Dr. John H. Huddleston, of the board of health; Dr. George H. Fox, and Dr. Charles W. Allen, all of whom agreed that shields for protecting vaccination sores had done more harm than good, no device having yet been invented which would not irritate the inflamed spot. Dr. Fox suggested the theory that it would be well for physicians to remove vaccination scabs artificially.

The German Medical Society of the City of New York will meet at the Academy of Medicine on Monday, April 1st, when a paper will be presented on Atonia Gastrica and a New Method of Treatment by Dr. A. Rose. The paper will be discussed by Dr. L. Weber, Dr. K. Dauber, Dr. William M. Leszynsky, and others. A paper will also be presented by Dr. Freudenthal on Primary Syphilitic Affections of the Nose.

Measles.—An epidemic of measles in a light form has visited Upper Alton, Ill., where 150 children are reported ill with the disease.

Scarlet Fever.—Stringent measures are being taken by the board of health of White Plains, N. Y., to prevent the spread of scarlet fever, which has broken out there.——Conditions are also reported quite serious at Montreal, Can.

Diphtheria has made its appearance at Philadelphia and at Montclair, N. J. At the latter place the patient was an employee of a dairy, but, after the place had been quarantined, permission was given for the resumption of the sale of milk.

An Epidemic of Mumps Closes a Chicago School.—Mumps were responsible for the closing of two departments in Lake Forest University at Chicago. An epidemic struck these divisions, and when the number of hospital patients reached twenty the trustees decided to close the classes most affected until April 3d, the end of the regular spring vacation. As this announcement was made all the students in these departments packed their trunks hurriedly and left for their homes.

Small-pox.—Several cases of small-pox were reported during the week from St. Francis Hospital in New York city, as well as one or two from Brooklyn. Reports of the epidemic also continue to arrive from various points in Michigan. At Harrisburg, Pa., 750 pupils in the public schools refused to obey the law and be vaccinated, and they were given several days' grace in which to change their minds or else be refused admission to the schools.——Robert Martin, a lace importer of New York, who has recently been discharged from the small-pox hospital on North Brothers Island, has publicly charged the hospital authorities with neglecting and abusing the patients. In order to completely refute the charges the New York city health commission invited representatives from the several daily newspapers to accompany them on a tour of inspection of the island, to be made without any previous intimation to the hospital authorities of the proposed inspection. The tour resulted in a full and complete refutation of the charges, all the reporters testifying to the cleanliness and care exercised in the treatment of patients.——New cases continue to occur in New York city, four having been reported on March 26th, while one, the first, was reported from Staten Island.

The Health of Havana.—The statistics just published by Major W. C. Gorgas, chief sanitary officer of the Department of Cuba, show that the death rate for February in Havana is lower than it has been for any February for which authentic records have been kept. The last February under the Spanish rule, 1898, showed a death rate of 82.32 per 1,000, while statistics for last February, the third February under American rule, show a rate of 19.32 per 1,000, a figure which is lower than that for January in several American cities, including Baltimore, Cincinnati, Jacksonville, Newark, New Orleans, New York, and Washington. In many of these the death rate ranges up to from 25 to 29 per 1,000. Major Gorgas is very sanguine as regards the future of Havana so far as yellow fever is concerned, and says that Havana now has a lower death rate than the Gulf cities generally and that he thinks it probable that within a year or two Havana will have to take steps to protect itself from infection from American cities. In February, 1900, seventeen new cases of yellow fever occurred in Havana, and in February, 1901, only eight new cases occurred, notwithstanding the fact that the number of non-immunes present in the city was very much larger this year than last. Besides disinfecting the houses with formalin and other disinfectants, the authorities now screen the rooms occupied by yellow fever patients, kill all the mosquitoes in the building with the fumes of pyrethrum powder, and cover with kerosene oil all places about the building where mosquitoes can breed, and also kill all the mosquitoes in all adjoining buildings. It is hoped by vigorous prosecution of these measures to markedly decrease the yellow fever during the coming summer.

Munificent Gift to an English Hospital.—The heir to the late Lord Armstrong, inventor of the Armstrong guns, has given five hundred thousand dollars to the Victoria Jubilee Infirmary at Newcastle-on-Tyne.

Hospital Appointment.—Dr. George R. White, formerly of Southampton, L. I., has been appointed to a position in the clinic of the Woman's Hospital in New York. Dr. White returned a short time ago from the Philippines, where he was with the army as surgeon.

The Last of St. Luke's Hospital Site Sold.—Judge McAdam, of the Supreme Court of New York, has granted authority to the officials of St. Luke's Hospital to sell the remaining five lots of land on the southwest corner of Fifth Avenue and Fifty-fifth Street, the last of the original plot of thirty-two lots on the old site of the hospital, for $575,000. According to the petition upon which authority was given to make the sale, the market value of the remaining real estate of the hospital is $2,326,000, while the cash value of its personal assets is placed at $1,180,260. The debts and liabilities are about $5,000.

Proposed Change in Administration of New York Hospitals Abandoned.—The Senate committee on cities in the New York legislature has agreed to strike out of the proposed amendments to the charter of the city of New York that section which recommended that Bellevue and the allied hospitals, viz., Fordham, Harlem, Gouverneur, and the Emergency Hospital, be placed under the administration of a board of seven trustees, the board to be so appointed that the term of office of one member of the board would expire each year. These trustees were to be appointed by the Mayor, but provision was made that certain societies should have an opportunity to make nominations for these appointments. The power of the Mayor to make the appointments was, however, in no degree abridged. The action of the committee in striking out this amendment is practically final, so far as this session of the legislature is concerned, as it will prevent its consideration by the legislature.

An Emergency Hospital for the Pan-American Exposition has been erected near the west end of the mall at the exposition at Buffalo. The hospital, which is for the most part but one story in height, has a frontage of 90 feet on the mall, and the main wing has a depth of 38 feet. The exterior walls are finished in bright colors and the general architectural effect is that of a low, adobe mission house. The interior fittings of the hospital are thoroughly up to date, comprising an office with telephone and electrical annunciators, etc., two male wards with seven cots each, a woman's ward with twelve cots, bath-rooms, linen closets, offices and quarters for the nurses, physicians, etc.; waiting-rooms, kitchen, pantry, and dining-rooms, stables for the electric ambulances and for a gasolene motor ambulance. Dr. Roswell Dark is the director, Dr. Vertner Kenerson is deputy director, and Dr. Alexander Allen is the resident physician of the hospital. Up to March 1st, 504 cases had been treated on the grounds, of which only one was fatal. During the Omaha Exposition about 3,000 cases were treated, and during the World's Fair in Chicago 11,602 cases were cared for in the hospital, in 69 of which death occurred.

Hospital Buildings and Endowments.—A bill has been introduced in the House by Dr. Hemsted, of St. Paul, Minn., for the building of a sanitarium for consumptives. An appropriation of $150,000 is asked, and also a site somewhere in the pine regions of the State. ——The new German Hospital at Buffalo, N. Y., was to be opened for the reception of patients in March. The hospital has ward accommodations for seventy patients and private rooms for twenty-five more.——Residents of that neighborhood in Albany where the proposed new Hospital for Imbeciles is to go up are agitating the question of the selection of a new site.——At a recent meeting of the board of directors of the Montefiore Home for Chronic Invalids in New York, the title and charter of the institution were changed to the Montefiore Hospital for Chronic Diseases. The only reason given for the change of title is that many people misconstrued it and believed the institution to be a home.——Rose Hawthorne Lathrop has conveyed the property at 426 Cherry Street, New York, to the Society for the Relief of Incurable Cancer, a corporation recently formed under the laws of New York. The deed specifically recites that the corporation shall use the premises only as a free home for poor persons suffering from cancer. If it becomes impracticable to use it for this purpose, the directors can sell the property and devote the proceeds to the purchase of other property for similar use.——The Platt Pavilion, the latest addition to the New York Eye and Ear Infirmary, just erected to the memory of James N. Platt, through the munificence of the family of the late Justin A. Bliss, has been practically completed, and was opened for public inspection on February 20th. A feature of the building is isolated wards for the treatment of cases of contagious ophthalmia.——The Post-Graduate Medical School and Hospital, New York City, has received an anonymous gift of $15,000——Plans have been drawn for a $50,000 hospital to be built at Oshkosh, Wis., by a stock company, of which Dr. C. W. Oviatt is at the head.——The New York State senate finance committee has reported favorably the bill appropriating $120,000 for a tuberculosis hospital in the Adirondacks.——The new fireproof addition to the Lutheran Hospital at St. Louis has been opened. Its cost was $25,000.——Ground has been broken for the addition to the National Jewish Hospital for Consumptives at Denver, Col.——In the annual report of the superintendent of the City and County Hospital of St. Paul, Minn., he recommends the erection of a new building for a hospital for contagious diseases at a cost of $20,000 to $30,000. ——The movement to convert the Marcella Street home property in Boston into a home for consumptives has aroused some opposition on the part of citizens residing in the neighborhood. A motion to appropriate $40,000 for the repairs required should the home be used for consumptives has been introduced in the Boston common council.——Among the last of the measures enacted by the expiring congress were the Sundry Civil bill, which embraces the following appropriations: For support of the Government Hospital for the Insane, $338,000; for Providence Hospital, $50,000; for Garfield Hospital, $19,000; for laboratories for the Department of Agriculture, $200,000.——In the report of the Brooklyn and Queens (N. Y.) Charities Department for the last quarter of 1900 General Medical Superintendent J. T. Duryea comments upon the pressing need of a separate institution in Brooklyn for the cure of alcoholic patients. ——A seven-story hospital building will be built by the French Benevolent Society at Nos. 450, 452, 454, and 456 West Thirty-fourth Street. It will cost $400,000, the greater part of which sum, it is said, has already been raised. The present home of the institution is at Nos. 320 and 322 West Thirty-fourth Street. It is expected that the new home will be ready for occupancy in about a year.——The contract for the foundation work of the new City Hospital at St. Louis, Mo., has been awarded, and work will soon be begun.——It has been decided to erect two additions to St. Francis's Hospital, Cincinnati, O., to cost $10,000, and to be devoted to patients suffering from cancer.

Births, Marriages, and Deaths.

Married.

Brown—Poole.—In St. Louis, on Wednesday, March 13th, Dr. Arthur C. Brown, of New York, and Miss Annie L. Poole.

Caples—Stelle.—In Milwaukee, on Saturday, March 23d, Dr. Byron Caples, of Waukesha, Wisconsin, and Miss Grace Harriet Stelle.

Holman—Timmerman.—In St. Clair, Minnesota, on Thursday, March 14th, Dr. Carl Holman and Dr. Endora Madge Timmerman.

Lewis—Landfear.—In Brooklyn, on Thursday, March 21st, Dr. Stuart Lewis and Miss Jennie Campbell Landfear.

Died.

Bowen.—In Fort Monroe, Virginia, on Tuesday, March 12th, Dr. Charles H. Bowen, aged sixty-five years.

Burge.—In Brooklyn, on Sunday, March 24th, Dr. John Henry Hobart Burge, in the seventy-eighth year of his age.

Chapman.—In Birmingham, Alabama, on Saturday, March 23d, Dr. George C. Chapman.

Ewing.—In St. Louis, on Saturday, March 16th, Dr. James A. Ewing, in the thirty-third year of his age.

Fraser.—In Philadelphia, on Thursday, March 21st. Dr. Edward Clarence Fraser, in the sixty-first year of his age.

Hess.—In New York, on Sunday, March 24th, Dr. Ralph J. Hess, in the twenty-seventh year of his age.

Lovejoy.—In Washington, on Monday, March 18th, Dr. James W. H. Lovejoy, aged seventy-six years.

Medill.—In Denver, on Thursday, March 14th, Dr. W. W. Medill, in the thirty-third year of his age.

Valentine.—In Brooklyn, on Friday, March 22d, Dr. Richard K. Valentine, in the forty-sixth year of his age.

Wren.—In New York, on Saturday, March 23d, Dr. George W. Wren, of Bridgeport, Connecticut, in the twenty-seventh year of his age.

Pith of Current Literature.

Journal of the American Medical Association, March 23, 1901.

Elbow Fractures and the X-ray. By Dr. W. W. Grant.—The author believes that the only tenable conclusion is that the skiagraph should never be used as the determining factor in regard to the existence and pathology of fractures, but may be, in honest and capable hands only, used to supplement or confirm opinions reached without it.

General Bodily Resistance as a Factor in Nose and Throat Disease. By Dr. Frank Louis Stillman.—The author lays stress upon the harmfulness of treating the local remedy alone, and he makes a plea for a more intelligent general treatment. The specialist should always remember that he is physician first and specialist afterward.

Systemic Factors in Catarrhal Deafness. By Dr. Sargent E. Snow.—Among these systemic factors, upon which the author lays particular stress, are, (1) a sluggish skin reaction; (2) low vital forces; (3) torpid liver; and (4) a lack of proper exercise. The author's experience has taught that failure to improve the hearing power means a fault either in the patient or in the physician, and not in the local ear condition. A knowledge of hygienic care and how to increase bodily resistance is a distinct obligation upon the otological specialist.

Diagnosis and Prognosis of Ear Disease. By Dr. B. Alexander Randall.—The author, while advising the possession of a more complete armamentarium for the aurist, is careful to add that it is the eye and the hand behind the instrumental aids that constitute the real means of diagnosis, and that "special" training is by no means essential if a true physician, with gentle hand and observing eye, undertakes these studies.

Effect of Alcohol on the Nervous System, the Mind, and Heredity. By Dr. Albert E. Sterne.—If the true import of the alcohol question were understood, and a proper conception of the effect of alcohol on the physical and mental qualities were gained, the author believes that few generations would pass before we should find, in place of our institutions for restraint and punishment, hospitals for the cure and care of a class of patients more ill, often, than those whom we generally regard as sick or diseased.

A Case of Combined Gastric and Aural Vertigo, with a Discussion of the Pathology of such Cases. By Dr. G. W. McCaskey.

Heart Tonics. By Dr. John N. Upshur.—The author discusses in particular those agents which, under a strict classification, are to be considered as cardiac depressants, but yet are, in the broadest sense, indirect heart tonics, because they regulate heart action. It is not a new thing to see digitalis given to relieve a patient suffering from disturbed heart action, excessive in tension because of hypertrophy, when really it is emphatically contra-indicated, and the truest tonic is an agent like aconite, nitroglycerin, or veratrum viride, belonging to the class of pronounced motor depressants.

The Therapeutic Application of the Organic Extracts. By Dr. O. T. Osborne.

Treatment of Addison's Disease. With Case. By Dr. John V. Shoemaker.—The use of suprarenal extract is advised, though the author doubts its efficacy in cases in which the tuberculous process is advanced or active. The cases in which organotherapy is useful are probably those in which there is a certain amount of atrophy, sclerosis, or inflammatory alteration, but in which a portion of the gland or glands is still functionally potent.

Quantitative Tests for Proteolysis. By Dr. A. L. Benedict.

Anastomosis of the Ureters with the Intestine. A Historical and Experimental Research. By Dr. Reuben Peterson (*concluded*).—The primary mortality of uretero-intestinal anastomosis, both in experimental work on animals and in man, is exceedingly high. All efforts to prevent ascending renal infection in animals or in man, where the ureter has been implanted without its vesical orifice, have proved futile, and the author concludes that this operation is unjustifiable. The results of uretero-intestinal anastomosis through the formation of a vesicorectal fistula have not been favorable thus far. The primary mortality of uretero-trigono-intestinal anastomosis is low for an operation of this magnitude; and, while it cannot be denied that ascending renal infection may occur after this operation, the infection, as a rule, is of such a type that the chances of the individual's overcoming it are good. Hence the operation of implanting the vesical flap with its ureteral orifice into the intestine is a justifiable surgical procedure.

Medical Record, March 23, 1901.

1. A Case of Ambulatory Typhoid Fever with Intestinal Perforation. 2. A Case of Traumatic Rupture of the Intestine; Operation; Recoveries. Remarks concerning Operation in Cases of Typhoid Fever with Intestinal Perforation. By Dr. A. A. Berg.—The existence of typhoid fever does not contra-indicate an operation; for typhoid patients bear operation almost as well as otherwise healthy individuals. The repair of a ruptured typhoidal ulcer attended with extravasation should be undertaken so soon after the perforation as the patient can stand the necessary laparotomy and possible eventration. Operation in the preperforative stage is not to be considered, for a local peritonitis does not always signify an impending perforation, nor does perforation alway imply extravasation. As we have no means of telling which ulcers will perforate, an operation undertaken to forestall such a perforation is often unnecessary. Extravasation can usually be diagnosticated early if strict attention is paid to the recognition of the symptomatology.

Chronic Gonorrhœa and Marriage. By Dr. Ludwig Weiss.—The author's position is that we should give permission to marry to those having had gonorrhœa when, after repeated and careful microscopical examination of slide specimens, and an exhaustive bacteriological and microscopical examination of the threads and of the secretions of the prostate and seminal vesicles, done under the strictest rules and with the aid of Gram's method, the presence of gonococci cannot be demonstrated.

Excision of Aneurysm, with a Report of Two Cases of Femoral Aneurysm so Treated. By Dr. George Ryerson Fowler.—The author believes that excision or ablation of aneurysm will be the operation of choice in all cases in which the diseased condition of the vessel is fairly circumscribed, and advanced inflammatory or other complications rendering the operation extraordinarily difficult, are absent.

Conservatism in the Diagnosis and Treatment of Prostatic Hypertrophy. By Dr. James R. Hayden.—Judging from the recorded histories of the large number of patients now being operated upon, the author believes that their symptoms hardly warrant such heroic methods. He asserts, moreover, that, as a general rule, these patients seem to be advised to undergo immediate operation before having had the benefit of an intelligent and sufficiently long palliative or preparatory treatment. This treatment consists in keeping the urine of as normally acid reaction as possible, both by internal medication and by a properly selected diet. Boric acid or urotropine is efficient when the urine is neutral or alkaline. In the opposite condition, the alkalies, either alone or combined with hyoscyamus, kava kava, triticum repens, or uva ursi, are of use. Hot saline rectal irrigation will relieve painful inflammatory symptoms. Hæmorrhoids should always receive prompt and efficient treatment.

Subphrenic Abscess as a Complication in Appendicitis. By Dr. J. McF. Gaston, Jr.

Surgical Treatment of Abdominal Dropsy Following Cirrhosis of the Liver. By Dr. James T. Jelks.—The operation suggested by the author consists of abdominal section, preferably between the umbilicus and the ensiform cartilage, evacuation of the accumulation of fluid, and scraping of the parietal peritonæum with a curette or rubbing off of its epithelium by means of a gauze sponge. The superior portion of the liver and the peritonæum covering the diaphragm are also to be rubbed. The omentum for three or four inches around the incision is then to be stitched to the parietal wall.

Hernia of the Adductor Longus Muscle with Operation. By Dr. Clarence A. McWilliams.

Ichthyol in the Treatment of Deep-seated Inflammations. By Dr. Walter T. Slevin.

A Case of Fatal Stenosis of the Larynx Following Intubation for Papillomata. By Dr. F. L. Wachenheim.

Some Facts Bearing upon the Malarial Problem. By Dr. Richard Waggener.

Tetanus. By Dr. John W. S. McCullough.

Boston Medical and Surgical Journal, March 21, 1901.

Puerperal Insanity. By Dr. Arthur C. Jelly.—The author writes an excellent text-book article upon this subject. He lays especial stress upon prophylaxis, for though the mental symptoms of pregnancy are mild and temporary, and frequently pass off without treatment, he points out that this is not a sufficient reason for neglecting to treat the patient seriously, because many patients pass gradually into a very serious condition, which leads to an attack of insanity and ends in dementia. When the surrounding conditions are ominous, the most perfect hygiene should be established; the digestive and eliminative functions should be attended to, and open-air exercise advised. Excitement should be avoided; sleep is important, but drugs should be avoided. Serious mental disturbance is not to be regarded as an indication for inducing labor.

Meat Ration in the Tropics. By Dr. P. R. Egan.—The author's opinions on tropical dietetics are directly opposed to the opinions expressed by the majority of writers, and he asserts that the theoretically perfect diet will not be found flawless in practice. Nothing is proved from an examination of the dietary of the natives, for, he believes, meat consumption among the natives of hot climates is limited by their purses, not by their taste. Native beef cooked in the American fashion is not without its ill effects in Puerto Rico, but native beef cooked by the native method is tender and palatable, largely consumed, and productive of the best results. He gives some illustrations of the absurdity of arguing from theory instead of experience, and mentions that cold fat pork, crisped on the outside, is sold as a "bonne bouche" in San Juan.

Bubonic Plague. Report on the Plague in Manila, P. I., from January 1, 1900, to June 30, 1900. By Dr. Joseph J. Curry.

A Case of Retroperitoneal Lymphangeiosarcoma; Operation; Recovery—No Recurrence after Two Years. By Dr. F. B. Lund.—A case which goes to show that not all tumors of malignant appearance and rapid growth are actively malignant. The treatment by the mixed toxines does not, according to the author, seem to have had anything to do with the nonrecurrence in this case; as, owing to its apparent bad effect upon the patient's general condition, the toxines were given only in small amounts and for a comparatively short time.

Vomiting of Pregnancy—Suspension of Pregnant Uterus—Extra-uterine Pregnancy—Operation for Fibroids. Reported by Dr. J. Oswald Vogel. From the service of Dr. Frederick William Johnson.

Philadelphia Medical Journal, March 23, 1901.

The Toxicology of Tellurium Compounds, with some Notes on the Therapeutic Value of Tellurates. By William J. Gies, M. S., Ph. D.—In an interesting article the author points out that tellurates, in quantities not excessive and yet much greater than the therapeutic doses in man, exerts no particularly deleterious effects on the nutritional processes in dogs, even when the administration is continued for a week, although proteid catabolism seems to be slightly stimulated after a time, and secretion of acid in the stomach retarded. The alliaceous odor imparted to the breath seems to be the chief objectionable feature constantly following the use of therapeutic amounts of tellurates.

Some Modern Gynæcological Resources. By Dr. Augustin H. Goelet.

Dejerine-Erb Type of Upper-arm Palsy Following Multiple Neuritis. By Dr. D. J. McCarthy.

A New Treatment for Tuberculous Glands of the Neck with Minimal Scarring, Involving a Method of Sterilizing a Tuberculous Region through the Lymph Channels. By Dr. G. Betton Massey.—The object of the author's method is the destruction of the bacilli by the cataphoric diffusion among them of nascent oxychloride of mercury, developed by the electrolysis of metallic mercury held in contact with a small gold electrode. From observation of two cases reported, the author believes that the germicidal action is not confined entirely to the gland to which the application is made, but that the chemicals deposited in this situation drain downward to the next gland in the chain and favorably influence any infection in these glands.

Strangulated and Gangrenous Hernia, Kelotomy and Laparotomy in Strangulation, External and Internal; Artificial Anus—Enterostomy, Primary or Secondary Resection—Enterectomy, and End-to-end or Lateral Jointing in Gangrenous Hernia. By Dr. Thomas H. Manley. (*Concluded.*)

Medical News, March 23, 1901.

Cerebro-spinal Meningitis (Weichselbaum, Jaeger) Treated by Repeated Lumbar Puncture. By Dr. Henry Koplik.—The author states that the relief brought about by repeated lumbar puncture seems to be in the direction of a diminution of pain and a reduction of those symptoms which may fairly be traced to toxæmia and mechanical pressure. At the same time he points out that the withdrawal of an appreciable amount of any fluid from the spinal canal, which contains bacteria and the toxic products of inflammation, must be beneficial in the long run on the course of the disease. He believes that, in time, this method will take its place with aspiration of the pleural cavity as a curative method.

Drainage in Abdominal Surgery. By Dr. J. W. Long.—The author brings many objections against drainage. He asserts that it is deceptive, that it is not a guarantee against infection, and, in fact, that both gauze and the glass tube constitute an additional source of infection. Observation, he says, will demonstrate that when drainage is not used patients do better. Finally, he asserts that drainage is neither scientific nor workmanlike, and he quotes Joseph Price as saying, "Drainage is an evidence of incomplete work." In a word, when we drain, we do so because we cannot do better.

Vertigo: A Stomach Lesion. By Dr. Martin A. H. Thelberg.—As to the mechanism of *vertigo e stomacho,* the author is of the opinion that three causes are concerned, collectively or separately, to wit: 1. Direct irritation of the gastric branches of the pneumogastric, thence by the lower cervical ganglion to the vasomotor nerves of the vertebral artery which supplies the internal ear. 2. Toxæmia from amulon and other ptomaines. 3. Direct pressure upon the heart through distention of the stomach and intestines by gases. The most satisfactory treatment is the correction of the gastro-intestinal disorder.

An Interesting Case of Splenic Anæmia. By Dr. Herbert Maxon King.—The chief points of interest in this case lie in its evident close relation to splenic leucæmia, on the one hand, and pernicious primary anæmia on the other. The blood examination and the general clinical history, however, demonstrate that the case belongs to the group of obscure toxæmias included under the name of splenic anæmia.

Lancet, March 16, 1901.

The Topographical Anatomy of the Abdominal Viscera in Man. By Dr. C. Addison.—The first of the Hunterian lectures. These lectures embody the results of an inquiry into the topographical anatomy of the abdominal viscera in man. The work falls into two parts, (1) that dealing with the relations of the viscera to the surface of the body; and (2) that dealing with their relations to each other. For obtaining maps of the viscera, the bodies of forty subjects taken consecutively were examined in the fresh state. Maps were drawn on the life-size scale on large sheets ruled in centimetre squares, in which the outlines of the various viscera were progressively filled in. The abdomen was divided vertically by three lines, a median and two lateral lines. The lateral lines were drawn vertically upward through a point midway between the anterior superior iliac spine and the middle line, in a line drawn transversely between the two anterior superior iliac spines. Two transverse lines were drawn, one half way and the other a quarter way, respectively, between the pubes and the suprasternal notch. At the intersection of these various lines the abdomen was transfixed by fourteen-inch steel pins. The abdomen was then opened and the position and dimensions of the various viscera noted and entered upon the map. In this way a complete map of the superficial and deep points in their relations to the lines of division of the abdomen was obtained, and the outlines of the viscera projected on to the surface. The author reviews the topographical relations of these various lines and points to the various viscera, and reaches the following conclusions: 1. A highly placed stomach is usually associated with a liver placed well up beneath the ribs, and often of small size, and with a highly placed transverse colon, which in most cases, also, is distended. 2. A low position of the stomach—referring to the greater curvature—appears to be especially associated with a liver extending low down into the abdomen and perhaps enlarged, and with a low transverse colon. 3. The liver is clearly chiefly responsible for causing alterations in the level of the pylorus. Allowing for the fact that the part of the liver overhanging the stomach varies considerably in thickness, it appears that mere distention of the stomach, apart from a low position of the liver, is not sufficient to produce material downward displacement of the pylorus.

The Treatment of Tuberculous Peritonitis. By Dr. I. B. Yeo.—The author reports three cases of tuberculous peritonitis in which cures were brought about by the external application to the abdomen of equal parts of iodoform ointment and cod-liver oil, and by the internal administration of a pill containing a quarter of a grain of iodoform and half a minim of creosote. In one case the treatment had to be persisted in for over three months before recovery took place. In another case pleurisy with effusion coexisted with the peritonitis. The cases were all in young people between ten and twenty years of age. The author holds that the iodoform rapidly enters the blood and is continuously eliminated in the secretions, including the secretions into the serous cavities. As these latter secretions do not pass out of the body, they must in time become richly charged with iodine compounds, at any rate sufficiently so to act as antitoxine to the tubercle toxine or as antibacterial to the bacilli. "Antitoxines" are not limited to animal products; the oldest and surest antitoxines we possess are mercury and quinine—one from the mineral, the other from the vegetable kingdom. Their effects are better known, more certain, and more reliable than those of any other antitoxine at present known to us.

Some Personal Experiences of the Epidemic of Enteric Fever among the Troops in South Africa, in the Orange River Colony. By Dr. H. H. Tooth.—The author discusses this outbreak of typhoid fever under the following heads: 1. The origin of the epidemic. The Bloemfontein epidemic should be regarded as the direct continuation of that begun at Modder River. 2. Dissemination of the disease. The main agencies, in the order of their relative importance, were (*a*) infected water-supply, (*b*) sand storms and dust, (*c*) flies, and (*d*) personal infection from man to man. 3. Precautions taken by the authorities to prevent the spread of infection. These include the various methods of purifying the water and of disinfecting excreta. 4. Preventive inoculation. Of 232 cases of typhoid seen by the author, 54 had been inoculated against the disease; of these, 4 died, or 7.4 per cent. Of the 178 uninoculated cases, 25 died, or 14 per cent. Of 34 officers, 21 had been inoculated, and of all these only one died, and he

had not been inoculated. The author's impression is that the disease takes a milder and more benignant course in the inoculated than in the noninoculated. 5. Treatment. Fresh milk was very difficult to obtain, and condensed milk was used in many cases, together with beef-tea, with good results. Alcohol was used very sparingly and only in the severer cases, it being replaced by digitalis and strychnine. Perforation took place in five cases; of these, two were operated on, but death took place in both, four or five hours after operation.

The Clinical and Pathological Relations of the Chronic Rheumatic and Rheumatoid Affections to Acute Infective Rheumatism. By Dr. A. E. Garrod.—The main subject for discussion in this paper is the relationship of rheumatoid arthritis to acute rheumatism. The author is inclined to the belief that they are entirely distinct and separate diseases. Rheumatism is such a common disease that a history of it is often obtained in cases of rheumatoid arthritis. Acute rheumatoid arthritis is often attended by considerable febrile disturbance, and at this stage is often mistaken for rheumatic fever. Further, rheumatic fever is followed by a chronic joint affection clinically indistinguishable from rheumatoid arthritis. Sufferers from the latter disease show no greater liability to valvular disease than others not so afflicted. The question can only be settled by pathological means, such as bacteriological examination, which, in the case of rheumatic nodules, has already yielded such interesting results in the hands of Poynton and Paine. At present the pathology of rheumatoid arthritis is unknown.

The Toxicological Detection of Arsenic and the Influence of Selenium on its Tests. By W. H. Willcox, M. B.—The author's experiments go to show that, while selenium does not give any result *per se* with the Marsh test in the absence of arsenic, yet it has a most decided effect upon the nature of the mirror when arsenic is present. The proximal half of the mirror is of a vermilion-red color, while the distal portion has the usual appearance of the arsenical mirror. The author examined many of the samples of contaminated beer from Manchester during the recent epidemic of peripheral neuritis, and in no case were the curious mirrors obtained, such as are given by selenium and arsenic combined. These facts prove that the poisoning could not have been due primarily to selenium and, secondarily, to arsenic, as has been suggested by others.

Septic Disease in Graduated Attacks in the Same Patient. By Dr. J. Snowman.—The author reports the case of a woman who had three or four distinct rigors between the third and sixth day after she was delivered of her sixth child. Three years later, she aborted after seven weeks' amenorrhœa, and the abortion was followed by a distinct attack of septic poisoning, with rigors, temperature of 105° F., and localized suppuration in the vulva and abdominal wall. Two years later the patient again aborted, and again the abortion was followed by septicæmia of a most severe type, going on to pyæmia. Abscesses formed successively in the left thigh, the right wrist, the left elbow-joint, and the left knee-joint. These were opened and drained, and the patient made a tedious but complete recovery. No antistreptococcic serum was used, the case being treated on ordinary surgical lines.

Presse médicale, February 23, 1901.

Small-pox in Paris. By M. H. Roger.

Parenchymatous Myocarditis of Rheumatic Origin.—M. Pierre Merklen and M. Rohé report their findings in a case of parenchymatous myocarditis, in which no healthy muscular fibres existed. There was a complete atrophy with destruction of the transverse striations, granular degeneration, and tumefaction of the nuclei. Vacuolization was found in those parts of the muscle which had completely surrendered to the process. The authors believe that the toxic effects induced by the rheumatism from which the patient suffered affected the myocardium in the same way as the toxines of the other infectious diseases do.

March 6, 1091.

Struggle against Leprosy in French Indo-China. By M. E. Jeanselme.

Arthritic Œdema of the Eyelids.—M. A. Trousseau says that his study of several cases of œdema of the eyelids leads him to believe that many of these instances are due to rheumatism; and he thinks that if all such cases were carefully observed a rheumatic basis would frequently be found. The observation has an important therapeutic bearing.

Indépendance médicale, March 6, 1901.

Contusions of the Heart and Pericardium.—M. Mauclaire says that these are not numerous accidents and that they are always due to severe injury to the chest. The symptoms are those of great shock, intense dyspnœa, irregular, small, and rapid pulse. Death usually follows at once, and is due to reflex inhibition of the heart's action, to its arrest by compression, or to hæmorrhage. In some cases the heart continues to beat tumultuously, the pulse becomes very rapid and small, blood collects in the pericardium or mediastinum, and death soon follows. Injury to the heart or pericardium should always be suspected when grave injuries to the right side of the chest are encountered, and the rapid evolution of the symptoms with a fatal result will make the diagnosis usually a correct one.

Progrès medical, February 23 and March 2, 1901.

Aphthous Stomatitis.—M. Gabriel Arthaud describes a scarlatiniform eruption which accompanies acute aphthous stomatitis. It may be hæmorrhagic or erythematous in character, or appear as opalescent pustules, the miliary form. It is accompanied by a high temperature with slight morning recessions. It covers the entire body or may be limited to the mouth and mucous membranes.

Sterilization of Milk and the Results of its Use. By M. Axel Johannessen. (*Continued article.*)

Propagation of Malaria by Mosquitoes. By Dr. Patrick Manson. (From the *Lancet* of September 29, 1900.)

Sterilization of Milk and the Results of its Use. By M. Axel Johannessen. (*Continued.*)

Journal des praticiens, March 2, 1901.

Pleuro-typhoid and Typhoid Pleurisies.—M. Paul Remlinger says that pleurisies which appear in the course of severe enteric disease are almost always caused by Eberth's bacillus, except those pleurisies of secondary microbic infection. A distinct morbid entity is constituted by those cases of serous pleurisy which precede a mild typhoid, a typhoid so attenuated that it gives rise only to an intestinal or gastric discomfort; this is the so-called pleuro-typhoid.

The pleurisies which appear during a typhoid fever

offer a more serious prognosis. They may be serous, purulent, or hæmorrhagic. The prognosis depends upon the purulent character of the effusion and its appearance in point of chronology. The subacute onset, the preference of the effusion to locate on the left side of the chest, and the tendency of the fluid to become sterile by the disappearance of Eberth's bacillus, are characteristics of this form of pleurisy.

Poisoning by an Aniline Dye. By M. Laurent and M. Guillemin.

Orbital Heteroplasty. By M. Felix Lagrange.

Lyon médical, March 3, 1901.

Congenital Malformation of the Œsophagus.—M. E. Weill and M. Péhu report an autopsy on an infant that had shown from birth the signs of an imperforate œsophagus. Ingestion of milk was always marked by great dyspnœa and cyanosis and the fluid was ejected about fifteen minutes after it had been taken. Radioscopy showed a diverticulum at the right of the sternum. At the autopsy, the œsophagus was seen to exist in two parts; the superior terminating in a *cul-de-sac* just below the bifurcation of the trachea, the inferior portion passing on to the stomach. There was no other visceral anomaly of development. The child died of bronchopneumonia. The authors regard such cases as hopeless from a therapeutic point of view, as surgical measures are almost certain to end fatally, while rectal feeding is unsatisfactory, although it should be tried.

Multiple Tuberculous Strictures of the Small Intestine.—M. Maurice Patel, in this instalment, records the symptoms and treatment. Constipation is the rule, although there may be diarrhœa which is continuous. Colic is frequent, usually coming on two or three hours after eating, the abdomen becomes tympanitic at one place, soon to be followed by the appearance of tympanites at another place, when the pain shifts its location. Musical murmurs may sometimes be heard even at a distance from the patient. Meteorism, the sensation of a definite mass in the abdomen, the great mobility of the small intestine, the detection of mesenteric masses, are important diagnostic signs. Stercoral fistulæ or even intestinal perforations may occur. Surgical measures offer the only form of treatment, some form of intestinal anastomosis being necessary.

Gazette hebdomadaire de médecine et de chirurgie, February 28, 1901.

Hysterical Tympany. M. P. Londe and M. R. Monod report the case of a single woman, thirty-three years of age, who presented enormous distention of the abdomen. She was hysterical and was eventually cured. Before coming under the observation of the reporters, she had been twice laparotomized, each time complaining of intense pain under the left false ribs. No organic disease could be discovered.

March 3, 1901.

Infection of Wounds by Perspiration of the Hands.—M. E. Genevet has adopted this method of sterilizing his hands for surgical procedures: Washing and scrubbing with soap and water for fifteen minutes, then washing with a pad of sterilized gauze impregnated with ether, then rinsing them with ninety-five per cent. alcohol, and finally washing them with sterilized water for five minutes. No cultures could be obtained from the hands after this method of disinfection. But when the hands were made to perspire freely after such a washing, the transpired fluid always yielded a pure and virulent culture of the *Staphylococcus albus.* The author concludes: (1) that it is possible to obtain absolute sterilization of the hands; (2) that as soon as perspiration of the hands begins, infection of the wound is possible; (3) that, as it is impossible to disinfect the operative area, the lips of the cutaneous wound should always be protected; (4) disinfection of the hands should be completed by their immersion for ten minutes in a two-per-cent. solution of tannin to inhibit the sweating; (5) gloves should be worn in septic operations where mere manual dexterity is not an important factor.

Centralblatt für Gynäkologie, March 2, 1901.

Preliminary Bath of Parturient Women as a Source of Infection.—Dr. Sticher says that his experimental studies have convinced him, as they have Professor Stroganoff, clinically (see *New York Medical Journal,* March 16, 1901), of the danger of introducing pathogenic bacteria into the bath into which a parturient woman is placed. He introduced into such a bath the *Bacillus prodigiosus,* which is not ordinarily found in the vaginal secretion, and was afterward able to secure these organisms from the vagina of a woman who had bathed in the water.

A New Operating Table. By Dr. P. A. Fenger Just and Dr. A. Madsen.

Wiener klinische Rundschau, February 24, 1901.

Massage in Lymphangeitis.—Dr. Batsch recommends massage in early cases of lymphangeitis, lymphadenitis and phlegmous. By this means leucocytes are attracted in greater numbers to the field of infection and thus exert a more powerful phagocytic action than is otherwise possible. While this is purely theoretical, the author says he will continue to use it, although his first case, *in corpore vili,* was not entirely successful.

So-called Sclerotic Hemisphere Atrophy. By Dr. Ernst Bischoff. (*Continued article.*)

Vegetarianism. By Dr. W. Thurn. (*Conclusion.*)

Wiener klinische Wochenschrift, February 21, 1901.

Phosphorated Oil. By Dr. Konrad Stich.

Gastric Carcinoma Following Ulcer of the Stomach.—Dr. Anton Krokiewicz reports the case of a man of thirty-four years of age who developed a carcinoma of the stomach at the site of a former ulcer, who died after a very rapid course of a few weeks only.

Casuistics of Intestinal Lipoma. By Dr. Ernst Füchsig.

February 28, 1901.

Cinnamic Acid Treatment of Tuberculosis.—Dr. Julius Pollak reports the clinical results in a number of cases of tuberculosis treated at the sanatorium in Alland by cinnamic acid. In many of the cases the injection of the acid exerted an antipyretic influence, but in two of them the treatment had to be discontinued on account of an increase in temperature. Expectoration was rendered easier. The remedy seemed to be harmless, as no sequelæ were observed from its use, nor did a hæmoptysis ever directly follow an injection. In selected cases, the author thinks that cinnamic acid is of real value; but it cannot replace regular sanatorium treatment.

Intravenous Injections of Cinnamic Acid in Tuberculosis.—Dr. C. Hödlmoser reports encouragingly and

thinks that this method of treatment should be widely employed before its rejection.

Rare Intestinal Injuries. By Dr. V. Subbotié.

Centralblatt für Chirurgie, March 2, 1901.

Medullary Narcosis.—Dr. Karl Schwarz has tried eucaine β as the anæsthetic agent and found it unsatisfactory. He has also tried to avoid the disagreeable effects of cocaine by making use of Racoviceanu-Pitesci's suggestion of injecting cocaine into the subarachnoid space the day before the attempted operation. In this instance the effect of the cocaine was marked by the usual disagreeable symptoms. With the use of tropococaine, however, no pallor or sweating, nausea, vomiting, headache or vertigo have been observed, while anæsthesia was complete. The author has performed Whitehead's operation for hæmorrhoids, and also herniotomies under this method of anæsthesia, with perfect satisfaction. Seven tenths of a grain of tropococaine is sufficient to produce anæsthesia.

Pseudo-arthrosis of the Terminal Digital Phalanx. By Professor W. Müller.

March 9, 1901.

Treatment of Severe Scoliosis.—Dr. Peter Bade describes an apparatus which is applied in such a way that, after forcible reduction has been practised, increased pressure may be brought upon the scoliotic area as the wearer of the plaster jacket grows.

New Suturing Method for the Recti in Ventral Herniæ.—Dr. A. Hammesfahr, in a case of median ventral hernia, separated the recti muscles with their sheaths anteriorly and posteriorly from the symphysis to the ensiform cartilage. This was done without opening the peritoneal cavity. A suture of wire was then passed from the aponeurosis of the external oblique into the middle of the rectus muscle and out through the other side in a similar manner. This was done through the entire length of the muscle, so that its inner surfaces were slightly inverted when the sutures were tightened. An excellent result followed the operation.

Riforma medica, February 2 and 4, 1901.

Concerning the Regeneration of the Suprarenal Capsules. By Dr. G. B. Ramoino.—The author has observed the process of regeneration in suprarenal capsules after various operations which involved the destruction of a portion of the gland, and sums up his observations in the following statements: After wounds, contusions, or the application of caustics to the suprarenal tissue, the gland heals by cicatrization, preceded by more or less severe inflammatory reaction, which begins with an extravasation of blood, and includes the formation of a more or less circumscribed area of gangrene. The extravasations are more marked in capsules which had been mutilated by removing a segment with a knife than in those in which the injury had been a contusion or a destruction by means of caustics. The necrosis of the capsular parenchyma is less marked in incised wounds than in contusions or in burns with caustics. The proliferation of small cells is more abundant in the capsules subjected to the two last-named procedures than in capsules which have been simply cut with a knife. When a wound extends into the cortical substance, the hæmorrhage is more abundant and the clot persists for a longer time than in wounds involving the cortex only. Perhaps the reason of this is that, in the former, the inflammatory reaction is more intense. The proliferation of parenchyma cells after an injury to the suprarenal is so abundant that a true regeneration of the tissue of the gland takes place.

February 5, 6, 7, and 8, 1901.

Relapsing Neuropathic Lymphangeitis. By Dr. Sante Solieri.

Two Cases of Primary Sarcoma of the Liver. By Dr. Bindo De Vecchi and Dr. Guido Guerrini.—The authors report the autopsies and microscopic findings in three cases of sarcoma of the liver. From a study of these cases, and from a critical review of the literature of the subject, they conclude as follows concerning the histogenesis of primary sarcoma of the liver: The tumor primarily develops from cirrhotic lesions that precede its formation in the liver. A succession of sarcomatous nodes develops in the connective tissue at the periphery of the tumor and within the bands of connective tissue that surround it. The second stage of the growth of the tumor consists in the enlargement of the nodes until they coalesce into a continuous mass of sarcomatous tissue.

February 9, 11, 12, and 13, 1901.

Experimental Researches Concerning the Use of Antitoxic Serum in Tetanus. By Dr. Guido Tizzoni.—The author gives an account of the efficiency of the serum which he has prepared for the treatment of tetanus, and reports a large number of experiments on animals which he cites as proofs of his assertions. He concludes that his serum has a very distinct curative effect if administered in sufficient doses and early enough. A second paper will be devoted to a comparative study of Tizzoni's serum and the serums against tetanus prepared by other observers.

Vratch, February 3, 1901 (February 15, New Style).

Hydrorrhœa Nasalis. Report of a Case. By Dr. A. F. Eckert.—The author had a case of this rare and comparatively obscure disease under his observation for a year. The patient was an unmarried woman aged thirty-nine years. In October, 1899, she began to feel feverish at times, and with this there appeared a peculiar tickling sensation in the nose, accompanied by a discharge of watery fluid from the nostrils. She also began to complain of pain in the chest, and a persistent cough appeared. The patient had been suffering from chronic catarrhal inflammation of the nasal mucosa for a number of years, but had been treated for this trouble with good results. On examination, the lungs showed dulness at the left apex and râles over the left lung. There were elevations of temperature which came on rather suddenly, usually at about five o'clock in the morning, and were accompanied by chills and prostration, and sometimes followed by sweating. Before such an attack the flow from the nose increased, during the attack it decreased. There never was a tendency to sneeze. No malarial parasites were found in the blood. The discharge amounted to 120 grammes in twenty-four hours, and, as a rule, flowed from the left nostril only. If the head was held bowed down, the stream became continuous and kept on flowing until she raised her head again. It was supposed that the fever was due to the presence of bronchiectases which were too small or too deeply situated to give physical signs. The lacrymal apparatus was found normal, so that the secretion could not be attributed to a disorder of this function. The nasal mucous membrane presented no deviations from the normal. A removal to a southern climate (Crimea) improved the

fever, the cough, and the nasal discharge considerably, but her return to the north was followed by an exacerbation of the symptoms. The patient was gaining in weight during this period. All manner of local and general treatment was tried without avail. (*To be continued.*)

The Spleen and the Trypsin Ferment of the Pancreas. By Dr. L. B. Popelsky.—(A reply to Dr. A. A. Gertzen. See abstract in the *New York Medical Journal* for March 2, 1901, p. 387.) The question under dispute is: Has the spleen any influence upon the formation of the trypsin ferment of the pancreatic juice? The present author strongly champions the negative side and devotes a lengthy article to arguments in support of his view and to broadsides against his antagonist, Gertzen.

Difficulties Met with in the Combat with Diphtheria. By Dr. E. M. Wolfson.—The author has had occasion to observe certain cases of diphtheria in houses from which patients with that disease had been removed to a hospital, and which had been thoroughly disinfected. He recommends that all forms of mild amygdalitis should be examined bacteriologically. In addition to the use of antitoxine, local treatment should be employed in order to hasten the disappearance of the bacilli. Patients should not be discharged from the hospital without repeated bacteriological examinations. If, for some reason, the patient is discharged with bacilli still in his throat, the attending physician or the health authorities should be notified. If true diphtheria bacilli persist for a long time in the throat of an individual, the virulence of these germs must be tested by inoculation into animals. Isolation should be continued for from four to six weeks, and, at the close of this period, the throat and nose should be irrigated several times daily with antiseptic solutions. Schools in which cases of diphtheria occur and in which it is impossible to make a bacteriological investigation in every scholar, should be closed for three or four weeks.

Corporal Punishment in Russia in the Twentieth Century. By Dr. D. N. Jbankoff (*concluded*).—The author concludes that corporal punishment is by no means abolished in Russia at the present date, and that it cannot be abolished without legislative interference. He urges the medical profession, as well as society in general, to continue to cry out against this shameful practice which reflects injuriously upon the whole Russian nation.

Concerning the Use of Injections of Sodium Cinnamate in Tuberculosis. By Dr. L. A. Finkelstein (*concluded*).—The author concludes this article by saying that he cannot speak of any positive success; but cinnamate of sodium did not do any harm. This remedy cannot compete with the ordinary hygienic and dietetic measures against tuberculosis.

Roussky Archiev Patologyi, Klinitcheskoy Meditsiny, i Bacteriologyi, December, 1900. (Russian Archives of Pathology, Clinical Medicine, and Bacteriology.)

A Contribution to the Subject of Intestinal Self-intoxication. Concerning the Changes in the Liver in Obstruction of the Intestines. By Dr. A. M. Levin.—The author describes the changes which he has observed in the liver in cases of intestinal obstruction, as follows: A marked hyperæmia as the result of vasomotor changes, sometimes hæmorrhages; degenerative changes in, and atrophy of, the liver cells, in which the nuclei do not take part, and which, in all probability, may return to normal; evidences of inflammation in the stroma of the organ and desquamation of the lining of the biliary canals. The least important of these changes is undoubtedly the degeneration of the cellular protoplasm. Vacuolization of liver cells is found even in normal animals, and seems to depend on the stage of digestion in which the animal is killed, as well as on the quantity and quality of the food consumed. The changes due to vasomotor alterations, especially the compression atrophy, are more important. These processes are capable of causing, in the course of time, a deficiency of the liver functions as a result of chronic self-intoxication. The question whether, in addition to the absorption of poisonous substances from the intestines in cases of obstruction, there is also a migration of intestinal germs into the blood, and whether such emigrated germs may produce lesions in the liver under these conditions, remains to be settled by further researches.

Concerning the Question as to the Pathogenesis of Diplobacillar Conjunctivitis and the Biology of the Diplobacillus of Morax-Axenfeld. By Dr. F. F. Rymovitch.—In 1896, Morax described a germ which he found in the secretions of patients affected with subacute conjunctivitis accompanied by mild objective symptoms. Soon afterward Axenfeld found an identical germ in the same class of cases. Pure cultures were inoculated into conjunctivæ and the appearances of conjunctivitis of the subacute type followed within four days, the secretion of these patients containing the same germ in pure culture. Since then, this diplobacillus has been found in subacute conjunctivitis by a number of other observers. The author has investigated bacteriologically 116 cases of conjunctivitis. Of these, thirty-three, or 28.4 per cent., showed the presence of the diplobacillus discovered by Morax and Axenfeld. If the cases of acute and eczematous conjunctivitis are deducted from the total, 52 per cent. of all the others were caused by the aforesaid germ. This micro-organism occurs as a double bacillus with a distinct line of division between the two members. Each member is about 2 micromillimetres in length, and the length of the whole organism is 5 micromillimetres, while its width is from 0.50 to 0.75 micromillimetres. The ends are well rounded. The germs are often seen in chains of three or four, and occur in abundance in the secretion. They are easily stained with aniline dyes and are completely decolorized by Gram's solution. They are easily distinguished from pneumococci by the absence of a capsule. They grow with difficulty on ordinary media, but cultures may be easily obtained on media containing human serum or blood, and also on agar mixed with nutrose, as well as on agar with pigeon's blood. The clinical features of the conjunctivitis that they cause are those of ordinary subacute and chronic catarrhal conjunctivitis. In four cases the inflammation was intensely acute, probably because the germs were more virulent than usual. In some cases of acute conjunctivitis the author found, in addition to the bacillus of Koch-Weeks, a few diplobacilli. The majority of cases of the diplobacillar type occurred during the summer months. Zinc sulphate acts as a specific in these cases, but silver nitrate, in ten times weaker solutions, also gives good results, although its effect is not so constant as that of the zinc salt.

Studies on Phagocytosis in Fatal Infections. By Dr. Th. Tchistovtch.—The author has studied the process of phagocytosis in the organs of animals that had died of infectious diseases. He examined the organs of ten rabbits that had been inoculated with extremely viru-

lent cultures of streptococci, and had been killed at various intervals in the process of infection. He found that there was always a polynuclear phagocytosis in the lungs. On the other hand, in the liver, some of the streptococci were engulfed by the cells of Kupffer, while others remained free. There was no polynuclear phagocytosis in the spleen, the marrow, or the kidneys. To sum up, a general infection of the fatal type is marked by absence of leucocytic phagocytosis.

Concerning the Preservation of Microscopic Specimens of Urinary Sediments. By Dr. B. Koslovski.—The following method is recommended by the author: He places a cubic centimetre of an aqueous solution of any aniline dye, such as one-per-cent. eosin, into the tube of a centrifuge, and adds the urine to be examined. After having centrifugated this mixture he obtains a beautifully stained sediment. If a scanty sediment results, the first amount of urine is decanted and another portion is added, the mixture being again centrifugated, etc., until enough sediment is obtained. The urine is then decanted completely. A little of the sediment is now taken with a pipette or with a platinum loop, and placed on a slide on which a drop of Farrant's mounting fluid had previously been poured. This fluid is prepared as follows: Equal parts of distilled water, glycerin, and a saturated solution (in boiling water) of arsenious acid. Mix, and add gum arabic in pieces until half of the fluid is displaced. Allow to stand three weeks, stirring daily with a glass rod until all the gum is dissolved. The liquid may then be filtered, but this is not necessary. The specimens thus prepared may be kept for years without any change in the appearance of the sediment.

Researches Concerning the Physiology of Phosphorescent Germs. By Dr. L. Tchougaeff.

Proceedings of Societies.

NEW YORK OBSTETRICAL SOCIETY.

Meeting of February 13, 1901.

The President, Dr. H. J. BOLDT, in the Chair.

Persistent Amenorrhœa.—The PRESIDENT mentioned a case of defective menstruation dating back to the time of the first menstruation, at the age of thirteen. Before her marriage the patient menstruated at intervals of three or four months; since that time (three years) she had menstruated only twice. The pelvic organs were normal, with the exception that the uterus was slightly smaller than it should be.

Dr. H. N. VINEBERG remarked that in some cases after marriage small uteri seemed to diminish in size and lost their function rather than developing, as one might expect.

Cæsarean Section for Fibrocystic Uterine Tumor.—Dr. GEORGE L. BRODHEAD reported a case. The specimen presented was one of fibrocystic growth of the uterus removed from a patient upon whom Cæsarean section had been performed eleven days before. The woman first came under his observation on November 20, 1900, when she presented herself for examination in the lying-in service of the New York Post-graduate Hospital. She was thirty-four years of age, had been married two years and a half, and her menstrual history prior to marriage and up to the time of the present pregnancy had been normal in every respect. There had been no symptoms at any time of uterine growth, and her general condition was very good. The last menstruation had begun on May 6th, and had continued for three days, the usual amount of blood having been lost. Abdominal examination showed a uterus enlarged to the size of about seven months' gestation, the fundus being higher than it should have been to correspond to the period of pregnancy as based upon the date of the last menstruation, namely, six months, or a little over. The presentation was of the vertex, the head being high above the brim, and the position the left occipito-anterior. The fœtal heart rate was 148, and a loud uterine souffle was heard in the right upper quadrant. The pelvis was of the justo minor type, the woman being of small stature, about five feet two inches in height, and weighing about 109 pounds. Vaginal examination revealed a tumor of the size of an orange, of moderately firm consistence, well down in the cul-de-sac of Douglas, pressing the cervix well forward behind the symphysis. With the idea that the tumor might be one of the ovary, or a pediculated fibroid, which might be made to slip back into the abdominal cavity, the patient was placed in the knee-chest posture, but the growth was so adherent that it could not be replaced. The patient was extremely anxious to have a living child, and therefore Cæsarean section at or near full term seemed indicated. Dr. Dudley concurred both in the diagnosis of fibrocystic growth and in the advisability of performing Cæsarean section. On January 19th the position was found to be left sacro-anterior, the breech being well above the brim, and a loud umbilical souffle was heard in the left lower quadrant of the uterus. On February 2d the operation was performed at the New York Post-graduate Hospital, the patient being within ten days of full term. It seemed best to elect this time for the reason that the child was of good size and the uterus already well distended. In the operation, able assistance was rendered by Dr. Dudley and the house staff of the hospital, Dr. Boldt and Dr. Ward being present also. The technique of the section was that described by Dr. Dudley in the *New York Medical Journal* for November 3, 1900, in his article, The Modern Cæsarean Section—An Ideal Method of Treatment for Placenta Prævia. Under constant irrigation with a hot normal saline solution, an incision six inches in length was made in the median line from a point just below the navel to just above the symphysis, and the uterus exposed. A rubber ligature was then passed over the fundus and carried down to the lower segment of the uterus, just above the fibroid. While the uterus was held up and the ligature tightened by an assistant sitting between the legs of the patient, and while the abdominal walls were kept closely applied to the uterus above, an incision about six inches in length was quickly made through the uterine wall, and the fœtal sac opened. The breech of the child, found lying just beneath the incision, was seized, the child lifted out, and the cord clamped and cut. The amount of amniotic fluid was small. The uterus was followed down and lifted out of the abdominal cavity, while the intestines were protected above. The child, a male, weighing six pounds seven ounces, was extracted five minutes after the operation was begun, in good condition, and soon cried lustily. The placenta was found lying loose in the uterine cavity, and was removed, with its membranes, manually. The tumor was adherent to the rectum, but the adhesions were soon separated and the growth was lifted up out of the abdominal cavity. It was then found that during its removal the cyst had

ruptured, allowing a small quantity of yellowish-brown fluid to escape. The mass was of about the size of an orange, and was attached to the posterior wall of the uterus by a thin pedicle about an inch and a half in width. The growth was enucleated and the uterine wall closed with several layers of fine catgut sutures. Ten minutes had been occupied in the removal of the fibroid. A finger was then passed through the cervix from the uterine side, and the incision closed in layers with a continuous suture of fine No. 1 ten-day chromicized catgut. Beginning above, the mucosa was first closed, then, from below upward, the muscular layer and finally the peritoneal coat were united. The ligature was now loosened, and several sutures were passed to control slight oozing. As there was a moderate amount of bleeding from torn adhesions, a strip of iodoform gauze was placed in the cul-de-sac and the end drawn out of the vagina. The incision in the abdomen was closed in layers with catgut, and the patient put to bed in excellent condition, a little less than an hour having been consumed in the entire operation, and the loss of blood having been very small. The child was well developed, and since birth had done well. The mother's recovery had been uninterrupted from the first.

Dr. VINEBERG asked if it would not have been feasible to remove the growth *per vaginam*.

Dr. BRODHEAD stated that the patient was a primipara thirty-five years of age, exceedingly anxious to have a living child, and perfectly willing to undergo the operation at full term. Under these circumstances it seemed best to wait, as an operation *per vaginam* would almost certainly have induced premature labor, with the probable loss of the child.

Tuberculous Peritonitis.—Dr. E. H. GRANDIN presented the uterus and appendages. For three months the abdomen had been enlarging, and a diagnosis had been made of tuberculous peritonitis. On abdominal section, the parietal peritonæum was found enormously thickened, fully an inch thick. About a gallon of fluid was evacuated. Every organ in the pelvis and abdomen was covered with tubercles. The appendages were adherent and the tubes contained thin pus. The hysterectomy was difficult. The abdomen was washed out with normal saline solution and gauze was carried into the vagina. Strange to say, the woman was still draining six weeks after the operation, by the vagina, but she had gained rapidly in flesh and in appearance.

Dr. W. S. STONE asked if the disease was primary in the tubes.

Dr. GRANDIN replied that he could not say. His reason for removing the uterus and appendages was that better drainage could be secured. The results had justified the course pursued.

The PRESIDENT added that drainage in cases of tuberculous peritonitis was the proper after-treatment, and Nature seemed to be providing the treatment in the case reported.

An Unruptured Ovum from an Ectopic Pregnancy was presented by Dr. B. H. WELLS. The patient was a Russian woman, twenty-six years of age, with no history of abnormities in either her labor or convalescence. Her menstrual history had been normal. Ten weeks before the time of operation she menstruated for the last time. Skipping the next period, she was supposed to be pregnant. Six weeks later she began to have a moderate amount of pain in the left side; it was not severe. On January 28th, the day of the operation, she had had severe cramps during the night and felt faint. She went to the clinic, and the physician said she simply had colic. Five minutes later her pulse was found to be 140, and there were signs of internal hæmorrhage. The diagnosis of ruptured ectopic gestation sac was made. She was admitted into the Polyclinic Hospital at 10 P. M. in a desperate condition. Her abdomen was opened, she was given hypodermics of strychnine and hot salines, and her condition became somewhat better. Five or six ounces of dark blood clots were found, which were probably from the hæmorrhage of the day before, and the abdomen was filled with recent blood. The tube was fairly low down in the cul-de-sac, and sticking out was found this ovum. It was the fimbriated extremity which was still bleeding. During the manipulation the ovum dropped out of the tube. The patient was filled with hot salines, the abdomen was washed out, and she was well to-day.

Acute Bacteriæmia.—The PRESIDENT narrated the case of a patient who had a criminal abortion produced by a midwife on January 16th. Two days later she was attacked with fever. The physician who was called did a thorough curetting, removing some placental *débris*. After the curetting the uterus was swabbed with carbolic acid. The temperature, which had been 104° F., dropped to 100° F., but four days later it again reached 104° F., and from that time on it varied between 102.5° and 104.5° F., being usually above 103° F. She was seen in consultation late at night on January 25th. The pulse was 130 and the temperature 103.6° F. There was no sensitiveness on external examination, except over the uterus. The heart and lungs were normal. Bimanual examination showed the uterus somewhat increased in size and sensitive, and the condition of the external os did not indicate the presence of foreign material within the uterus. The parametria were free. A blood culture was made the same night, although there had been no chills at any time. The examination of the blood specimen on the following morning showed a negative result. Another specimen was then taken from the median vein. At noon no positive result had yet been obtained, but it was evident that the patient was rapidly getting worse, and the source of the infection being apparently the uterus alone, the secretions from the interior of which showed streptococci and *Staphylococcus aureus*. Vaginal hysterectomy was decided upon and performed with the use of clamps. The time occupied was four minutes. The patient continued to sink, and died about thirty hours after the operation. A blood culture made soon after death showed mixed infection. Sections through the uterus from the site of the placental attachment showed the structures to be invaded quite deeply with streptococci and staphylococci. He believed that an earlier operation might have saved the patient's life.

Vaginal Hysterectomy by Morcellation for Fibroids.—The PRESIDENT also reported this case. The patient from whom the specimen had been removed was forty-three years old, and had been suffering from atypical hæmorrhages for two years, besides numerous pressure symptoms from the tumor, which completely filled the pelvis. Morcellation and bisection of the uterus made the operation comparatively easy of performance. Only four ligatures were required to complete the work, during which but little blood was lost.

Dr. GRANDIN rather protested against the term bacteriæmia. At the present time we were inclined to look upon germs as the causative element in these conditions, but we might not do so in the future. He still liked the

terms sapræmia and septicæmia. Oftentimes we dared not operate early enough, and in many cases the uterus was removed unnecessarily.

Dr. VINEBERG stated that he had operated upon a patient about a year ago for puerperal sepsis, and that the uterus had shown almost the same change as the one the president had presented. The patient recovered. A blood examination at the present time was not satisfactory; while we were waiting for the blood examination the patient was getting beyond hope.

The PRESIDENT said that at the time of operating he had thought the infection was local, with intense constitutional symptoms, and therefore that removal of the uterus was justifiable. The parametria were free, and there were no complications in the pelvic organs. The specimen showed how apt we were to err, and it should stimulate us to try to get on the right track.

Notes Relating to Cases of Ectopic Gestation.—Dr. GRANDIN gave a talk on this subject, relating the clinical histories of many cases seen both in his own and in consultation practice. His experience had taught him that many of the patients with whom he had had to deal gave histories which were decidedly atypical, judging by the classic symptoms spoken of in the majority of the text-books. He believed that, when we were in doubt, it was advisable to make a posterior incision into the cul-de-sac, for the purpose of establishing the diagnosis. Abdominal section could then be resorted to for the removal of the mass, if the posterior section was insufficient for the purpose.

Dr. GEORGE T. HARRISON thought the reader of the paper should have made a clearer distinction between cases in which the ovum was dead and those in which it was living. In the latter class of cases the extreme softness of the tumor lying near the uterus was a very characteristic symptom. Again, when the ovum was dead, the uterus was hard, whereas, if the ovum was living, the uterus was usually soft. He believed all cases of ectopic gestation should be attacked through the abdominal wall, and not by a posterior colpotomy. He thought that the rupture of the tube was a rare termination, while tubal abortion was a frequent termination. At least eighty per cent. terminated in that way. After the death of the ovum the picture changed, and the tumor became harder. He strongly advocated abdominal section for such cases.

Dr. J. E. JANVRIN said that as far back as in 1886 he had strongly advised abdominal section for all cases of supposed tubal or abdominal gestation. As a rule, we did see some, generally many, of the symptoms which were ordinarily laid down in our text-books for guidance. There was usually the lapse of one menstrual flow, followed by irregular bleeding, colicky pains, severe shock accompanying the pains, and other symptoms leading us to suspect pregnancy. He could see no reason for approaching such cases in any other way than by abdominal section, and believed that the preliminary expulsion through the vaginal wall was entirely unnecessary.

Dr. VINEBERG thought that in certain cases the incision into the cul-de-sac for the purpose of diagnosis was a valuable one. In one instance he had in that way removed a cystic ovary in a case of suspected ectopic pregnancy. He believed that Dr. Mann had reported a case in which he lost the patient by making an incision into the cul-de-sac. The patient bled so profusely that before he could find and catch the bleeding vessel she died.

Dr. CLEMENT CLEVELAND said he also was of the opinion that abdominal section was much better in every way than posterior colpotomy. His experience was the same as that of Dr. Grandin, that in a large majority of the cases but few of the positive diagnostic symptoms were present. He was positively opposed to opening the posterior cul-de-sac for the removal of a tubal gestation ovum, for the reason that the danger of hæmorrhage was too great, and therefore the procedure too hazardous. During the past three weeks he had seen three cases of ectopic pregnancy, all of which had presented features of interest. In the first, the sigmoid flexure presented under the incision, and it was found difficult to penetrate beneath the intestine, which completely hid the uterus and pelvic contents. Finally he succeeded in effecting an entrance, but in so doing tore up a flap of the serous and mucous coats of the sigmoid for at least an inch and a quarter. This was at once repaired. The right tube was removed with its contents, and as a precaution, on account of the injury to the intestines, he put in a gauze drain. The patient did well for several days; then, upon his drawing down the gauze, fæcal matter appeared. The symptoms became severe, and he performed vaginal hysterectomy as the only means of saving her life. The fistula was now closing rapidly. In the second case the right tube was removed by posterior section, and the bleeding was so great from the whole surface of the cavity where the mass had been lying that it was necessary to pack the cavity. Bleeding continued, and it required very thorough tamponing to arrest the hæmorrhage. After this the patient did well, but the case emphasized the point that the lower route was not a safe one through which to remove a tubal gestation ovum. In the third case the patient had been curetted twice under the supposition that the case was one of incomplete abortion. The speaker diagnosticated the condition as that of ectopic pregnancy, and, on operating, found an unruptured tubal gestation sac of three and a half to four months. In removing the tube he had used Skene's electric clamp, for he preferred it because of the liability of ligatures to cut through the soft tissues. The patient recovered.

Dr. A. BROTHERS said that the frequency of ectopic gestation was to him alarming. He had had a case some weeks before in which the mass was so bound down by adhesions that it was necessary to remove the uterus. The patient had made a good recovery.

Book Notices.

Twentieth Century Practice. An International Encyclopædia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by THOMAS L. STEDMAN, M. D. In Twenty Volumes. Volume XX. Tuberculosis, Yellow Fever, and Miscellaneous. General Index. Pp. vii-906. New York: William Wood & Company, 1900.

THIS, the final volume in the series, contains chapters on the bacteriology, pathology, ætiology, symptomatology, diagnosis, prognosis, prophylaxis, and treatment of tuberculosis; on yellow fever; on poisoning with snake venom; on mushroom poisoning; on diseases of the uvula and soft palate; and on the neural and mental defects in childhood. In addition, the volume contains a copious index to the subjects treated of in the various volumes.

The editor is to be congratulated upon the completion of this extensive work, and on the good judgment he has displayed in the selection of his contributors. The labor must have been great, but the result justifies the effort.

Rudiments of Modern Medical Electricity. Arranged in the Form of Questions and Answers. Prepared Especially for Students of Medicine. By S. H. MONELL, M. D., Professor of Static Electricity in the International Correspondence Schools, etc. Pp. 5 to 165. New York: Edward R. Pelton, 1900. [Price, $1.]

DR. MONELL has presented in this volume the elementary facts in regard to electricity, its derivation, its therapeutical uses, and the physiological effects of the various kinds of current. We do not doubt that for the beginner, especially for the student, the book contains much that will be useful and instructive.

Diseases of the Nervous System. A Text-book for Students and Practitioners of Medicine. By H. OPPENHEIM, M. D., Professor at the University of Berlin. Authorized Translation by EDWARD E. MAYER, A. M., M. D., of Pittsburgh. First American from the Second Revised and Enlarged German Edition. With Two Hundred and Ninety-three Illustrations. Pp. 5 to 899. Philadelphia and London: J. B. Lippincott Company, 1900.

No book is more worthy of translation than this masterly production of Oppenheim's. Coming from a man who to-day occupies the first rank among neurologists, it reflects on every page the wide experience of the author and shows the utmost care in its preparation. Without exceeding the limits of a text-book, it covers the whole field of neurology. It is full, concise, accurate, and in entire accord with the most advanced teachings. It is with great pleasure that we take this opportunity of calling to it, in its English dress, the attention of students and practitioners in America.

Ulcer of the Stomach and Duodenum, and its Consequences. By SAMUEL FENWICK, M. D., F. R. C. P., Consulting Physician to the London Hospital, and W. SOLTAU FENWICK, M. D. Lond., M. R. C. P., Senior Physician to the London Temperance Hospital, etc. Pp. xiv-392. Philadelphia: P. Blakiston's Son & Co., 1900. [Price, $3.50.]

THIS work is one of those masterly monographs that are far too rare in medical literature. None can read what is herein set down without great profit and a far more complete understanding of all that concerns gastric and duodenal ulcerations, for the book is very exhaustive.

So far as description goes, we can do no better than cite the preface to the effect that the work is divided into four parts, the first of which deals with the pathology and ætiology of gastric and duodenal ulcer, while the three others are devoted to a consideration of the clinical aspects of the disease and its sequelæ. The studies of the morbid anatomy of these diseases are based upon the records of 1,015 *post-mortems* in cases of ulcer of the stomach and 130 in cases of duodenal ulcer. The second part treats of symptomatology, and is based upon the clinical notes taken in 143 cases of acute ulceration, and the third part is similarly descriptive of the chronic ulcer, being based upon a study of 308 cases. The final part is descriptive of the sequelæ of ulcerations. From the wealth of material studied and the well-known ability of the writer, it might be expected that the work would be of unusual merit, and this is indeed the case. Great value, too, is added by a number of most excellent illustrations, chiefly photographs of museum specimens.

On Diabetes Mellitus and Glycosuria. By EMIL KLEEN, Ph. D., M. D. Pp. vii-9 to 313. Philadelphia: P. Blakiston's Son & Co., 1900. [Price, $2.50.]

THIS highly interesting and valuable monograph opens with a chapter upon definitions, and also briefly presents the historical data that concern the disease. The geographical distribution of diabetes is the subject of the second chapter, and Chapter III treats of glycosuria in its several forms. This chapter is most complete and instructive, and, in our opinion, is the most important of the work. The fourth chapter describes the symptoms and the complications of diabetes, and the fifth is on diabetes infantilis. Diabetes mellitus after removal of the pancreas is the subject of the sixth chapter, and the methods of investigating the disorder are described in the eighth. The final chapter is upon therapeutics.

There are several works upon diabetes and glycosuria that are entitled to be considered authoritative, notably von Noorden's and Naunyn's, but even by comparison with these the work before us will scarcely suffer. It is true that it is conventional in great part, for up to the present time, unfortunately, glycosuric disorders have failed to permit of much originality. The questions involved are handled in a masterly fashion, however, as might be expected of one so much in earnest as Dr. Kleen, and one, too, who has had the unequaled opportunity for the study and observation of the disease that Carlsbad affords.

The book is one that will be read with profit, and from our own reading of it we have derived an exceedingly orderly and satisfactory picture of the disorders of which it treats.

The Present Position of the Treatment of Simple Fractures of the Limbs. An Address delivered in opening a Discussion at the Meeting of the British Medical Association held in Ipswich, August, 1900. By WILLIAM H. BENNETT, F. R. C. S., Senior Surgeon to St. George's Hospital, London, etc. To which is Appended a Summary of the Opinions and Practice of about 300 Surgeons. Pp. 41. New York and Bombay: Longmans, Green & Company, 1900.

THIS volume presents the substance of the address mentioned on the title-page. In it we find not only the views of the writer on the proper methods of treating fractures in general, but also a summary of the opinions of a number of other practitioners. The author shows a partiality for the ambulatory treatment of fractures and favors the use of massage and early movement in recent cases; he, however, does not suggest their general adoption, but restricts their use to the hands of those who have had large experience in fractures.

On the Use of Massage and Early Passive Movements in Recent Fractures and other Common Surgical Injuries, and the Treatment of Internal Derangements of the Knee-joint. Three Clinical Lectures delivered at St. George's Hospital. By WILLIAM H. BENNETT, F. R. C. S., Senior Surgeon to St. George's Hospital, London, etc. With Twelve Illustrations.

Pp. x-97. New York and Bombay: Longmans, Green, & Company, 1900.

THIS little book represents, with a few additions, three lectures which have appeared in the *Lancet*. Lectures I and II are devoted to the use of massage and early movements in recent fractures and other common injuries, and Lecture III treats of the internal derangements of the knee-joint. The book concludes with an appendix on the use of massage in the treatment of recent fractures. Both this small work and its companion on the treatment of simple fractures will be found most interesting and instructive.

BOOKS, ETC., RECEIVED.

The Treatment of Fractures. By Charles Locke Scudder, M. D., Surgeon to the Massachusetts General Hospital, Out-patient Department, etc. Assisted by Frederic J. Cotton, M. D. Second Edition, Revised. With 611 Illustrations. Pp. 9 to 457. Philadelphia and London: W. B. Saunders & Company, 1901. [Price, $4.50.]

A Text-book of the Diseases of the Nose and Throat. By D. Braden Kyle, M. D., Clinical Professor of Laryngology and Rhinology, Jefferson Medical College, etc. With 175 Illustrations, 23 of them in Colors. Second Edition. Pp. 5 to 646. Philadelphia: W. B. Saunders & Company, 1901. [Price, $4.]

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, etc. Assisted by H. R. M. Landis, M. D., Assistant Physician to the Out-patient Medical Department of the Jefferson Medical College Hospital. Volume I. Pp. 4-17 to 440. Philadelphia and New York: Lea Brothers & Company, 1901.

Pulmonary Consumption, Pneumonia, and Allied Diseases of the Lungs: Their Ætiology, Pathology, and Treatment, with a Chapter on Physical Diagnosis. By Thomas J. Mays, A. M., M. D., Professor of Diseases of the Chest in the Philadelphia Polyclinic, etc. Illustrated. Pp. 8 to 539. New York: E. B. Treat & Company, 1901. [Price, $3.]

The Annual Eclectic of Medicine and Surgery. Record of 1897 and 1898. Volume VIII. Edited by John V. Stevens, M. D., Professor of Diseases of the Nervous System in Bennett Medical College, Chicago, etc. Pp. 3 to 522. Cincinnati: Scudder Brothers Company, 1901. [Price, $2.]

Manual of the Diseases of Children. By John Madison Taylor, A. M., M. D., Professor of Diseases of Children, Philadelphia Polyclinic, etc., and William H. Wells, M. D., Adjunct Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic, etc. Second Edition, thoroughly Revised and Enlarged. Illustrated. Pp. xvi-17 to 859. Philadelphia: P. Blakiston's Son & Company, 1901. [Price, $4.50.]

The Feeding of Infants. A Home Guide for Modifying Milk. By Joseph E. Winters, M. D., Professor of Diseases of Children, Cornell University Medical College. Pp. vii-47. New York: E. P. Dutton & Company, 1901.

Oral Sepsis as a Cause of "Septic Gastritis," "Toxic Neuritis," and other Septic Conditions. With Illustrative Cases. By William Hunter, M. D., F. R. C. P., Senior Assistant Physician, the London Fever Hospital, etc. Pp. 30. London and New York: Cassell & Company, Limited, 1901.

Studies in Human and Comparative Pathology. By Woods Hutchinson, A. M., M. D., Professor of Comparative Pathology and Embryology in the University of Buffalo, etc. Edited by Edward Blake, M. D. Pp. x-340. London: Henry J. Glaisher, 1901.

Miscellany.

A Memoir of the Late Dr. J. Henry Fruitnight.—At a meeting of the Northwestern Medical and Surgical Society, held on March 20th, Dr. Henry Ling Taylor presented the following: To attempt a full and just estimate of the character and services of any man is indeed a formidable—one might almost say a superhuman—undertaking. Let us content ourselves with the simple endeavor to register in brief outline the life history of our friend and to record some of the impressions which his daily walk and conversation made upon ourselves and upon others. Dr. Fruitnight was of pure German descent, his father and mother having come to New York from the kingdom of Hanover in the 'forties. John Henry Früchtnicht, the father, was an ex-guardsman of the Hanoverian army, and for twenty years served in Troop A of the New York State militia. His retail grocery business was seriously affected by the panic of 1857, and the children, brought up in somewhat straitened circumstances, early learned the lesson of helpfulness and independence. The mother died about eight years ago, at the age of sixty-four, and the father passed away last autumn in his eighty-fourth year. Both parents and an only sister had for many years made their home with the doctor; a younger brother died in early manhood many years ago, after beginning the practice of medicine. John Henry was born in New York, on or near Broome Street, on November 5, 1851. He attended the public schools, graduating at the old Thirteenth Street school, which had a great reputation in those days under Principal Hunter, now president of the Normal College. In 1872 Dr. Fruitnight took his A. B. degree at the College of the City of New York. During his course he had shown special aptitude for mathematics and languages, and had added to the English and German he already possessed an excellent knowledge of French. During the last two years at college he had assisted himself by teaching in the city night schools, and continued this work, as well as private tutoring in German and mathematics, during his medical course. Soon after leaving the city college he began the study of medicine under our fellow member, Dr. Charles E. Leale, attending lectures at the Bellevue Hospital Medical College, where he received his degree of M. D. in 1875. Those who remember him in his school and college days describe him as a bright, industrious student, gifted with a remarkable memory, quiet and somewhat shy, but of a clean, straightforward, loyal nature, qualities which distinguished him throughout his life.

Dr. Fruitnight began the practice of medicine in 1875 in what was then the upper West Side, on Fifty-third Street, near Eighth Avenue, and with the co-operation of his late instructor and other friends he acquired a profitable practice within a few months. In the following year he was married to Gertrude Huggins, who died three years later. In May, 1881, he married Mary Augusta Stewart, who, with one son, H. Stewart Fruitnight, survives him.

In the first years of his practice Dr. Fruitnight was

especially interested in obstetrics, and up to 1890 had written a dozen papers on obstetrical and gynæcological subjects, most of which appeared in the *American Journal of Obstetrics*. Before that date he had attended upward of 1,000 obstetric cases, and a colleague informs me that three obstetric calls in one night were not a rare occurrence. As his general and obstetric practice had become very large, perhaps for some years the largest on the West Side, he withdrew as much as possible from midwifery, but continued to do considerable gynæcological work. Before this he had become deeply interested in the diseases of children, and it is as a pædiatrician that he is most widely known to the profession. He had served as physician to the New York Foundling Asylum clinic from 1879 to 1881, and was for many years actively interested in the work of St. John's Guild, having been one of the founders and attending physicians of its city hospital for children. He was also an original member and the first secretary of the Pædiatric Section of the Academy of Medicine, established in 1887, and was its chairman in 1897 and 1898. He was a charter member of the American Pædiatric Society, was very regular in his attendance at the annual meetings, and rarely failed to present one or more original contributions, most of which were published in the *Archives of Pædiatrics* and in the *Transactions*. He was also a prominent member of the New York Academy of Medicine, its delegate to the State society from 1880 to 1883, a member of its obstetric as well as of its pædiatric section, and completed five years' service on its membership committee in 1899. At one time or another he was a member of the Medical Society of the County of New York, the Society of Medical Jurisprudence and State Medicine, the Medicolegal Society, the Medicosurgical Society, the Bellevue Hospital Alumni Association, the American Academy of Medicine, the New York Obstetrical Society, the New York Physicians' Mutual Aid Association, several of the International Medical Congresses, the Metropolitan Museum of Art, the New York Historical Society, the Alumni of the City College, and the Colonial and New York Athletic clubs. Dr. Fruitnight's membership in the Northwestern Medical and Surgical Society dates back to 1876, and the important place he held among us is known to you all. He rarely missed a meeting, was always ready to do work assigned, whether as officer, on a committee, or in the preparation of a paper, and it was largely due to him and to members like him that the social and fraternal feeling in our society has always been such a prominent and attractive feature. He acted as our secretary from 1881 to 1885, and as our president for the year 1886. Modest and retiring in manner and in feeling, never thrusting himself forward, yet nearly always holding positive and well-digested opinions on the topics which came up for discussion, his remarks were remarkably clear, concise, and practical, because based on a mature judgment and an extensive and well-ordered experience.

Dr. Fruitnight was an excellent diagnostician and clinician; he carefully studied his cases, was most conscientious and assiduous in attendance, and enjoyed to a remarkable degree the confidence and affection of his patients. In therapeutics, he was inclined to be conservative, relying on well-tested remedies and methods, but was always open-minded and eager to learn.

Never a very robust man after two serious attacks of septic pneumonia in his student days, the amount of work that Dr. Fruitnight accomplished was simply prodigious. His daily rounds took him to the extremes of the West Side, and upwards of thirty daily visits were not unusual for him. He enjoyed besides a large consulting practice, much of which came from neighboring States. He was active in many of the societies already enumerated, and his published work comprises over forty titles. As a matter of fact, he went to the extreme limit of his strength in his devotion to his profession, and his vacations were short and infrequent, his relaxations and outside interests few. He appreciated good literature, and in such intervals as he could snatch from his work he was fond of reading the standard English and German authors. He was also devoted to his church, and served for twenty years on the board of deacons of the Central Presbyterian Church, during the last fourteen as president.

In spite of curtailing night work in later years, the strain proved too severe, and it was evident to some of us two years ago that he was failing. With undaunted courage, though perhaps faulty judgment, he continued his work to within a few days of his death, which took place on December 19, 1900, in the forty-ninth year of his age.

We often hear it said of a man who has been fairly successful how much more might he not have accomplished had he only taken a different course or lacked certain elements of weakness. In Dr. Fruitnight's career, on the contrary, we see what intelligent industry and conscientious devotion may accomplish. Singularly free from personal blemish, large or small, his well-ordered and blameless life was given freely and gladly in useful service. In an age and in a profession often accused of self-seeking and of devotion to material interests, though without independent means, he kept his ideals high, and the monetary side of his profession never dominated him. Business-like in his methods, reasonable in his charges, unalterably opposed to the prostitution of medical charity, he was incapable of bias from social or financial considerations, and freely and conscientiously gave his services whenever and wherever they were required. He was in fact one of the most unselfish of men, always ready to do a favor and slow to ask one, and consistently spending time, strength, and his best thought in the service of others.

A pædiatrist of world-wide reputation said in a recent letter: "I know of no one who, without being unusually gifted intellectually or beyond the endowments of most of us, through his honest industry, modest behavior, and sense of duty and responsibility, made a more favorable impression on the large number of those who knew him, and made more friends in and out of the profession."

This deliberate and authoritative judgment is most suggestive, for few will doubt that the world is quite as much in need of men unusually high of aim and broad of sympathy as of men of unusual intellectual calibre. Indeed, it is only the refined intelligence warmed by generous emotion that is capable of persistently putting aside those things for which most men strive, and of putting the emphasis of life upon personal character, good citizenship, and service to others. What his life was he made it from deliberate choice and with his own strenuous endeavor; whoever came into contact with it could not fail to be impressed with its integrity, its consistency, its steadfast devotion to the highest aims. His published work, the lives he saved for the community, the affection he leaves in thousands of modest homes where he ministered as physician and as friend are his enduring monument. We who knew him well in both relations would bring also our tribute of respect and

devotion, bearing witness to his attainments and skill, to his singularly kind, gentle, and helpful nature, and to his remarkable personal and professional loyalty.

Precocious Obesity.—According to Chauffard (*Journal de Médecine,* March 10, 1900; *British Medical Journal,* December 22, 1900) much fatness in a child is not a sign of health, but one of degeneration, and unless treated may end fatally. Chauffard had under his care a man, aged thirty-four years, of middle height and of very excessive obesity. From early childhood this had been the case, and it was discovered that there were several instances in his family of hereditary obesity. Examination showed considerable cardiac embarrassment and dyspnœa. He was put on milk diet alone, together with some doses of thyreoid extract, and under this treatment he lost a good deal of weight in three weeks. He returned home and resumed his ordinary diet, on which he regained a kilogramme *per diem.* It was found that his heart was failing, and had ceased to react to digitalis and other tonics. The patient died of asystole. It is difficult to state exactly the pathogenesis of congenital obesity. In some cases, apparently, there is too rapid an assimilation of nutritive material, while in others combustion is not sufficiently rapid. It has also been supposed that there is some peculiar lipogenic ferment, but the evidence of this is not sufficient. In constitutional cases treatment is very much more difficult, especially in view of the fact that the patients are not infrequently gouty, diabetic, or the subjects of renal disease. A great deal also depends on the state of function of the heart and kidney, which are indeed the indications of most importance. Not infrequently there is tachycardia or arrhythmia. On post-mortem examination, the muscular structure of the heart is generally found to be considerably affected. A point that has, so far, not been sufficiently studied is the thyreoid gland. In the cases quoted by the author, this organ was double the normal size, and its structure profoundly altered, there being a condition which could best be described as a hypertrophic cirrhosis. In such cases the main line of treatment is, first, to impress on the patient the absolute importance of reducing his weight, otherwise the heart may be suddenly hampered and give way. Next, to put him on a very limited diet, chiefly milk, and to order a carefully graduated scale of exercises. It is important that it should be judiciously increased, and it may be combined with massage. The administration of thyreoid extract is undoubtedly of use, according to the author, but its action must be carefully watched. It is contra-indicated in cases where there is severe cardiac embarrassment. When given, it should be taken for a week at a time, followed by the administration of Carlsbad salts. If taken too frequently the result may be cardiac failure.

Experimental Tuberculosis.—Dr. R. R. Dinwiddie (*Journal of Comparative Medicine and Veterinary Archives,* January) thus concludes an interesting serial article on Experimental Tuberculosis, Human and Bovine, in the Domestic Animals:

"In reviewing the results of the foregoing experiments, considered in their relation to agricultural or veterinary science rather than to comparative pathology, I may formulate the following conclusions, which seem to be thoroughly established by the evidence which we now possess:

"1. Toward tubercle bacilli of human consumption, pigs, sheep, and cattle show a susceptibility in the order named. Pigs may obtain a genuine progressive tuberculosis by infection from man, while cattle are practically insusceptible.

"2. As regards tubercle bacilli of bovine tuberculosis, all three species are alike susceptible to the inoculation disease.

"3. The excess of virulence of the bacilli of cattle tuberculosis over that of human consumption, previously demonstrated in cattle and rabbits, holds good, also, for pigs and sheep—for all susceptible animals, practically, on which the test has so far been made.

"I may add to this, in conclusion, an opinion of my own, forced upon me largely by the experience I have had in these studies of experimental tuberculosis in animals, namely, that the conditions of environment, in their influence on the initiation and progress of tuberculosis in cattle and in mankind as well, have been and are even now greatly underestimated. Among the unfavorable influences, I attribute much the greatest importance to the breathing of vitiated air—disregard of ventilation—in houses and stables."

Recovery from Pernicious Anæmia.—Dr. W. Hunter (*British Medical Journal,* February 16th) recently showed to the Medical Society of London a man who had completely recovered from pernicious anæmia. For ten years he had suffered from purulent discharge from the gums, with recurrent pain in the tongue and stomach, attended with digestive disturbance and progressive anæmia. Ultimately the red corpuscles in his blood reached only twenty-seven per cent. of the normal, the hæmoglobin only thirty-five per cent. His urine showed the characteristic dark, smoky tint, and he had irregular fever with numbness and tingling of the fingers. Under treatment by oral and gastric antisepsis (chiefly carbolic-acid solution for the mouth, and bichloride of mercury in small doses) he steadily improved; four injections of antistreptococcus serum had been administered in three weeks with apparent benefit. The red corpuscles had thus been increased forty per cent., and further treatment by the administration of liquor arsenicalis had brought the blood condition to: red corpuscles = 95 per cent., hæmoglobin = 106 per cent. Cases of pernicious anæmia, Dr. Hunter said, often improved under arsenic alone, but invariably relapsed, and he considered this case the most hopeful he had yet seen. He attributed great importance to a septic condition of the mucous tract in the causation, and to antiseptic measures in the treatment. From this last statement, however, Dr. J. Broadbent dissented, and related several cases to the contrary.

Gonorrhœa in the Genital Tract of a New-born Child.—Aichel (*Hegar's Beiträge,* Vol. ii, Part 2, 1900; *British Medical Journal,* November 17th) observed this case. The mother had gonorrhœal discharge from the urethra, verified by microscopic examination. Four days after birth the infant had swelling, with redness about the vagina; from that date to the tenth day there was purulent discharge which for the three succeeding days was sanious. The infant's general condition remained good, no inflammation of the surrounding connective tissue followed. Plenty of gonococci were detected in the pus, which when cultured yielded diplococci and *Bacillus coli communis.* Aichel suspects that gonorrhœa of the vulva may be frequent in the infant, and that it ascends quickly, the vulva healing. It may explain the bleeding and erosions not rare in infants; also it may cause the so-called "congenital" atresia vaginæ.

Original Communications.

THE ACTIVE PRINCIPLES OF DIGITALIS LEAVES.

By JOSEPH W. ENGLAND, Ph. G.,

PHILADELPHIA.

The more important features of Dr. Leon L. Solomon's paper upon A Clinical Analysis of Digitalis and its Preparations, calling special attention to the glucosides and more especially to digitoxin, as contained in a recent issue of this journal, are, in my judgment, the contrasts shown between the physiological actions of digitalis derivatives and the clinical claims made for digitoxin. The clinical studies were made with "digitalin, German-Merck," and "digitoxin—Merck"; for the former the formula $C_{35}H_{56}O_{14}$ is given, for the latter, $C_{34}H_{54}O_{11}$, though the qualifying statement is made that while these formulæ "are now pretty definitely established, this is not absolutely so."

Dr. Solomon asserts, in brief, that digitoxin is the chief constituent of digitalis leaf, and that the latter should be standardized in terms of its contained digitoxin; and, further, that digitoxin is superior to digitalin as a diuretic, since it more promptly and certainly dilates the renal vessels while stimulating the heart, manifesting such effects within twelve hours. He quotes Masius as saying that the action of digitoxin is "certain, quick, and energetic," and Van Aubel as stating that digitoxin is "the most prompt, reliable, and powerful derivative of digitalis."

The chemistry of digitalis leaves has been in a state of confusion for nearly three quarters of a century. Various so-called active principles have been isolated, from time to time, nearly all of which have been found to be varying mixtures. The digitalins of Homolle, Quevenne, Walz, Kosmann, and Nativelle, the "French" digitalin, and the "German" digitalin, have been shown to consist of a number of compounds. Merck's "German" digitalin—referred to by Dr. Solomon as a definite compound, and probably the most uniform and reliable product of its class—is a mixture, as shown by the following quotation from a letter by Merck & Company to the writer: "Digitalin, 'German,' is a mixture of the digitalis glucosides that enter into solution in the preparation of the aqueous infusion of digitalis. According to Schmiedeberg's investigations, it consists preponderantly of digitalein, with small proportions of digitin, digitonin, and Schmiedeberg's digitalin. It occurs as a yellowish-white amorphous powder that is soluble in water and in alcohol, but practically insoluble in chloroform and in ether. The process of its manufacture consists in precipitating it from infusion of digitalis in the form of its difficultly soluble tannate; then liberating it from this compound by appropriate means, and finally subjecting it to further purification."

The work of Schmiedeberg in 1874 (*Arch. für exp. Pathol. und Pharm.*, 1874, 16, *vide Pharm. Journ. and Trans.*, 1875, 741) attracted very general attention. The results of his experiments seemed to indicate that the active principles of digitalis leaves were a digitalin, digitoxin, digitonin, and digitalein. He discovered digitoxin, obtaining it from the leaves. The digitalin he examined was prepared from commercial digitalin made from seeds, and it was assumed that the digitalin, digitoxin, digitonin, and digitalein present in the seeds were the same as those present in the leaves. The digitalin isolated has been known as "Schmiedeberg's digitalin."

In this connection it is interesting to give the following data, taken in part from a paper by the writer upon the subject of Digitoxin as the Active Principle of Digitalis, as contained in the *American Journal of Pharmacy* for 1899:

In 1892 Kiliani reported (*Archiv. der Pharm.*, 230, p. 250, *vide Pharm. Jour. and Trans.*, June 25, 1892, p. 1061; *Am. Journ. Pharm.*, 1892, pp. 415, 422) that "the digitalin of Schmiedeberg is a distinctly individual substance which possesses, in a marked degree, the characteristic property of acting upon the heart"; that "analysis gave results agreeing with those obtained by Schmiedeberg, which lead to the formula $C_5H_8O_2$"; that the digitalin is very definitely split up by diluted hydrochloric acid into digitaligenin, glucose, and digitalose, and that the pharmacological results obtained by Professor Boehm, of Leipzig; Dr. Motter, of Munich, and Professor von Ziemssen, of the Munich Hospital, with Schmiedeberg's digitalin were characteristic of digitalis. Kiliani prepared his Schmiedeberg's digitalin from digitalis [whether from leaves or seed it is not stated.—J. W. E.] and it was named "Digitalinum verum." In 1895 Kiliani (*Archiv der Pharm.*, 233, 299, *vide Pharm. Journ. and Trans.*, 1895, 29) published further details regarding the "Digitalinum verum," the material for examination having been prepared from purified commercial digitalin made from digitalis seed.

After this, however, Kiliani radically changed his views and claimed that Schmiedeberg's active principles were, in several instances, impure products—that is, mixtures; that digitalis *leaves* contained neither digitonin nor digitalin, but the glucoside digitoxin; that the glucosides digitalin and digitonin are present in the *seeds*, but not in the leaves; that digitonin is quite insoluble in water, and that the existence of digitalein is extremely doubtful. In other words, that digitoxin is the only important constituent of digitalis leaves (*Archiv d. Pharm.*, 1892 to 1896, inclusive, through *American Druggist*, 1897, 68).

In 1895 (*Arch. d. Phar.*, 1895 (No. 4), 311, 320, *vide A. Ph. A. Proceedings*, 1896, 825) Kiliani reported obtaining from digitalis leaves a substance identical with, or closely related to, the digitoxin of Schmiedeberg,

and provisionally termed it *b* digitoxin. It was present to the amount of 0.1 per cent., was glucosidal, and crystalline. In 1896 Kiliani reported (*Arch. d. Pharm.*, 234, No. 7, September 10, 1896, 481, 489, *vide A. Ph. A. Proceedings,* 1897, 735) that experiments had shown that Schmiedeberg's digitoxin and the digitoxin which he had isolated during the previous year and provisionally named *b* digitoxin, were positively identical.

In 1897 C. C. Keller's conclusions (*Berichte d. Deutsch. pharm., Gesellsch.*, 7, 125, *vide Pharm. Journal, vide American Druggist,* August 10, 1897, 70) on the subject of the chemical principles of digitalis leaves were that they contain a digitalin, a digitoxin, and a digitonin identical with products from digitalis seeds, but in somewhat different proportions, the amount of digitoxin in the seeds being much smaller than that in good leaves, but varying much in different samples of leaves, or from 0.26 to 0.62 per cent. Keller writes that the unsatisfactory results obtained with the digitalin prepared according to the method described by Kiliani (see *Pharm. Journal,* 55 (1896), 29) have again attracted attention to digitoxin, which latter is alleged to be the most potent constituent of digitalis leaves, and then makes a plea for standardizing digitalis preparations on the basis of the amount of digitoxin they contain.

Replying to a criticism by Keller of his results of investigation concerning the constituents of digitalis leaves, Kiliani then claimed that digitalis leaves contain, besides digitoxin, a crystallizable glucoside in considerable quantities, which, like digitoxin, is soluble in chloroform, and which also produces, with solution of iron in glacial acetic and sulphuric acids, the blue color regarded by Keller as characteristic of digitoxin. Kiliani proposed for the new substance the name of digitophyllin, and gave its physical and chemical properties (*Arch. d. Pharm.*, August 17, 1897, 425-429, *vide Proc. A. Ph. A.*, 1898, 795).

Professor Boehm, while in general acknowledging the value of Keller's method for the estimation of digitoxin, warns against an absolute reliance upon it, as, in his opinion, the efficacy of digitalis depends not alone on the digitoxin present, but rather on the sum total of all its constituents (*American Druggist,* June 25, 1898, 342; from Gehe & Co.'s *Bericht*).

According to Kiliani, he has never been able to find in the leaves of digitalis either the so-called *Digitalin verum* (*i. e.*, Schmiedeberg's digitalin) or (probably) digitonin (*Arch. d. Pharm.*, 1897, 425-429, *vide Proc. A. Ph. A.*, 1898, 795), while Keller (*Ueber die Werthbestimmung von Drogen und galenischen Praparaten,* Diss. Zurich, 1897) states that both *digitalin* and *digitonin* are present. M. Cloetta has gone into this knotty problem, and finds that the leaves contain the same *digitalin, digitoxin, digitonin,* and *coloring matter* as the seeds. He did not find any *digitalein* in the leaves. The seed contains much more *digitalin* than *digitoxin,* while in the leaves the reverse obtains (1898, *Arch. f. exp. Pathol. u. Pharm.*, 41, 421, *vide Am. Jour. of Pharm.*, 1899, 90).

Quite recently more light has been thrown upon the chemistry of digitalis leaves, and a very interesting paper has been written upon the subject by A. R. L. Dohme, Ph. D., for the *Druggist's Circular* (January, 1901, 4), from which the following information is taken:

In 1898, Kiliani ascertained the composition of digitoxin ($C_{34}H_{54}O_{11}$) by saponifying it into digitoxigenin ($C_{22}H_{32}O_4$) and digitoxose ($C_6H_{12}O_4$). He also determined the composition of digitalin ($C_{35}H_{56}O_{14}$) by saponifying it into digitaligenin ($C_{22}H_{30}O_3$), digitalose ($C_7H_{14}O_5$), and *d.* glucose ($C_6H_{12}O_6$). In his work he used the principles made from digitalis seeds, and claims that the glucosides obtained from the leaves are different from those of the seed; thus, the digitoxin from the leaves had the formula $C_{28}H_{46}O_{10}$; that from the seeds had the formula $C_{34}H_{54}O_{11}$. The so-called "German digitalin" contains, he asserts, about 50 per cent. of digitonin.

Digitalis seeds are largely used in Germany for the preparation of digitalis principles. Hence, continues Dr. Dohme, we know, apparently, not very much about the glucosides of digitalis *leaves,* the main work so far having been done upon preparations made from the *seed.* This appears rather odd since, although the manufacturers of digitalin preparations do use the seed, as it appears, the pharmacist uses practically exclusively the leaves of the drug, and wants to know about them and what glucosides and other substances they contain. In a communication recently received from Professor Kiliani, he states that digitoxin is by no means the only active principle of digitalis, although no doubt one of the most active. In the leaves are contained besides digitoxin, digitalein very largely, and most probably digitalin. According to Professor Boehm, he says further, digitoxin is not a complete substitute for an infusion of the leaves, as this contains principally digitalein, which most probably produces most of the physiological effect of the infusion. There is no reliable method of assaying digitalis for digitoxin, according to Kiliani, for he maintains that Keller's method is unreliable. Digitalein, he further says, is too incompletely characterized and known and too easily decomposable to enable one to readily discover a method of assaying digitalis for it. To sum up the status of digitalis chemistry to-day, writes Dr. Dohme, we know little about the glucosides of the leaf, although we do know considerable about those of the seed, due to the unfortunate fact that investigators use the preparations of digitalin apparently made by manufacturers who use the seed in making their products. As the seed contains no digitalein, we see but little mention of this in the literature, and correspondingly more of digitonin, digitalin, and digitoxin. We know the composition and properties of the digitonin, digitoxin, and digitalin and digitophyllin of the seed, but hardly as much of the digitoxin, digitalein, and digitalin

of the leaf. There is hence quite a field for work in the study of the glucosides of digitalis leaf, and the results, when they come out, will probably not agree with those of Kiliani, whose work has been on products of the seed, which he maintains are different, as we have seen, from those obtained from the leaf. The problem before those who are interested in the assay of digitalis leaf, concludes Dr. Dohme, is to obtain the various glucosides therefrom in quantity and study them, after carefully purifying them, both chemically and physiologically. All such as are found to be therapeutically active and valuable should be carefully studied and a method worked out that will enable us to determine all the same quantitatively. What has been done on digitalis preparations heretofore should be left unconsidered in this work, as it will probably tend more to confuse than to aid in the work, inasmuch as it applies to different preparations. It would appear that here is the opportunity of some ambitious American pharmaceutical chemist to help us out of a peck of trouble and put us on *terra cognita* in a domain distinctively in need of a firm foundation and a scientific structure.

The assertion made by Dr. Solomon that digitoxin is the chief constituent of digitalis leaves is not a new one. It was advocated years ago by Kiliani, but abandoned later. The formula given for the digitoxin used by Dr. Solomon, in his clinical work, is $C_{34}H_{54}O_{11}$, and this Kiliani has shown is the formula of the digitoxin obtained from the seed; the digitoxin of the leaves has the formula $C_{28}H_{46}O_{10}$. The digitoxin Dr. Solomon used was presumably made from the seed, and, if Kiliani is correct, cannot represent the leaves.

Now, apart from the question of chemical composition, if it be true that digitoxin represents the medicinal value of digitalis leaves, it follows that it should give, clinically, all the therapeutic results yielded by the leaves or preparations, and as promptly. Further, since digitoxin is wholly insoluble in water, the infusion of the leaves should be wholly destitute of the representative principle, and consequently of medicinal worth; yet there are physicians who use the infusion of the leaves to the exclusion of its other preparations. Against this fact it is contended (*Apoth. Ztg.*, 1899, 178, *vide Proc. A. Ph. A.*, 1899, 521) that while pure digitoxin is insoluble in water, yet in the presence of digitonin it becomes water-soluble, which, to say the least, is remarkable, if true.

Now, as the writer has previously stated (*Amer. Journ. Pharm.*, 1899), while digitoxin may be a most distinctive *chemical* substance, it is very clear, from the experiments of Dr. Karl Hofmann (*Wiener klinische Wochenschrift*, 1896, No. 42, 939, *vide American Journal of the Medical Sciences*, 1897, 107), and the pharmacological results already obtained by the writer with his tincture of "fat-free digitalis," that the entire therapeutic activity of the leaf cannot depend upon digitoxin.

Dr. Hofmann reports the clinical use of digitoxin in fifty-nine cases—three instances by the mouth, thirty-seven by subcutaneous injection, and nineteen by enemata. He confirms previous investigators in referring to its insolubility in water and the vigorous local irritation caused by its use. The injections are followed by local burning pain, lasting from one half to three or four hours, and redness for two or three days, which is sensitive to pressure. Inappetite, nausea, vomiting, and pain in the epigastrium occurred in one fourth of the cases, whether subcutaneous injections or enemata were administered. The most remarkable fact, however, was the *length of time* reported as having elapsed before physiological effects were manifested. After the first dose, six hours were required to increase pulse-force and lessen dyspnœa, while twelve hours were required to produce diuresis. With enemata these changes required twenty-four to thirty-six hours.

These results have been confirmed by the recent work of Dr. J. P. Arnold and Dr. H. C. Wood, Jr., in a paper published in the *American Journal of the Medical Sciences*, August, 1900, entitled A Comparative Study of Digitalis and its Derivatives, in which it is stated that "digitoxin is not to be recommended for human medication on account of its irritant action, which makes it liable to upset the stomach when given by the mouth, or to cause abscesses when given hypodermatically, and on account of its insolubility, which renders it slowly absorbed and irregularly eliminated, having a marked tendency to cumulative action."

The "tincture of fat-free digitalis" referred to (*American Journal of Pharmacy*, July, 1899) is a preparation originated by the writer some years ago for use in the Philadelphia Hospital. It is made by exhausting freshly ground digitalis leaves with purified petroleum benzin, drying the residue thoroughly by exposure to air, percolating with diluted alcohol, and neutralizing the percolate with ammonia water; the strength of drug is the same as the official tincture of digitalis. The product is a deep reddish-brown, almost black liquid, of not unpleasant odor and purely bitter taste. It has not the acrid taste of the official tincture, and, unlike the latter, remains transparent on dilution with water. The benzin treatment removes the fat, and probably all the nauseating and odorous principles, and the ammonia treatment neutralizes the free fatty acids present in the finished tincture. All the proximate principles are made water-soluble and not partly so, as in the official product. This feature is of marked value, because all compounds must be made water-soluble before they can be absorbed by the tissues. Increased cellular absorption means increased assimilation, as clinical experiments with this tincture have proven.

Fifteen cases in the Philadelphia Hospital were treated with the fat-free tincture and with the official tincture, and the time, in minutes, required to induce first effects and full effects, along with the work and beats reduced, were noted. Practically, the primary ef-

fects of the fat-free tincture were manifested in 15 minutes, and the maximum in 45 minutes; while with the official tincture primary effects were manifested in 30 minutes, and maximum in 60 minutes. The duration of the effect was the same in both cases—30 minutes. The pulse reduction in work done was slightly greater with the fat-free tincture than with the official. The fat-free tincture was much more rapidly absorbed than the official. No special difference in the time of absorption between hypodermic injections and mouth administrations was observable, but when the tincture was given hypodermically the pulse reduction seems to have been greater with the fat-free tincture, though not extending over any greater length of time.

From a therapeutic point of view, it is clearly impossible to believe that a drug or preparation that yields physiological effects in about thirty to sixty minutes has for its most important constituent a proximate principle (digitoxin) whose physiological effects are not manifested in from six to thirty-six hours.

It seems clear from the properties of digitoxin—its difficulty of absorption, the length of time necessary to yield cardiac and renal effects, its slowness of elimination, and the relative rapidity of absorption of digitalis tinctures, that digitoxin cannot be the most important therapeutical principle of digitalis leaf. The severe local pain following hypodermic injections of digitoxin, the prolonged sensitiveness of injected tissues, and the slowness of physiological effects indicate a great difficulty of absorption and assimilation. Dr. Solomon states in his paper that after discontinuing the use of digitoxin its influence persists from eight to ten days, and that, given hypodermically, "a very hard infiltration œdema usually follows the injection, until after many pricks of the needle the tissues about the point of puncture become stiff and rigid, interfering somewhat with the function of the part." In view of these facts, is it not probable that the water-insoluble digitoxin is absorbed, not as digitoxin, but as a water-soluble decomposition product or products? Digitalis is sometimes cumulative in action. When taken for a long time there are occasionally exhibited symptoms without any increase in the use of the drug. This has been thought to be due to the fact that the proximate principles of the drug were not excreted by the kidneys as fast as absorbed, and that they therefore accumulated in the body. But from the experiments referred to above, it would seem to be more reasonable to believe that cumulative action, where existent, is due to the slow absorption and elimination of digitoxin. With a bed-patient, a good tincture of digitalis, for example, should yield primary effects in from 15 to 30 minutes, and full effects in from 45 to 60 minutes. Digitoxin, however, on hypodermic injections, requires, before any effects are shown, 6 hours and over. Now, if a large number of doses of a digitoxin-containing tincture of digitalis be given, and the use of the drug be withdrawn, may not the accumulated digitoxin (of the tincture) by absorption give rise to the dangerous symptoms which are called the cumulative effects of digitalis?

The chemistry of digitalis leaves cannot be regarded as being satisfactorily settled. If Kiliani's claim that the glucosides of the leaves are different chemically from those of the seed is a fact—and it seems singular that such a difference should exist between the glucosidal principles of the leaves and the seed of the same plant—it means that equally as great differences in the physiological activities of the principles may exist, and these differences, if existent, would serve to explain much of the seeming confusion that has heretofore obtained in the reports made by different investigators upon the chemical nature and the physiological properties of digitalis principles. New investigations are needed upon the glucosides prepared from the leaves (not from commercial products obtained from the seeds); and these investigations should be made along new lines, leaving unconsidered, as Dr. Dohme urges, all the work that has been heretofore done upon digitalis principles.

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THE COMPARATIVE PATHOLOGY OF THE JEWS.

BY MAURICE FISHBERG, M. D.,
NEW YORK.

(Concluded from page 543.)

Mental diseases occur more frequently among the Jews than among non-Jews. It has been asserted by many competent and reliable observers that the Jews supply proportionately from two to five times more mental defectives than the Christians. Thus Lombroso (44) shows that the Jews in Italy had, in 1869, one lunatic to 391 of their people—*i. e.*, almost four times more than the Catholics in that country. Verga confirmed this in 1879, and stated that there were:

One lunatic to 1,775 Catholics;
" " " 1,725 Protestants;
" " " 385 Jews.

Meyr shows that in 1871 there were:

In Prussia:		
To 10,000 Christians	8.7	insane
To 10,000 Jews	14.1	"
In Bavaria:		
To 10,000 Christians	9.8	insane
To 10,000 Jews	25.2	"
In the German Empire:		
To 10,000 Christians	8.6	insane
To 10,000 Jews	16.1	"

Dr. Sikorsky and Dr. Maximoff bring the following data about the troops in Kieff, Russia, during 1895-1896 (45):

Russians	0.91	per cent. of insane
Polish	0.92	" " " "
Mohammedans	1.06	" " " "
Jews	2.19	" " " "

According to German statistics (46) there is one idiot

In Silesia:
To 580 Catholics; to 408 Protestants; to 514 Jews

In Wurtemberg:
To 4,113 Catholics; to 3,207 Protestants; to 3,003 Jews

And one lunatic:

In Bavaria:
To 908 Catholics; to 967 Protestants; to 514 Jews

In Hanover:
To 528 Catholics; to 641 Protestants; to 337 Jews

In Silesia:
To 1.355 Catholics; to 1,264 Protestants; to 624 Jews

In Wurtemberg:
To 2,006 Catholics; to 2.028 Protestants; to 1,544 Jews

In a recent study of 1,000 cases of insanity at the Colney Hatch Asylum in London, Mr. C. F. Beadles (47) observes that "by those who come in contact with the (Jewish) race in hospital and private practice, the men are looked upon as neurotic and the women as hysterical. Neurasthenia, and all that this term implies, would seem to be a common complaint amongst those seeking medical aid. Hereditary insanity probably figures high in the race, but it is impossible to get at the proper proportions which this holds." Mr. Beadles then shows that there was found to be a great preponderance of general paralysis among Jewish males; over twenty-one per cent. of all the male Jews admitted being subjects of that disease, while the proportion of cases of general paralysis among all the males admitted to the hospitals for the insane in England and Wales is thirteen per cent. "It is evident," says Mr. Beadles, "that among the Jewish males, admissions for general paralysis are sixty per cent. more frequent than among the English and Welsh." No such disparity has been observed in Jewesses, although insanity following childbirth is more common among them than among others—namely in fifteen per cent. of all the Jewish females admitted to the Colney Hatch Asylum, as compared with 6.18 per cent. among the non-Jewish patients. It was found that insanity appeared earlier in Jews of both sexes than in non-Jews; at thirty-seven years of age in Jews, as compared with forty-three years in Christians; relapse occurs twice as frequently in Jewish patients discharged from hospitals for the insane as in other patients. "The mental strain," says Mr. Beadles, "resulting from excessive zeal in acquiring riches, and the worry and annoyance which must invariably accompany the greed for worldly goods, doubtless play no small part in the mental breakdown of these people."

All the statistics show plainly the frightful disposition of the Jews to insanity and idiocy. We shall speak of the causes of this peculiarity of the Jews hereafter in this paper when discussing the causes of the comparative pathology of the Jews in general.

Lagneau's observations led him to conclude that the Jews suffered relatively more from epilepsy than Christians (47*a*), but other observers, particularly Charcot, have disproved this conclusion. Worms (47*b*) observed in the Jewish hospital in Paris, during a period of twenty-five years (1865 to 1890), only 77 epileptics among 26,591 Jewish patients. Oser states that this is also the case in the Jewish hospital in Vienna. In the Salpêtrière, according to Charcot, there were observed only 39 epileptics during thirty-four years (47*c*).

It is a curious fact that infantile cerebral degeneration, or amaurotic family idiocy, or *agenesis corticalis,* a rare and fatal disease of infancy, occurs mostly among Jews; of the cases first reported, in which the nationality is stated, the patients have all been Jews. Lately some cases have also been reported among Christians. This disease is characterized by progressive mental and physical enfeeblement, associated with symmetrical changes of the macula lutea which are pathognomic.

It will be observed that, with the exception of amaurotic idiocy, just mentioned, and also of the cases of general paralysis from Colney Hatch Asylum, all the observers agree that the Jews are disposed to suffer mostly from functional nervous diseases. With organic nervous diseases, as tabes, the various organic degenerative diseases of the brain and spinal cord, the Jews are no more affected than non-Jews; on the contrary, some varieties of organic nervous diseases occur less frequently among Jews than among Christians. Thus Dr. L. Minor, of Moscow, discussing syphilis as a cause of tabes (48), shows that the Jews are infrequently affected by both these diseases. To substantiate his contention, he brings statistics of his 383 cases of nervous diseases, of which 260 were in Jews and 123 in Christians. From among the Jews, he found eight positive and three probable cases of syphilis; among the Christiants, twenty positive and twenty-six probable cases of syphilis. Among the 260 Jewish patients, he met with two cases, and among the Christians four cases, of tabes. Among the Christians there was consequently five times more syphilis and tabes than among the Jews.

General paralysis was also found to be six times more frequent among the Christian than among the Jewish patients.

In order to have more statistical evidence, Dr. Minor asked Professor Kajewnikoff and Dr. Korsakoff for their cases, and found that among Professor Kajewnikoff's 2,403 patients of nervous disease, 347 of whom were Jews, there were sixty cases of tabes and forty-eight of general paralysis; sixty-five per cent. of previous syphilis was discovered in the patients suffering from both these diseases. None of these 347 Jewish patients were affected with tabes, and only three Jews had general paralysis.

Dr. Korsakoff found that, among his 2,610 patients, were eighty-nine Jews; with tabes were affected sixty-two Christians and four Jews. Sixty-five per cent. of the patients with tabes had syphilitic antecedents. Among the four tabetic Jews, three had syphilis positively. General paralysis was found in sixty-nine patients, including one Jew; there were syphilitic antecedents in seventy-two per cent. of these cases.

Dr. Minor summarizes these cases as follows:

4,700 Christians: 137 cases of tabes	2.9	per cent.
696 Jews: 6 cases of tabes	0.8	per cent.
4,700 Christians: 124 cases of general paralysis	2.6	per cent.
696 Jews: 6 cases of general paralysis	0.8	per cent.

In a later communication (49) On the Comparative Pathology of the Nervous Diseases in Jews and Christians, Dr. L. S. Minor analyzes 3,214 cases of nervous diseases which occurred in his practice. Among these there were 1,480 Jews and 1,734 Christians. He arrives, in part, at the following conclusions:

I. So far as he could find from his cases, the Jews are no more predisposed than Christians to *all* the nervous diseases.

II. On the contrary, the most serious organic diseases of the brain and spinal cord, chronic inflammation of the cerebral blood vessels, kidney, etc., are far more frequently met with among the Christians than among the Jews. The more dangerous organic diseases of the nervous system, as tabes and general paralysis, are rare among the Jews.

III. The reason for this lies mainly, if not exclusively, in the fact that syphilis and alcoholism are more frequent among the Christians.

IV. From his cases he does not find that even the functional nervous diseases occur more frequently among the Jews than among the Christians.

V. Hysteria is more frequent among the Jews than among the Christians. Hysteria in the male is very frequent among the Jews.

The statistics of Mr. Beadles, of the Colney Hatch Asylum, are the only ones we could find in the medical literature that contradict the contention that Jews suffer mostly from the functional neuroses. Dr. George H. Savage, in discussing Mr. Beadles's paper, aptly remarked (50) that, in his experience, "there has been very little general paralysis either among the (Jewish) men or women. Just as other races are affected, general paralytics among the Jews have nearly all had some history of syphilitic degeneration. The forms of moral depravity common among Jews are very marked and disproportionate, and perhaps that is not altogether surprising, considering the history of the race."

The frequency of functional nervous diseases in the Jew, as we have seen before, is attested by most of the observers on both continents. He is most liable to the diseases of our age—neurasthenia and hysteria; he has the distinction of having his nervous system predominating over his muscular. The Jews are far less muscular than nervous, probably because they are the most brainy, having lived for centuries only on the products of their brains; and, therefore, having for two thousand years overstrained their nervous system, they very easily become disordered, "out of gear," and even collapse entirely; a fatigued organ is easily disturbed in its function.

"The nervous derangements which are the effect of psychic trauma," says H. Oppenheim (51), "explain to some extent the reason why the Jewish race—after being persecuted and oppressed, mostly only tolerated among the nations, living in peace for short times only, and then again tormented—is suffering in such immense numbers from the neuroses and psychoses, and particularly hysteria."

Dr. F. Jolly (52), speaking of the frequency of hysteria and the neuroses in the Jewish race, says that "possibly the persecution the Jews had to undergo for centuries, and with this the frequency of consanguineous marriages, has been the chief cause of the degeneration of their nervous system."

Dr. Otto Binswanger (53), speaking of the fact that the Jews supply relatively the largest contingent of neurasthenics in Europe, says "that there are no ethnic causes in their production." "This fact can be explained to have its origin in other causes: the disproportion between the inadequate development of the body of the Jew, on the one hand, and his constant restless mental activity on the other, has a degenerative influence on the Jew's nervous system; the consanguineous marriages, which occur so often among the Jews, have also very much to do with their nervousness." In the same sense speak also Krafft-Ebing, Erb, Charles Féré, and many others, about the causes of the frequency of the functional neuroses among the Jews. We shall return soon to this subject again when discussing the causes of the peculiarities of the general pathology of Jews in general; meanwhile, we want to point out that those diseases which occur most frequently among the Jews, as diabetes and the functional neuroses, are ascribed by many authors, as Van Noorden, Stern, Jolly, Binswanger, Erb, and many others, to the frequency of consanguineous marriages. To the same cause have, at some periods in the world's history, been attributed the following diseases (54): phthisis and leprosy, idiocy, insanity, epilepsy, cretinism, hydrocephalus, abnormally-sized heads, prognathous jaws, hare-lip and cleft palate, rickets, goître, chorea, deaf-mutism, sterility, tuberculous meningitis, ichthyosis, and a score or more of other diseases. We have found that the Jews, who intermarry quite freely, are not more subject to all those complaints, excepting, of course, diabetes, insanity, and the functional neuroses; to many of these affections, as phthisis, sterility, etc., they are even less susceptible than other nations who do not so freely intermarry. We are consequently of the opinion that consanguineous marriages have very little, if anything, to do with the predisposition of the Jews to diabetes and the functional neuroses. And, indeed, it is at present quite universally agreed that consanguineous marriages among healthy individuals are not *per se* productive of any disastrous results to posterity.

Of the great number of other diseases which were, at one time or another, supposed to have been of more frequent occurrence among Jews than among Christians, we will but name gout and chronic rheumatism, and also

various eruptions on the skin, especially psoriasis. French authors, as Charcot, Lancereaux, Féré, and many others, find a close connection between the neuroses and what they call "arthritisms" and "herpetisms," including under these names a number of diseases and conditions, as gout, lithæmia, chronic rheumatism, psoriasis, diabetes, gall-stones, nephrolithiasis, etc., all of which occur in people of a nervous diathesis. They describe all these affections as occurring very often among the Jews. "The pathological history of the Jewish race," says Charles Féré (55), "is particularly favorable for the observation of the following fact: Nowhere else do we see so clearly the close connection which exists between the neuroses and the arthritisms, which are especially represented by gout and diabetes and the nervous diseases. Neurasthenia manifests itself in the Jews in its most complex forms."

Physicians who practise extensively among the Jews do not generally notice that the Jews are more prone to herpetism, gout, etc., than Christians. The case is, as we have seen, different with the functional neuroses and diabetes.

Varicose veins, and particularly hæmorrhoids, occur very frequently among the Jews, probably more often than among Christians. It is a fact that can be attested by most of the physicians practising among these people, that a very great proportion of Jews who have passed the fourth decade have their hæmorrhoidal veins more or less enlarged. The various forms of visceral herniæ appear also to be very frequent among the Jews.

According to Dr. Hardy (56) and many others, Jews are more often affected by eczema than non-Jews; but dermatologists with extensive practices among Jews and Christians inform me that the Jews in the United States are not any more liable than any other nationality to this disease.

Of the affections of the eyes, the Jews are said to be more liable to blindness, colorblindness, astigmatism, trachoma, glaucoma, and, according to M. Hervé (57), there is a frequency of lacrymal tumors among the Jews, due to the narrowness of their nasal canal.

Concerning blindness, Dr. Herman Cohen (58) brings the following statistics for Bavaria:

		Per cent.	
Among	10,000 Protestants	7.2	blind
"	10,000 Catholics	8.2	"
"	10,000 Jews	13.8	"

and for Prussia, in 1880:

		Per cent.	
Among	10,000 Protestants	8.2	blind
"	10,000 Catholics	8.4	"
"	10,000 Jews	11.0	"

There are similar statistics showing the frequent occurrence of blindness among the Jews in the various other European countries.

According to the *Report of the Committee on Colorblindness* of the Ophthalmological Society of London (59), the Jews are more subject than the ordinary population to colorblindness. Among 730 Jewish women examined, 3.1 per cent. were found affected; and among 949 Jewish males, 4.9 per cent. The report adds that the Jews were, on the whole, of a poor condition of life, and their defects were of pronounced character. Jacobs and Spielman (60) found no less than 12.7 per cent. of London Jews to be colorblind. Fuchs and many others mention that trachoma and glaucoma are very often met with among Jews. "In many countries the Jews are special sufferers from trachoma," says Fuchs (61), and he ascribes it to the fact that they live in crowded houses and are uncleanly. About glaucoma, the same opthalmologist says that "among Jews inflammatory glaucoma is more frequent than among Christians" (62).

Of the many other diseases considered to be more common among Jews than non-Jews we will not speak here, because the writers who have described these peculiarities either have not substantiated their statements with facts, or their evidence is inadequate and is not borne out by experience among the Jews.

The causes of the peculiarities of the comparative pathology of the Jews have at different times received different interpretations. Some have attributed the fact that the Jews have a longer duration of life, a lower mortality, etc., and also their greater liability to be affected with nervous diseases than non-Jews, to indolence of the Jew, to his lack of exercise, to the rich, highly-seasoned food that the Jews are supposed to eat. Some have even gone so far as to say that the Jews consume very much sweets, and that on this account they are more liable to diabetes than Christians. That "the Jews are obliged to keep two Sundays in a week, besides Jewish, Christian, and political holidays, or two out of every seven days being lost to business, gives them, by necessity, about twice as many days of leisure as Christians" (63), is another argument. But all these reasons do not hold good at present, particularly with our American Jews, as almost everybody who comes in contact with modern Jews will testify.

Others have tried to explain the comparative pathology of the Jews as consisting of "biostatic" differences of the physiological organization of the Jews as compared with non-Jews. But there are no proofs that the Jews possess peculiar racial characteristics of a purely physiological or anatomical nature. The so-called "biostatic" differences of the Jews can be easily explained by their past history; the differences in customs in relation to the customs of non-Jews; to the devotion of the Jews as husbands, as wives, and as parents—to the family spirit of the Jews, the *sentiment de la famille,* as M. Legoyt calls it, which is more developed in them than in Christians, and which assures to their children, to their aged and infirm parents, a solicitude more active, to the newborn the mother's breast, to the poor and afflicted a more efficacious assistance. As a result of the pure, chaste, married life which the majority of the Jews lead, we find that alcoholism and syphilis are very rare among

them, and, with this, a number of diseases the ætiology of which in a great measure depends on these two virulent poisons, as nephritis, arteriosclerosis, tabes, etc. The result is that the Jew has that "unprecedented tenacity of life" which the above statistics have proved.

The custom of ritual circumcision practised by the Jews on every new-born male infant has been given by many authors (67) as a cause for the longevity of the Jews and their comparative immunity to certain diseases. Others have attributed the tenacity of life of the Jews to their excellent system of meat inspection, by which all those animals that are found to be suffering from disease, particularly pulmonary affections, are not allowed to be consumed by the Jews. Circumcision has probably a great deal to do with the fact that syphilis is uncommon among the Jews; it has hardly any influence on their susceptibility to gonorrhœa, excepting, of course, some of its complications, as balanitis, phimosis, and paraphimosis, which are unknown among Jews. But, excepting syphilis, in the opinion of the writer, circumcision has no influence whatever on the comparative pathology of the Jews. The "Kosher" meat, which the Jews almost invariably eat, may be a factor in the infrequency of tuberculosis among them, but outside of this we do not think that it prolongs their lives.

The past history of the Jew explains to us the reason why he has such a wretched aspect. Persecuted and abused for two thousand years, the Jew of to-day has comparatively less physical strength and muscular power, his blood is more diluted, his stature smaller, his chest and shoulders narrower, than those of his non-Jewish neighbors. But notwithstanding all these physical infirmities, the Jew resists misfortune, disease, and even death, as we have seen above, better than almost any other race. The reason for this apparent contradiction is not far to seek: the modern Jew is, physically and mentally, a product of natural selection, of a process of survival of the fittest which has been going on for two thousand years.

Being persecuted, oppressed, and tormented for centuries, only those who were the most stubborn, the most callous, the most energetic, could venture to remain Jews. All those who were too weak, sickly, and infirm, bodily and spiritually, were eliminated from the race either by death or baptism. The modern Jews are, therefore, possessed of a great "tenacity of life."

Another important point in the comparative pathology of the Jews is the fact that they are predisposed, in such a high degree, to the diseases of modern life—to hysteria, neurasthenia, most of the functional neuroses, and diabetes, as we have seen in the course of this paper. The Jew has been for centuries an urban resident, only rarely living in the country and engaged in agricultural pursuits. The diseases of the city population are therefore accentuated on his body and mind. We know that with the majority of the Gentiles the case is different. It has been shown by Mr. Cantlie, in his book *Degeneration amongst Londoners,* that the London poor do not survive beyond three, or at most four, generations; the same has been proved to be the fate of the poor inhabitants of Paris. It is, indeed, rare to find among the poor in modern large cities families which could trace their ancestors back for five or six generations as city dwellers. The population of the cities is kept up by the constant influx of good, pure, fresh blood from the country, which counteracts the deteriorating influences of the busy, enervating city life.

The Jews have not had this advantage, and all the evil effects of the strained, nerve-shattering city life have consequently been transmitted to their offspring. With each new generation the nervous vitality of the Jewish race has lessened, and, as a result, we find that most of the diseases that increase with the advance of civilization, particularly the neuroses and psychoses, are relatively more frequent among the Jews than non-Jews.

"The Jew," says Leroy-Beaulieu, "is the most nervous, and, in so far, the most modern of men. He is by the very nature of his diseases the forerunner, as it were, of his contemporaries, preceding them on that perilous path upon which society is urged by the excesses of its intellectual and emotional life, and by the increasing spur of competition. The noisy army of psychopathics and neuropathics is gaining so many recruits among us that it will not take the Christians long to catch up with the Jews in this respect. Here, again, there are no ethnic forces in operation" (64).

The frequency of diabetes among the Jews is another confirmation of this contention. Diabetes is very much on the increase in all civilized countries, particularly in large cities. Some are even inclined to place it on the list of diseases of modern life. The Jews, as we have just shown, being hard sufferers of most of the diseases of modern life, could, of course, not escape it. The relation of diabetes to lesions of the nervous system has long since been observed, particularly by Claude Bernard. The Jews suffering very much from nervous diseases, are, therefore, to a large extent liable to diabetes.

As has been shown recently by Dickinson (65), the most common variety of diabetes is associated with diseases of the nervous system; pancreatic diabetes is uncommon. "Grief, anxiety, terror, may all be followed by diabetes so closely that there is no room for doubt as to their having occasioned it. * * * It is well known as a result of commercial disaster, and it may be said truly that every panic on the Stock Exchange produces its results in diabetes. It has recently come to light that engine drivers are especially subject to this disease, presumably from the anxious nature of their occupation." Diabetes is twice as common among engine drivers as in the ordinary population.

According to competent observers in England and America, Dr. Dickinson further points out some cases of insanity are accompanied by diabetes, and, while the pathology of both remains largely a problem for the

future, the association between the two conditions seems conclusive to Dickinson. This view of diabetes explains best the reason why the Jews are such great sufferers from this condition; being the most nervous of the European and American races, they show the largest percentage of insanity in their ranks, and they consequently have the largest proportion of diabetics in their midst.

Before we dismiss the subject, we want to state that it has been observed in Europe that the tenacity of life of the Jew and his resistance to certain diseases, as tuberculosis, syphilis, alcoholism, etc., diminish gradually as we proceed from east to west, from the countries where the Jew lives isolated, pursuing his life in his own fashion, adhering to the customs of his forefathers, to those countries where the Jew commingles and assimilates with the non-Jewish inhabitants, adopting their modes of life and habits. This has also been observed to be the case in the United States. Thus Dr. Billings has pointed out that "those (Jewish) mothers who were born in the United States average only 3.56 children each, as against 5.24 for those born in Germany, 5.63 for those born in Russia and Poland, 5.27 for those born in Hungary, and 5.44 for those born in Bohemia, indicating a diminished fertility in those women born in this country" (66).

In another place Dr. Billings shows that "the death rate among the Jews in this country is decidedly increasing," and that "the death rate among the native-born (Jews) of native-born parents was 9.16, and among the foreign-born 7.61."

It has also been observed by physicians that syphilis and alcoholism are decidedly increasing among those Jews living, for a longer or shorter time, in the United States. If this is actually the case, then we may expect that all those "biostatic" or "ethnic" differences of the American Jews will soon disappear.

SUMMARY.

I. The death rates of the Jews, at all ages, are relatively and absolutely lower than those of the people among whom they live.

II. The marriage rates and birth rates of the Jews are smaller than those of the Christians; the Jews increase in number more rapidly than non-Jews, because they lose by death relatively fewer children and bring more to maturity.

III. The Jews die less often than their neighbors from many of the infectious diseases, particularly epidemic cholera, small-pox, and tuberculosis.

IV. Syphilis and alcoholism, and also diseases due in great measure to their poisons, are comparatively rare among the Jews.

V. Diabetes is very frequent among the Jews. Most observers have recorded that almost twenty-five per cent. of all the cases of diabetes occur in Jews.

VI. All the functional neuroses and psychoses, particularly neurasthenia and hysteria, occur more frequently among Jews than among non-Jews; while all the organic nervous diseases, as tabes, general paralysis, etc., are less frequent, commensurate with the infrequency of syphilis and alcoholism, among them. The great majority of cases of amaurotic idiocy occur in Jewish children, and insanity is met with among Jews between two and five times more often than among Christians.

VII. Blindness, colorblindness, trachoma and glaucoma, and also varicose veins, particularly hæmorrhoids and hernias, are very frequent among Jews.

VIII. All these peculiarities in the comparative pathology of the Jews are not due to any ethnic, "biostatic," or racial characteristics of a purely anatomical or physiological nature in relation to non-Jews. They have their origin in the past history of the Jews, in their habits of life, and in the fact that syphilis and alcoholism have but rarely been seen among them.

IX. Where the Jew is commingling with his Christian neighbors and adopts their customs and habits of life, he sooner or later loses his "racial characteristics," and his comparative pathology presents no special peculiarities.

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207 EAST BROADWAY.

THE PATHOLOGY OF INTRA-UTERINE DEATH.

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(Continued from page 537.)

DISEASES OF THE PLACENTA.—Before proceeding to consider the various morbid conditions of the placenta, it will be well to have a clear understanding of its formation and relation to surrounding structures. The placenta was so called by Falloppius because of its fancied resemblance to a flattened cake. When mature, it measures from six to eight inches in diameter and about an inch and a half in thickness. It is thickest at the centre and gradually becomes thinner toward the circumference. It subserves the double function of circulation and respiration. By means of it oxygen and nourishment are brought for the development of the fœtus, and carbonic acid and other effete materials are given off. The placenta is, therefore, a medium of intimate communication between the fœtus and the mother. The development of the placenta takes place in the third month of pregnancy. Previously to that period the ovum receives its nourishment from the umbilical vesicle and the allantois. The placenta has not an independent origin, but is gradually evolved from the decidua and the chorion; the part of the decidua concerned in its formation corresponds to the part to which the ovum becomes attached, and is called the serotina. (See Fig. 3.) Toward the end of the second month the fœtal elements of the placenta are composed of innumerable small cotyledons projecting out from the walls of the ovum. These

gradually increase in size, and eventually develop into fully formed chorionic villi. They are not of uniform size, and they branch off at irregular angles. (See Figs. 4 and 5.) Their distal ends become somewhat club-

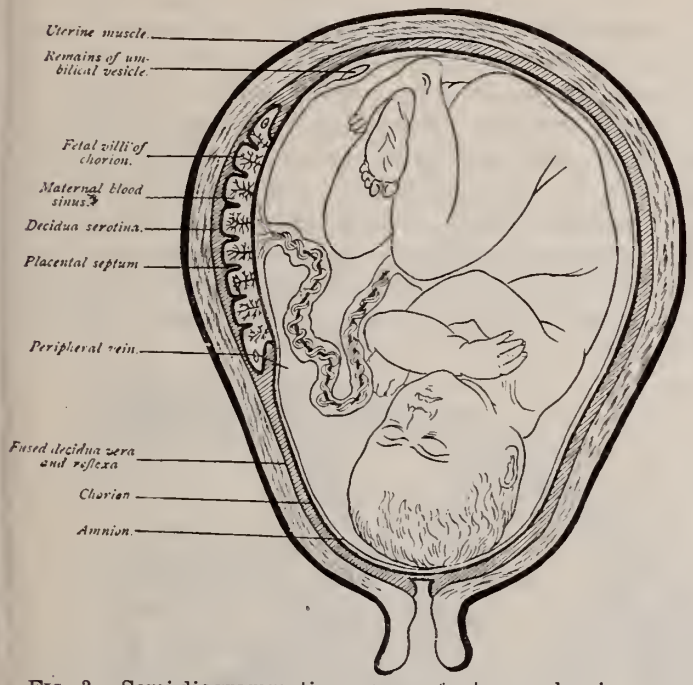

Fig. 3.—Semi-diagrammatic section of uterus, showing relation of fœtal and maternal placenta (Ahlfeld).

shaped and, at the point of attachment, they are constricted. Coursing over these projections are innumerable small blood-vessels from the allantoic arteries and veins. They are so numerous that they form vascular tufts on the surface of the villi. The maternal portion of the placenta, as already indicated, is derived from the decidua. The blood-vessels of the uterus become very large at the particular part that goes to form the placenta, and are then called sinuses. The small projections from the chorion dip into these sinuses and are continually bathed in maternal blood. It is in this way that the fœtus receives its necessary nourishment for growth and development. During the time the fœtus has its abode in the uterus, the aeration, or decarbonization, of its blood is effected in the placenta. The impure blood of the fœtus is brought to the placenta by the umbilical arteries. These communicate directly with the umbilical veins in the placenta, but have no direct continuation of canal with the maternal circulation. The mother and fœtus have entirely distinct and independent circulations. These, however, lie so closely together in the placenta that they may be said to be in juxtaposition and to interdigitate. The carbonic acid of the fœtus is liberated from the umbilical arteries and receives in return the necessary amount of oxygen by an endosmotic action. The parent, besides supplying the oxygen to the fœtus, transmits, by a process of percolation, the necessary amount of nourishment for the development of the fœtus. It is quite natural to suppose that, during the period in which the villi are preparing for the important function they are to assume when fully developed, many mishaps may occur. After the third month of uterogestation, the varicus structures of which the uterus is composed are considerably firmer and deviations are not nearly so prone to take place.

To one who has investigated the subject of diseases of the placenta it soon becomes apparent that authors have heretofore been much divided in opinion as to the various morbid conditions that may affect this organ. Under different appellations they have described progressive stages of the same disease, and in various other ways have jumbled the pathology of this important structure in a skein of inextricable confusion. Many of them seem to regard the particular diseases they have had the opportunity of witnessing as the most important with which the placenta is affected. This is altogether too narrow a view of the subject. We can see no reason why the placenta cannot be affected by as many pathological conditions as the brain, liver, or lungs. In attempting to lay before my readers the most important affections of the placenta that may be considered detrimental to the well-being of the fœtus, I do so with a feeling of consciousness that my task will be imperfectly performed, but, nevertheless, with a knowledge that the subject abounds in many more morbid conditions than is generally believed.

Placental Hæmorrhage.—From what has been stated in previous paragraphs, it is but natural to suppose that apoplexy of the placenta, with the various morbid changes following as a consequence, may be considered one of the most frequent pathological conditions of the

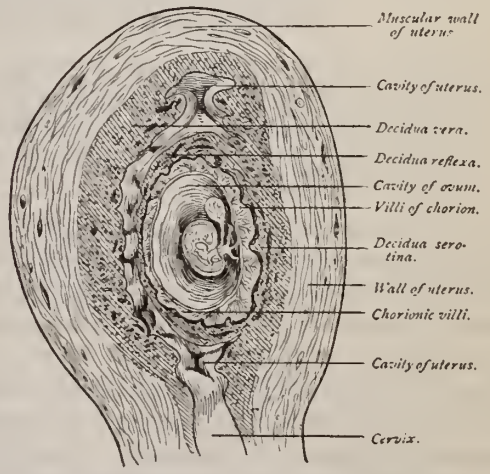

Fig. 4.—Semi-diagrammatic section of gravid uterus, showing the ovum at five weeks (Allan Thomson).

placenta. During the early months of pregnancy, when the placenta is in the course of formation, the opportunities for deviation from normal progress are extremely frequent. When one contemplates the many subtle influences that Nature adopts to correlate and adjust the blood supply to the necessary fulfilment of her purposes, it is marvelous how frequently she accomplishes her designs so satisfactorily. Up to the end

of the third month the placenta may be said to be in a rudimentary form. Its sinuses and cavities are not yet elaborated. Permeating everywhere over the surface of the villi, miniature loops of blood-vessels are weaving intricate webs so tender and fragile that many of them cannot be seen by the naked eye. It is not to be wondered at that extravasations of blood from these loops are exceedingly common. Such effusions may be due to local conditions, although they frequently arise from constitutional causes, as we shall see directly. If such extravasations are limited in extent, little or no damage may arise. When, however, they embrace a large surface, the nutrition of the embryo becomes impaired, if, indeed, the whole ovum is not entirely expelled. When such a hæmorrhage occurs, the ovum not only loses the nourishment from the ruptured vessels, but the resultant clot compresses the root-like projections of the surrounding villi, and thereby so crushes their blood-vessels as to render them entirely useless. All sizes of clots and shades of color may be found. When recent, the clots are of a red color and disorganized. Those that have existed for some time will be found to be consolidated, indurated, and of a brownish appearance. The villi have become atrophied, and so blended together in one mass that it becomes difficult to recognize them. The situation of these clots depends largely upon the period of rupture. Until after the period of three months of uterogestation the various membranes are separate, but no space remains between them. Hæmorrhage taking place previously to this time may be found burrowing down between any of them. After the third month, the various membranes come into apposition and there is not an interspace between them, although the attachment is not yet very intimate. The clot then is most frequently found in the substance of the placenta, although it is sometimes found between the uterine walls and the maternal surface of the placenta. There is this difference between hæmorrhage in the early period of gestation and that resulting when the placenta is fully organized, that, in the latter, larger effusions of blood may take place without interfering with the progress of pregnancy. So it happens that, the larger the size of the placenta the less risk there is to the safety of the child, so far as hæmorrhage and its consequences are concerned. There remains still another reason why hæmorrhage in the early stages of uterogestation is followed by more serious results. During this period the villi of the chorion are extremely fragile and but slightly embedded into the substance of the decidua serotina. There is a general laxity and insecurity of these structures, and hæmorrhage with extravasation is much more liable to occur than when, afterward, they become mature and firm and more able to resist. When the utero-placental sinuses are fully formed and the villi are mature and project into these lacunæ, there is no doubt that many extravasations of blood are caused by a thrombosis in these sinuses. The maternal blood circulates very slowly through these lacunæ and eddies about for a considerable time before it passes away in the maternal veins. Anything that interferes with the free flow of this circulation will of necessity cause a certain amount of stagnation and coagulation. The blood of pregnant women being richer in fibrin than normally renders coagulation in these sinuses easily possible. Any sudden or gradual slowing of the maternal circulation may be followed, therefore, by the formation of a throm-

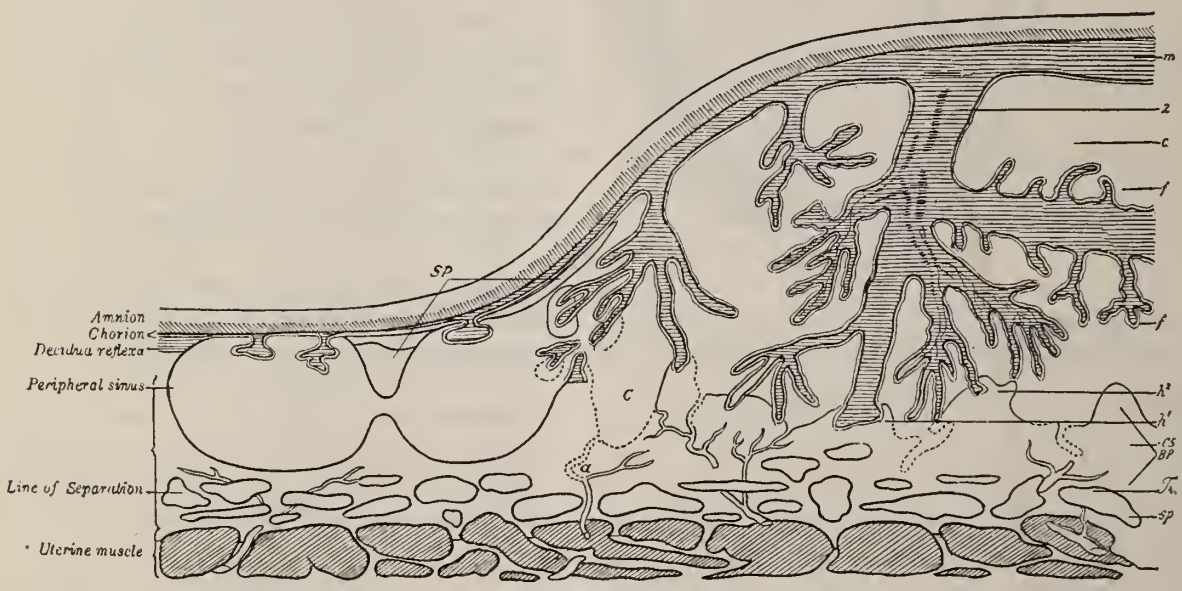

FIG. 5.—Diagrammatic section through the human placenta at the middle of the fifth month (after Leopold). The fœtal placenta, consisting of the chorion (*m*) with its villi (*z*), has grown into the maternal placenta; the villi present attached points (h^1, h^2) and free processes (*if*); *sp* is the spongy layer of the decidua serotina, in which the separation takes place along the line *Tr; CS* is the compact layer forming the inner part of the uterine placenta, which consists of the basal plate (*BP*) the closing plate (*SP*), the arteries (*a*), the cavernous blood-spaces (*c*), and the marginal sinus.

bosis. Weak, delicate, and nervous women are susceptible to fainting spells and syncope, the pulsations of the heart become greatly diminished, there is an arrest of the circulation in the uteroplacental sinuses, and thrombosis may quickly follow.

There is good reason for believing that there are frequent coincidences between the occurrence of extravasations into the substance of the placenta and of hæmorrhages in other organs of the body. Valvular disease of the heart, Bright's disease, interference with the portal circulation, syphilis, calcareous deposits in the placenta —each and all tend to passive congestion, and eventually to a weakening of the coats of the blood-vessels. It is to be remembered that hæmatophiliacs and anæmic women are singularly liable to such hæmorrhages. Given any one, or a combination, of these constitutional tendencies, it can be readily understood that it does not require much of a local injury to bring about a hæmorrhage. The direct causes may be numerous, and sometimes difficult, to locate. Some unusual exertion, such as a false step, jerk, fall, or blow, can generally be traced as the exciting cause. In the great majority of instances there is a previous degeneration of structure from some of the diseases just enumerated. Especially is this so after pregnancy has advanced beyond the third month. The results of such hæmorrhages vary widely. Sometimes the amount of injury is limited, and little or no damage is inflicted upon the fœtus. But a larger area may be involved. The clot then may tear through uteroplacental sinuses, separate the membranes from the uterine wall, and burrow on down to the *os uteri* and into the vagina. There may be little or no pain associated with this accident, and generally the first indication made manifest to the patient is the sudden and unexpected appearance of flooding from the genital passages. In a certain number of cases, the extravasated clot may remain at the point of rupture. The amount may be large or small, according to the number of uteroplacental sinuses ruptured and the integrity of the surrounding structures. When extensive, the product sometimes bulges the uterine wall so considerably outward as to be felt, through abdominal examination, as a nodular mass. This constitutes the condition described in our text-books as "concealed hæmorrhage." If the amount is reasonably small, it usually remains localized at the area of formation and does not interfere with the progress of pregnancy or the integrity of the fœtus. Whatever their size, these clots seldom entirely disappear, but go through various phases of changes peculiar to retained clots in any other part of the body. Their fibrin frequently becomes lardaceous and then breaks up into two varieties of granulations. The first is of a proteid character, soluble in acetic acid and alkaline fluids; the other is not soluble in these agents, and is of a fatty nature.

Placenta Prævia.—A variety of hæmorrhage different from any we have hitherto mentioned is that which results as a consequence of a misplaced placenta. It is an exceedingly dangerous complication, both to the mother and the child. Fortunately, in recent years the profession has been enabled to meet the emergency in a more scientific and rational method than was done formerly, and much of the danger has been thereby obviated. The ætiology of this condition has for a long time remained a fruitful theme for discussion. Long ago the subject was considered a serious one by the ancients. They did not, however, understand the causes of this anomaly, and the treatment was unsatisfactory. We cannot boast much of our superior knowledge of its pathology. There are several interesting speculations as to why a placenta becomes attached to the lower segment of the uterine cavity instead of to the fundus, where it normally belongs, but no one has yet produced a theory that has not many objections.

Dr. Tyler Smith maintained that the ovum, in these cases, was not impregnated in the tube, but in the lower portion of the uterine cavity in the neighborhood of the *os uteri.* His syllogism is obviously defective, although there may be a certain amount of accidental truth in his theory. His premises depend on the belief that impregnation normally takes place in the Falloppian tube, and not in the uterine cavity. With these teachings we cannot agree, for reasons already given. Müller and others have advocated the theory that the impregnated ovum originally became attached to the fundus, but that, from uterine contractions or accident, it soon became detached and dropped to the lower part of the uterus. Here it again became adherent and began to develop. These and other theories are devoid of substantial regard because of their incompleteness. If the physiology of the endometrium had been as well understood by these writers as it is at the present time, it is quite probable that they would have advocated a more plausible explanation as to why such ova occasionally become attached to the lower part of the uterus. Before a placenta prævia can possibly occur, it would seem to be a self-evident proposition that there must be a preexisting defect, either congenital or acquired, in some part of the mucous membrane of the uterus. More frequently this is acquired. Just why Nature, in her own subtle, clever ways, chooses the fundus for the implantation of the placenta is not definitely determined. The explanation of many of these things is frequently difficult of accomplishment. There is this to be stated, however, that all the important viscera are suspended, and not supported from below; and so it is with the fœtus. It is safer for the fœtus to be suspended from the dome of the uterus than it is for it to be carried in the lower segment of the cavity. In the former case, it is comparatively free from vibrations, shocks, and accidents. It has already been stated that the mucous membrane of the uterus has a certain amount of preparation to undergo before its surface is in a suitable condition for the retention of a fertilized ovum. Like many other per-

versions in and about the uterus, this preparation may be defective in physiological precision. The nervous mechanism regulating this function sometimes becomes disarranged for some unknown and inexplicable reason.

Formerly it was believed and taught in text-books that the whole of the mucous membrane was cast off at each menstrual period, but recent investigations have demonstrated the fallacy of this teaching. This mucous membrane is covered by columnar ciliated epithelium. Once a month, by a process of denudation, this epithelium is shed. The most important essential in the cycle of menstruation is the shedding of this epithelium. We have long maintained that it is absolutely impossible for a vitalized ovum to become attached to an epithelial surface. In normal menstruation, the latent cells and capillaries of the mucous membrane are thrown into periodic activity, the epithelial covering is exfoliated, and the underlying surface becomes engorged and swollen, and ready for an ovum to become embedded into its soft, velvety wall. Occasionally it happens that the whole of the superficies does not participate in the functional activity. Menstruation then may be imperfectly accomplished. It is possible for part of the epithelial covering to remain adherent to the mucous surface. When this takes place in the fundus, it would be quite impossible for a fertilized ovum to become attached. The result would be that it would be forced down the side of the uterine wall, and, when it reached a suitable surface there, would become embedded.

Chronic endometritis is another pathological condition that may directly cause a placenta prævia. The area in the region of the fundus may be so affected that an ovum cannot become adherent. The lower segment, at the same time, can be in a sufficiently healthy state to offer a resting place for its attachment, and there it may develop.

However caused, the condition is an exceedingly dangerous one, and may suddenly place the life of the mother or child in imminent jeopardy. The earliest symptom manifest is more or less sudden hæmorrhage, without any assignable reason. It is seldom that this comes on before the sixth month, and sometimes not until the beginning of labor. Unlike other varieties of hæmorrhage from a pregnant uterus, once it has begun, the natural tendency is for frequent repetitions. It is almost universally admitted that the source of the hæmorrhage is from the uteroplacental sinuses. It is not yet definitely determined how this is brought about. Until recently, and even at the present time, it is supposed by many to depend upon the gradual expansion of the lower part of the uterus during the later months of pregnancy. This probably is not a correct explanation of placental separation, for the expansion of the lower part of the uterus during this time is more apparent than real. Another theory, somewhat similar to this, was first advocated by Jacquemier. It is to the effect that, during the first six months of pregnancy, the fundus develops to a greater proportion than does the lower segment; that at six months the superior portion has attained its maximum growth, and that, consequently, the cervical part attains its principal expansion during the three last months. This theory cannot be accepted, for there is not convincing evidence to show that one portion expands in greater proportion at any period than another. Matthews Duncan maintained that the hæmorrhage associated with placenta prævia previously to the onset of labor was purely accidental. In all, he advanced the following reasons for its occurrence:

1. The rupture of a uteroplacental vessel at or about the internal *os uteri.*

2. The rupture of a marginal uteroplacental sinus within the area of spontaneous premature detachment, when the placenta is inserted, not centrally or covering the internal os, but with a margin at or near the internal os.

3. Partial separation of the placenta from accidental causes, such as a jerk or fall.

4. A partial separation of the placenta, the consequence of uterine pains, producing a small amount of dilatation of the internal os. Such cases may be otherwise described as instances of beginning miscarriage arrested at a very early stage.

I coincide with these opinions, with a modification. The objection entertained is that he advances or hazards no reasons why such separations take place more frequently when the placenta happens to be implanted in the lower segment of the uterus.

It may seem bold and reckless to break away from the teachings of the many distinguished men who have written upon this subject; nevertheless, I have long entertained the opinion that one of the cardinal reasons for the hæmorrhage accompanying placenta prævia previously to the onset of normal labor has been entirely overlooked. From the time a fertilized ovum begins to develop in the uterus until the full period of gestation the uterine walls have a rhythmic action of alternate contraction and relaxation constantly in progress. At first they are very weak, but as the uterus develops these contractions become correspondingly firm. In the later months of pregnancy they are quite powerful and can readily be recognized by placing the palms of the hands over the uterus for a few minutes. Labor pains are but exaggerations of these rhythmical contractions. Occasionally it happens that these contractions incessantly at work are more powerful than the necessities of Nature demand. These contractions have more influence upon the lower part of the uterus than they have toward the fundus. I advance the proposition, therefore, that the lower the placenta is implanted, the greater becomes the danger of accidental laceration of a uteroplacental sinus. These contractions begin at the fundus and increase in volume and strength as they

approach the cervix. When the placenta is implanted in the fundus, these contractions have not yet accumulated sufficient force to affect its uteroplacental sinuses injuriously. The climax of such contractions strikes the lower part of the uterus only. When, therefore, a placenta happens to be located in this locality, it receives the full power of these incessant contractions and is very liable to be severed from its attachments. Add to this jerks, falls, and blows, and the fact that the placenta is situated beneath the child, where its weight comes down with full impact against the placenta, and the causes for such hæmorrhages become reasonable. There may be contributory causes, such as a normal weakness of attachment, but I maintain the reasons herein given to be the main causes for the frequent floodings following in the wake of placenta prævia.

Placentitis.—Inflammation of the placenta is not a frequent disease. It does occur, however, and, if extensive, is generally fatal to the life of the fœtus. It is characterized by the usual phenomena of inflammation in any other part of the body. In the placenta, it is usually a chronic process. There will be, first, engorgement and more or less tortuosity of the blood-vessels; then, exudation of serum and organizable lymph or fibrous products. There is a striking similarity in appearance between inflammation of the placenta and hepatization of the lungs. This resemblance will correspond to the period in inflammation of the placenta when solidification of tissue has taken place as the result of exudation. The particular variety of inflammation that is most frequently encountered is the productive. It is exceedingly chronic in its action, and there appears to be a low order of vitality in the exudation thrown out. Frequently the mass of deposit crumbles down in the centre, and then hæmorrhages into the cavity may result. In appearance these masses of inflammatory product scattered throughout different parts of the parenchyma sometimes bear a close resemblance to tuberculous deposits. They are clearly not tuberculous, although many of the older writers described this disease under the appellation of placental phthisis. If the inflammatory action is limited, and the exudation that follows rapidly organizes into a fibrous deposit, it is possible that little damage may result. When, however, the area affected is at all extensive, the result will, in all probability, cripple the function of the placenta to such an extent as to imperil the safety of the child. The manner in which the injury is effected is not difficult to comprehend. When an exudation is thrown out as the result of inflammatory action, the placental villi are compressed and crushed together, and prevented from being bathed by the maternal blood in the uteroplacental sinuses. Should this exudation be of low organization, softening and caseation will shortly take place. If the product undergoes fibroid transformation instead, contraction of the villi will take place, the circulation through them will eventually be cut off, and the cavernous structures entirely filled up with an inert mass. It depends altogether upon the area involved as to whether the child will perish. If the inflammatory product is limited, there may not be sufficient damage to seriously affect nutrition. Nearly every obstetrician who has had extensive experience in this branch of the profession has encountered the effects of inflammatory changes in the placenta. There may be indurated nodular masses throughout the parenchymatous substance of the gland, or patches of broken-down tissue. The condition is one that may cause placental retention after normal delivery. Adhesions form between the placenta and the uterine walls, and it may be extremely difficult wholly to liberate the afterbirth. Again, the inflammatory action may have left the placenta in such a friable condition that moderate traction on the umbilical cord, or even uterine contraction, may be sufficient to cause a solution of continuity, and part of the placenta may be left adherent to the uterine walls. Such surfaces remain a constant source of danger from infection. The great majority of cases of placentitis are chronic, but, occasionally, there appears evidence that would indicate the process to be a more or less rapid one. This is inferred from the fact that, in exceptional instances, a plump, fat, and well-developed dead child is born, with a placenta engorged and infiltrated with recent exudation. The placenta has suddenly become choked and intra-uterine respiration can no longer be maintained. It is, in fact, an acute "pneumonia" of the placenta. It is extremely difficult to trace back the causes that produce this condition. Frequently a tuberculous or syphilitic history can be established, but as often not. That anæmia is frequently associated with placentitis is beyond dispute. In pregnancy there is a deficiency of red blood corpuscles and an excess of fibrin. These conditions may tend to a lower form of inflammation of the placenta.

It is difficult to make efficient injections into placentæ that are diseased as the result of an inflammatory process. This interferes seriously in making microscopic researches. The injections can, of course, be forced through the healthy structures, but the parts matted together it is impossible to enter. It becomes necessary, therefore, to resort to thin sections and to staining. Microscopic examination of inflammatory deposits shows beginning retrograde metamorphosis in the diseased parts; the deposit beginning to form connective tissue and the round corpuscles assuming an elongated form. Evidence of beginning fatty degeneration can sometimes be seen. In recent deposits, where disorganization has not entirely destroyed the integrity of the blood-vessels, there is great hypertrophy of the muscular coats. This may be due to a compensatory effort upon their part to overcome the obstruction that has already taken place in the extremities of the villi. It may be considered analogous to that which takes place in certain diseases of the kidneys.

(To be continued.)

RECTAL FEEDING IN THROAT DISEASES.

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Before I became interested in this subject, I was often impressed with the thought that, if a diseased throat could be given absolute rest, it would recover in a shorter time than it would without the rest. Whenever any part of the body is diseased, in order that the patient may be comfortable, and before the process of repair can go on uninterruptedly, the diseased member must be at rest and free from irritation. The splint is applied to the fracture and the bandage to the wound for the purpose of giving rest to the diseased part, and this should also be our object in treating diseased conditions of the throat. A person with a diseased throat knows from experience that the less the part is disturbed the sooner it improves; and it is for this reason that a gargle, instead of relieving an inflamed throat, actually aggravates it. No one would advise rubbing an acutely inflamed joint; it is given rest. Then why should not the throat be treated in like manner?

The taking of food causes the throat sufferer more dread than anything else, for the food, in passing over the inflamed surface, together with the movements of the throat in swallowing, so intensifies the pain that people often prefer to go without food rather than suffer the distress from the effort to swallow; and thus, as they do not receive sufficient nourishment, the reparative process is retarded and the suffering is prolonged.

Very often an invalid with chronic pulmonary tuberculosis is able to live for months, and even years, in comparative comfort, provided the digestive organs are in a healthy state and enough food is taken to nourish the patient and hold the disease in check. As soon, however, as the disease invades the throat and interferes with swallowing, the patient will take less nourishment, and thus the system becomes less able to resist the ravages of the disease, and there ensue loss of flesh and rapid decline. For such a person, rectal feeding is helpful in that enough food can be taken to enable him to regain strength, at the same time allowing the lesion in the throat to heal.

Nourishment and stimulation *per rectum* are applicable in all cases in which swallowing is difficult or painful, or in which an operation has been performed upon the throat and the wound is to be kept quiet. A person can be fed by the rectum solely for two or three weeks, and Flint mentions a woman who was wholly nourished by the rectum for five years. Feeding *per rectum* is of particular service in diphtheria, in tuberculosis of the throat, and after staphylorrhaphy, for here the throat is given rest, and the patient is spared the pain and distress that are incident to the taking of food in the natural way.

My attention was first called to the importance of rectal feeding in a case of diphtheria in which the child was attacked with septic pneumonia consequent on the entrance of food into the lungs. Often in diphtheria, and frequently in scarlet fever, the mucous membrane of the throat loses its acute sensibility, and food often gains access to the larynx without being expelled. This danger is avoided in rectal feeding. In this way the throat can be kept comparatively free from bacteria, and, there being no irritation, repair of the membrane is encouraged.

We all know how the little ones resist the taking of food and stimulants by the mouth; they often struggle until they are exhausted or overcome, their struggles resulting not infrequently in collapse, and, when the food finally is forced into the mouth, some of it frequently escapes into the nose, and a portion may even enter the larynx. Feel the pulse now, and the patient will be found very weak. In diphtheria the heart is not over-strong at any time, and undue exertion may be followed by heart failure. The food and liquor, the giving of which is so necessary in diphtheria, can be readily administered by the rectum, and the child's strength can be reserved to battle with the general infection; this satisfies the mother and her friends, who often object to the use of force.

An intubated child can be nourished in this manner for a week or two without the slightest discomfort, and one of the sources of danger to an intubated child, the entrance of food into the tube, is avoided. If food gets into the tube, it is apt to deprive the child of air or else cause a cough which may result in the expulsion of the tube. When a person is in a state of coma, it is with difficulty that food can be directed into the proper channel, or, again, the patient may be asleep and we do not wish to disturb him. Try artificial feeding.

In tuberculosis of the throat, particularly if there is ulceration, swallowing is often both painful and difficult, and unless this condition is relieved the patient will emaciate rapidly, for, notwithstanding the liberal use of cocaine, very little food is taken, and that which is eaten is not relished, for the cocaine removes the desire for food and retards its digestion, besides exerting a depressing effect upon the patient. Then, again, the food, as it passes over the ulcer, so irritates it that it counteracts any good that is accomplished by local treatment. There is also induced a reflex cough that is attended with vomiting and general distress, and even pulmonary hæmorrhage may be brought on by it.

Some years ago Dr. Delavan devised a soft-rubber tube for the feeding of patients with tuberculosis of the throat. The tube is passed into the œsophagus after the manner of a stomach tube. I have found that the tube causes so much distress that many patients prefer not to use it. In rectal feeding, however, we have a

means for the relief of these conditions, and, if it were more generally used, much of the suffering of tuberculous patients would be avoided.

A person suffering with a circumtonsillar abscess (quinsy), even after it has been incised, is often unable to swallow properly for a time, because the constrictor muscles are hampered in the performance of their function, so that food and drink, instead of being swallowed, will wholly or in part be forcibly ejected from the nose, causing additional distress and pain, thereby weakening the patient and delaying recovery. Here, also, rectal feeding will do much to assist recovery.

After the removal of tonsils or adenoids the throat is so sore for some time, and swallowing is so painful, that little or no food is taken, and the child becomes irritable. If, however, feeding is carried on by the rectum, the throat will get well in a shorter time, for the food keeps up the patient's strength, and rest to the throat insures freedom from irritation.

In cancer of the tongue or throat, swallowing is both painful and difficult, and the food irritates the growth and increases its activity. Rectal feeding is useful here; it gives rest to the throat and thus retards the progress of the disease, sparing the patient to his friends for a longer time than would otherwise be the case. After operations for cleft palate, it is essential that the flaps be kept quiet, so that they will unite readily, and this purpose is best served by rectal alimentation, giving the throat absolute rest. Syphilis of the throat, spasm of the larynx, œdema of the larynx, glossitis, and many other affections of the throat are greatly relieved if the throat is kept at rest. Many throat diseases are accompanied by trouble in another organ, and the progress of the disease in the remote organ is often dependent upon the condition in the throat, and, as the throat trouble is improved by rectal feeding, the associated trouble is also benefited. Phthisis, asthma, nephritis, and gastritis are types of these diseases.

The value of rectal feeding was known to the ancients, but, as it was thought that digestion could not go on in the rectum, it was but little used. Recently, however, it has been shown experimentally that food introduced into the rectum is almost wholly absorbed, and even partly digested, the colon vicariously doing the work of the small intestine.

A few examples of cases that have been under my care will serve to illustrate the importance of artificial feeding in throat diseases:

Case I.—*Diphtheria.* I was called to see a child which had been ill with diphtheria for five days, and during this time it had become greatly emaciated. Swallowing was so painful that the little one resisted the taking of food with all the energy it could command, and its struggles were such that two attendants had to hold it before nourishment could be forced into its mouth, and after much straining and gagging some food was swallowed, although much of it escaped through the nose. Having witnessed the struggles of the infant and having noted its exhausted condition after the ordeal, I directed that thereafter nourishment be given *per rectum,* which resulted in giving entire satisfaction to the mother and those interested, for the child appeared not the least disturbed when the enema was given. The pulse quickly responded to the stimulation, and the patient was soon in a refreshing sleep, from which it was not awakened when the next feeding took place.

From the beginning of the feedings the improvement was rapid, and this was due in great part, I believe, to permitting the child to rest, reserving the energy which had been used in resisting the forced feeding; then, again, the depression that accompanies diphtheria was in a measure neutralized. In this manner the infant was fed for six days, the only drink that it received during this period being an occasional sip of cold water; after six days of rectal feeding the patient made an uneventful recovery.

Case II.—*Tuberculosis.* A man aged forty-five came to me with his throat and larynx affected with tuberculous ulcers. He dreaded above all things the taking of food, for it caused such intense suffering that often he would abstain from nourishment for twenty-four hours or more. He lost in weight about twenty pounds in ten days, which so debilitated him that his power of resistance was diminished and the disease rapidly progressed. Rectal feeding was advised, and at the same time a twenty-five-per-cent. solution of lactic acid was applied to the ulcers. After the first nutrient enema of brandy and milk, the patient felt better, and that same night he enjoyed a sound sleep for the first time in two weeks. Under this treatment, and after I had removed a portion of the epiglottis, I succeeded in healing the ulcers with applications of lactic acid.

The patient gained weight and strength steadily, and two months after he began treatment he was able to leave for the mountains. Recently he wrote to me stating that he was in better health than he had been for two years, and, although he is now able to swallow without much distress, he prefers to take a nutrient enema each night before going to bed, for he has found that his health declines when the injections are discontinued. With him, as with most people with tuberculosis, food taken into the stomach is not readily digested, and the resulting distress is quite annoying. With rectal feeding, however, the stomach is allowed rest and is thus enabled to return to its natural condition.

Case III.—*Hay Fever and Asthma.* Miss S., a young lady of twenty-two, had had for five years an annual attack of hay fever. The trouble began in July and continued until September, lasting in all about two months. Each succeeding year the attacks had been more violent than in the preceding year, and the taking of food by the mouth had always intensified the suffering and brought on an attack of asthma.

An asthmatic attack following the taking of food is a condition that I have observed in other cases of hay fever; the cause appears to be reflex, the attacks coming on shortly after the food is eaten and lasting from a few minutes to an hour; the severity of the attack of asthma in these cases is commensurate with the amount of food eaten.

The lady referred to above, after suffering greatly for ten days, came to me for treatment. She was given the various remedies for hay fever that are usually em-

ployed, among them the suprarenal extract, the much-lauded remedy of specialists; but all to no purpose, for the attacks became more numerous and severe than before. Convinced that rest to the stomach would give her case, I directed that her food be given *per rectum.* Soon after the first enema the patient was relieved, and the improvement continued steadily, so that in a week after the first enema the hay fever had subsided considerably and the patient had had but three slight attacks of asthma.

Thus the patient was fed for two weeks, and after that time the enemata were supplemented by food guardedly taken by the mouth, until September 17th, when the enemata were discontinued, the patient having now entirely regained her health.

As so little is taught on rectal feeding in the medical schools, and as the success of the treatment depends largely on carrying out the minute details, the manner in which the nutrient enemata are prepared and the mode of administration may be of interest, and this I shall endeavor to set forth in as simple a manner as possible. Before administering the nutritive enema, a cleansing injection of a quart of water and a teaspoonful of salt will evacuate the bowel sufficiently, and an hour later the first rectal feeding can be given. The cleansing enema, besides preparing the bowel for the reception of the food, produces a free movement of the bowels, which in itself is most desirable, for it relieves the tension of the congested vessels in the throat as nothing else will do.

The quantity of food administered with each injection should range from one to six ounces, according to the age of the patient, and the enemata should not be given oftener than once in three or four hours. Although the bowel is capable of some digestion and of the absorption of most of the food products, it is best that nutritive enemata be composed of predigested or peptonized food, for these are preeminently adapted for rectal feeding because of their remarkable diffusibility. The composition of the enemata should be altered occasionally, so as to obtain the effects of the absorption of a variety of the food products. When the rectum is irritable, from two to ten drops of laudanum or about fifteen grains of corn starch may be added to the enema. When the administration of a stimulant is required, whiskey or brandy may be incorporated with the enema, in quantity ranging from ten drops to half an ounce.

The mode of introducing an enema is as follows: Place the patient upon the side, with the knees flexed so as to relax the muscles of the thighs. Introduce a soft rectal tube or a No. 12 male catheter into the rectum for five or seven inches; attach to the end of this tube a piston syringe, and inject slowly into the rectum the previously warmed nutrient fluid; then slowly withdraw the tube and allow the patient to lie quietly upon the side for fifteen minutes or so, or until all desire to evacuate the rectum has passed.

Concerning the composition of nutrient enemas, milk is the article most generally used; it is readily absorbed, and its use is not apt to be followed by irritation. The carbohydrates are likewise readily absorbed, experiment having shown that from thirty to ninety-five per cent. of these articles of food are absorbed in a few hours. Enemata are prepared by the cold process and by the warm. The former is suitable when the injection can be retained; otherwise the warm process should be used. The cold process of preparing food is as follows: Dissolve about ten grains of pepsin in four ounces of water, add a pint of milk, and then put it on ice. When needed, heat to 105° F. and inject. In the warm process, the food is prepared as above, and then heated to 115° F. for half an hour; then it is placed on ice until needed, when it is again heated to 105° F. before being injected. An egg, well beaten, is an acceptable addition to this enema.

It is well to remember that the temperature for peptonizing is 115° F. and the temperature for injecting is 105° F.

Whey is an agreeable food for rectal alimentation. It is prepared as follows: To half a pint of milk heated to 115° F. add a teaspoonful of essence of pepsin; let it stand for five minutes, and then stir until the curd is separated; then strain and warm the whey and inject it without diluting. Other nourishing enemata may be made from various food preparations.

To sum up, some of the advantages alleged for rectal feeding are as follows:

1. The throat, being at rest, is not irritated.
2. Struggling in children is obviated.
3. The progress of the disease is shortened.
4. There is no danger of food entering the larynx.
5. The physician is able to give such food and stimulation as he wishes to give.
6. The food is not bolted, as it is when swallowing is painful.

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THE MEDICAL ASPECT OF CHRISTIAN SCIENCE.*

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MY purpose is to deal with the medical, as distinct from the religious, aspect of what is called "Christian Science." You know, of course, that "Christian Science" is only one of several forms of so-called "mind cure" which have from time to time appeared, and which of late have been especially active; and, I suppose, your reason for selecting this form is because of its special claim to being in itself a revival of the method of cure employed by our Savior, and by Him enjoined upon his disciples as a part of their earthly mission, thus giving it a claim to attention from you as being of those disciples.

*A paper read before the Church Congress, November 13, 1900.

Speaking, then, for my profession, Medicine, I rejoice at this action; not that we need your help in dealing with our side of this particular "ism," but rather we rejoice that you seek the cooperation of the science of medicine, even semi-officially, in determining such questions as this; a course which, had it been pursued more openly and liberally in the past, would have been of immense service to us, and, we believe, of no detriment to you. I accept it as a harbinger of a time when religious bodies will cease to be the endorsers of our charlatanries. Turning to our question, however, we find that, so far from being new, it is older than Christianity itself; just as old as the recognition of the fact that man had a spiritual and a material side to his make-up. For all time, down to the present, our ailments have been, and will continue to be, dealt with from both sides, for, even at the present, in the face of all that medicine has recently effected, and can now accomplish, there comes a moment in every man's ailment when those of us who deal with his material side must confess our work is done, and that that higher power which each and all of us recognize in our spiritual selves must prevail if what we call the material is to survive and flourish. How this agent is to work, we know not; we simply affirm that, the case being in the hands of God, the source of all life, if that particular life is to be held, it must be through means beyond those He has so far permitted us to know and apply.

Pray understand that in making this affirmation, I do so with the distinct understanding that the best medical—using it in the sense material—aid has been brought to bear, so that no suspicion of ignorance or inadequacy of any sort can be alleged against the medical methods used. The best, then, that material man can do having been done and failed, that higher power must act if survival and efficient life is to remain.

The history of medicine shows that man's conceptions of the limits separating the two influences, the spiritual and the material, which govern his ailments have shifted their position, the material having gained ground, so that now medicine faces and overcomes conditions which formerly were abandoned as beyond it. The improvements in the handling of epidemic and contagious diseases fully exemplifying my assertion, render needless any citation of the advances in surgery, for instance, with which you are equally familiar. Having thus made such steady inroads upon the domain of what was supposed to constitute the field amenable to spiritual action alone, we are disposed to look with scant patience upon the claims of the latter as a working medical factor, especially as we have abundant proof of the failure of spiritual force to effect relief where the material meets with hourly success.

Spiritual action or force as expressed by mere mind concentration upon disease directly may, in time to come, cure it, but we believe the mastery which has been gained over disease has been gained, and will continue to be, by mind acting through so-called material things furnished by nature, a belief which even the Christian Scientist accepts when we protect his child from diphtheria or his wife from puerperal fever.

The church, I apprehend, is not without blame for some of this impatience, seeing how strenuously, in early ages, it subordinated all things medical to its conception of the needs of the spiritual. However, I will not raise that issue, except so far as it touches the question before us. Admitting, however, that medicine, like all material agencies, has its limits, we come to the question before us: Does the spiritual, as manifested in "Christian Science," so-called, occupy a field not covered by medicine, or which cannot be better covered by it? You will observe that I am dealing with the question from the standpoint of material medicine, which is the same that you, and I, and every Christian Scientist occupy in living, moving, and conducting our daily affairs; we all act from it, no matter how unreal we may believe it, for we know that not to act from it would place us in positions of jeopardy from which, we likewise know, the spiritual would not deliver us, even though we believed that it could.

Immortal mind—God, Principle, Life, Truth, Love, Soul, Spirit, Mind. Such is the definition of the principle, or agent, which Christian Science professes to offer as a cure-all. According to it, Mind is "all in all," the only reality being the "Divine mind." It admits, however (page 3, *Science and Health*), that this assertion is not seen to be supported by sensible evidence until its principle is demonstrated by healing the sick, and thus proved absolute and "Divine." The field of medicine is, therefore, chosen for the initial demonstration of a force which can be indefinitely extended. If you have followed me, you realize that there is nothing new in this claim, so far as medicine is concerned. It is simply the reaffirmation of the predominance of the spiritual over material methods. It does not content itself with the claim to take up and bring to a sound conclusion, from the human point of view, problems which medicine abandons as beyond it, but invades the entire territory with a view to setting it aside as a whole. I say that, if Christian Science can do this, it can do anything. Those of us who love our kind, heartily wish it were true, and physicians, of all others, would hail it as the answer to the mighty problems which oppress us.

When a new idea or discovery is presented to any of us, the plan adopted to test the value thereof is more or less searching, in proportion to its importance, but the principle is the same for all, viz., a test by experts whose knowledge, honesty, breadth of comprehension, and ability are established. Medicine, ever seeking to push further and further its dominion over disease and death, has constantly before it new remedies—large sums in energy, education, intellect, and money are being expended the world over in this direction, and every measure of relief or cure is promptly heralded

and tested by eager experts. It is true that certain claims are viewed with less favor than others, because of their origin, and to this class Christian Science belongs. But, in spite of even this drawback, sooner or later all are taken up and tested; and so it has been with Christian Science.

The first step was to place it. Was it something new, or merely a reaffirmation of the spiritual as a therapeutic agent? We found it to be the latter. Looking further, it was easy to isolate and place it as a variety of that form of "spiritism" known to us as psycho or mind therapeutics—a something related to, and a part of, hypnotism—familiar to us through the writings and work of Liébault, Richet, Charcot, Heidenhain, Bernheim, and many since, and long recognized as the source of the power of the medicine-man, the dervish, and the fakir.

The work done throughout the world through mental suggestion and hypnotism is identical with that performed by Christian Science. The fact that the Christian Scientist strenuously denies this, only proves that he prefers his own designation to that which the best human material thought finds belongs to it; for if the conditions wrought out by the two processes are placed side by side, the ordinary every-day human mind finds them identical. Take, for example, that bible of the Scientist, *Science and Health,* separate yourself from disturbing surroundings, open its pages with a mind even somewhat prejudiced, set yourself seriously to the task of comprehending its various iterations and reiterations, its statements backward, its statements forward, its statements sidewise, and every other wise of its initial proposition throughout its 569 pages, and I know there are many of you who, long before you had fathomed its depths, would find yourselves in a state of mental vacuity fit for the action of "suggestion." Medicine has always recognized that the mental state of a patient influenced the course of his disease; that optimism aided him more than pessimism, and that, while it would not overcome organic changes, it would lighten his sufferings and add to his ability to curtail the crippling influence of disease. But the rôle which optimism must play in any given case was to be determined by the inherent forces possessed by the patient, those with which his optimism could be backed up in the contest waging; and so, to-day, a man paralyzed from a blood clot on his brain is encouraged to be up and about so soon as he has recovered from the initial shock of the injury to his brain; and another, with certain forms of heart disease, is put to exercising, so as to strengthen what heart he has. But, with each, some limit is set, to be determined by a careful estimate of the structural strength involved, which estimate, in turn, is based upon the investigation of a qualified expert in such matters. Such people, aided by a cheerful, hopeful mental state, live longer, and certainly are more efficient, more acceptable to their surroundings, than those in whom no such frame of mind is invoked. Push mental or spiritual therapeutics further, push it to the point of commanding those people to get up, walk, run, do anything which a state of mental exaltation may suggest, and you soon find that the line of safety has been passed. Consciously or unconsciously, all practitioners of medicine employ mental suggestion, more or less, in the treatment of disease, and it is now not only acknowledged to be a resource, but the laws which govern its employment are being sought after with a view to placing it upon the same plane as other accredited remedial agents; but we must know its dangers as well as its blessings before we can give it unqualified endorsement. This is our duty and our rule in all allied questions. For the present, the best working formula in our possession is one to the effect that, in consequence of gradations, it can be used in a major and in a minor form. The former is that condition in which the suggestion is conveyed to the patient, previously put into a quiescent state, resembling unconsciousness, though he is really conscious so far as mental suggestion from the operator is concerned. The latter condition is merely a state either of mental negation, neutrality, or acquiescence on the part of the patient, such as some of us might reach in the reading of *Science and Health,* which fits him for "suggestion-treatment." The former is that to which the term hypnotic state is usually applied by the public at large, but in reality both of these conditions are to be included by the term, the difference being one merely of degree. I shall not detain you by any such speculations as are involved in a discussion of the kind of mental forces brought into play in these phenomena—whether there are such mental entities as a subjective and an objective mind, and if there are, whether all that has been built upon such a theory has any bearing upon our question—for we cannot afford to cloud the issue by departing from the safe ground of actual knowledge. I shall, therefore, proceed at once to tell you what we know this force in medicine can, and cannot, do. Every one is more or less amenable to it, and when in a state of such mental instability as accompanies disease or lowered vitality in all of us, we can be influenced to a greater or less degree—the personal equation, however, facing us here, as in all our dealings with our kind. But, quoting Lloyd Tuckey (who is undoubtedly one of the best exponents of the subject of psychotherapeutics), I think we may say that, the more a man's actions are the result of impulse rather than of reason, the more susceptible he is to external influences, and, therefore, to suggestion-treatment.

Turning next to the kind of diseases that can be favorably influenced by it, we find them comprised almost entirely in what we designate as functional disorders, mainly such as have become chronic, and especially such as we group under the term neuroses, such, for instance, as functional paralysis, St. Vitus's dance, asthma, palpitation, nervous headache, spinal irrita-

tion, neurasthenia, and many forms of dyspepsia, etc. (Tuckey, *Psychotherapeutics,* p. 63). That borderland of insanity occupied by dipsomania, the opium habit, and the excessive use of tobacco and other narcotics, offers an extensive field which should not be overlooked; and in organic diseases, especially such as are chronic, and in which pain is a potent factor, it has been used with benefit. Every practitioner is familiar with cases in which, through natural hyperæsthesia, the disabling effects of certain chronic ailments are far in excess of what the actual lesion warrants. The cross, the disgruntled, those lacking self-discipline, afford a fruitful field, exemplifying admirably the influence of mind in pandering to disorders. Here, mind, or, as the Christian Scientist puts it, "diseased mind," is having too full play, and here suggestion can be practised with benefit. Lloyd Tuckey, Bernheim, and others give ample illustrations.

I think I have said enough to show that in Christian Science we have no new or untried force in medicine. For forty years it has been before us, and the slowness of its progress with us is due to the fact that, entrusted by you, as we are, with all that you hold best and dearest on earth, we cannot consent to see a force, common as it clearly is to all sorts and conditions of men, the bad as well as the good, let loose until its dangers, as well as its blessings, are more clearly defined, recognized, and, if necessary, legislated upon. That there are dangers, the distinguished gentleman, Mr. Purrington, will clearly show, and you, as a leading body in this, our country, should hold up our hands, until such time as we can say of this, as of all other forces that we freely endorse, "Come and take of it, for we know its limitations." But, if you prefer to do otherwise, you need not expect to escape responsibility for the wickedness and dishonesty which now exploit it under the name of Christian Science.

7 East Thirty-sixth Street.

Correspondence.

LETTER FROM TORONTO.

Canadians and the Imperial Medical Services.—McGill University.—The Canadian Branch of the Victorian Order of Nurses.—The Proposed Dominion Medical Council.—Public Health Matters in the Province of Quebec.—The Ontario Bill for the Treatment of Inebriates.—Proposed Vaccination Legislation in Ontario.—Small-pox.—Medical Societies in Toronto.

Toronto, *April 1, 1901.*

The Militia Department at Ottawa has received information that a bill is at the present time before the Imperial House of Commons which proposes to admit medical men of the British colonies to the Imperial naval, military, and civil services. Where the examinations and course of study at the principal colonial schools of medicine are in all respects the same as those practised in the United Kingdom, and subject to the supervision of the General Medical Council, medical men from Greater Britain shall be admitted to these services. This is the direct outcome of the war in South Africa. Several prominent Canadian surgeons offered their services for the war, and a complete field hospital was offered from Canada, but the Imperial government could not accept, owing to the medical law of England. It may be presumed that after the enactment of this legislation the medical institutions of the colonies will require to have Imperial approval of their examinations and course of studies, provided they desire their students to avail themselves of these opportunities.

McGill University, Montreal, never seems to lack for friends, for they are continually tumbling over one another in their eagerness to render financial assistance to this great institution. Recently it was announced at a meeting of the board of governors that Sir William Macdonald had signified his desire to contribute to the funds of the university $150,000 more, he having already given something like $2,500,000 to the university. Of this magnificent sum, $75,000 will be taken to endow the chair of chemistry, and $62,500 for the chair of botany, and $12,500 will be added to the fund for the chair of physics. The medical departments are to be greatly improved during the coming summer. A large four-story wing will be added to the medical building, which will contain large lecture theatres, museums, and chemical laboratories. This is said to be part of a general scheme which, when completed, will alter the general appearance of the medical building. The total cost of the proposed addition will be borne by Lady Strathcona and the Hon. Mrs. Howard.

The local branch of the Victorian Order of Nurses held its annual meeting in Montreal within the last fortnight, and was presided over by the Hon. Senator Drummond. The report of the house committee states that the year just closed may be regarded as one of progress. The number of individual patients cared for during the year amounted to 529, and the number of visits paid was 6,751, in addition to 150 night calls. The fees derived from patients amounted to $782.50. The report of the treasurer showed that, including a balance of $7,821.51, the receipts had amounted to $10,463.58, and the expenditures to $5,126.24, leaving a favorable balance of $5,337.34. The nursing staff at present in Montreal consists of six nurses. The order proposes to erect hospitals throughout the northwest as memorials to the queen, and toward this end the Dominion government has contributed $6,000, and a gentleman of Montreal $2,000. This money will be used for the purpose of establishing two hospitals of this class in that district. Senator Drummond was reelected president, and Dr. J. George Adami secretary.

The bill for a Dominion Medical Council which has just been introduced into the Dominion Parliament by Dr. T. G. Reddick, M. P., will, it is fully expected by the profession throughout Canada, soon be enacted. The bill provides for three representatives on the council from each of the Provinces of the Dominion, including the Northwest Territories. This will make a body of twenty-four, which, with three representatives from the homœopathic body, will bring the council up to twenty-seven. These representatives are to be appointed as follows: The president of the medical council of each province, *ex officio;* one from each provincial medical council, to be elected by that council; one to be appointed by the Governor-general in council from each province, who, with the three from the homœopathic body, will make up the total membership of the Dominion Medical Council. This medical council would act as an advisory committee to the Dominion government. They would also prescribe an examination for all students who desired to practise throughout the Dominion, each student to spend five years in the study of medicine, as at present in Ontario, the last year to be spent in the study of practical medicine. The bill has received its first reading.

The Quebec Provincial Board of Health has just published its annual report. From this it may be gathered that, however far Quebec may be behind in some things, she leads the Provinces of the Dominion in respect to birth rate and progressive legislation in regard to tuberculosis. According to the law passed on the 7th of June, 1900, every householder in that Province in whose household a death occurs from consumption must notify the local board of health within forty-eight hours from the occurrence of such death. Then it is imperative upon the municipality to order and cause to be made a disinfection of the premises and apartments which may have become contaminated through the patient. In this way does Quebec hope to check the ravages of consumption. The city of Quebec has the smallest death rate from tuberculosis of any of the Canadian cities, and Ottawa has the largest. Quebec's rate is 1.99 to each 1,000 of the population; Ottawa's is 3.12, Montreal's 2.87, Toronto's 2.41, Kingston's 2.17, and London's 2.67. Paris is said to have a death rate from this cause of 4.90, and New York one of 3.60. The recorder of statistics can take a justifiable pride in the birth rate of the Province. In 1898 it was 35.70, as against that of Ontario, 20.4. In 1899 it was 33.46, a decrease of 3,585. Even with this decrease, Quebec's birth rate is larger than that of any country in the world, except Germany's, which was 36.2 in 1898.

The Ontario bill for the treatment of inebriates seems about to be given the "go-by" by the government. The session is nearing its end, yet this important item of legislation has not been introduced. Its friends are beginning to despair of any action on the part of the present government. The bill was drafted over a year ago, at the beginning of that session of Parliament. It has been approved of by the Premier and many of the members of the government, by the inspectors of prisons, and by the warden of the Central Prison, who is a medical man, but, with all this, the government persists in withholding the measure. A Provincial election is not far off, and the government may have cause in the future to wish they had acted differently in this and other educational matters.

A bill concerning revaccination is now before the Ontario legislature. It provides that persons having religious scruples with regard to vaccination shall not be required to have their children vaccinated before they can attend the public schools. The bill will be fought by the civic committee, and there is very little likelihood of its becoming law.

Small-pox exists in Ontario to the extent of 156 cases, and there are twenty-two different centres for infection. There has been a good bit of talk on the part of the antivaccinationists as to whether the outbreak is the genuine article or not, but the Provincial Board of Health is ever on the alert to prevent the possibility of the spread of the disease.

Toronto is again talking of an Academy of Medicine. There are three medical societies in the city, and, with a medical population of something like five hundred, no one of them can muster more than a score at a meeting. Amalgamation is deemed advisable.

Therapeutical Notes.

Antisepsis of the Nasopharynx.—*Presse médicale* for February 16th attributes the following prescriptions to M. Malherbe. They are to be used as anterior douches or by atomization.

Resolvent and antiseptic:

℞ Sodium salicylate. . . . . 22½ grains;
Distilled water. . . . . .4,500 minims.
M.

Resolvent, antiseptic, and astringent:

℞ Zinc sulphate. . . . . 4½ grains;
Distilled water. . . . . .4,500 minims.
M.

When there is much pain:

℞ Morphine hydrochloride. . . . ¾ of a grain;
Distilled water. . . . . .1,250 minims.
M.

At the same time inhalations are prescribed:

℞ Compound tincture of benzoin. 1,350 grains;
Chloroform. . . . . 25 drops.
M.

A coffeespoonful in a pint of boiling water.

Or, when the inflammation has diminished, the following formula is recommended:

℞ Oil of eucalyptus. . . . . 6 parts;
Magnesium carbonate. . . . . 4 "
Distilled water. . . . . 90 "
M.

A coffeespoonful in a pint of boiling water.

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RESPONSIBILITY FOR MEDICAL ATTENDANCE IN A DIVIDED FAMILY.

ACCORDING to a recent newspaper report, a physician was called about a year ago by a lady to attend her infant daughter in Brooklyn, and, not receiving payment, brought suit recently against her husband. It appeared on the trial that the husband and wife did not live together, but there was no evidence to show that the physician knew of this fact until after most of the services had been rendered. A judgment given in favor of the plaintiff has been affirmed by the Appellate Division in Brooklyn, which held that the physician called by the mother was not chargeable with constructive notice that the father and mother did not live together, and that the father was responsible to the physician for the value of the services thus rendered.

The principle governing the liability of the husband and father for medical services rendered under such circumstances seems to be well settled. The rule is laid down in *The Law in its Relations to Physicians,* by Arthur N. Taylor, LL. B., as follows: "If the husband and wife are living apart by mutual consent, and the husband has entered into a contract with the wife to furnish her with a certain amount each month for her support and maintenance and all family expenses, and pays such amount, he will still be liable to a physician who renders services at her request, the physician not knowing that they are living apart, and that the husband makes her a fixed monthly payment in lieu of supporting her." (Page 86.)

As to the liability of the father for attendance upon children, the same work lays down the rule that "in case of voluntary separation of the parents, the father is *prima facie* liable for the support of the children, though they may be in the custody of the mother." (Page 83.) It seems, however, that, if the wife abandons the husband without just cause, and takes the children with her, there is no implied authority in her to bind the father for medical attendance upon the children, her possession of them being unlawful.

At the same time, it is hard to see how the physician can be expected to divine that the obvious possession of the children by the mother is in contravention of legal right, and the judgment before referred to would seem to form a valid argument in this case also. The physician's claim stands on an altogether different basis from a trade claim. Many instances in which the physician is summoned are such as involve matters of life and death, and common humanity in such cases demands that the physician should not lose time before rendering his services in taking steps to protect himself, as the tradesman would and should do, before allowing indebtedness to be incurred.

THE SIGN OF THE ORBICULARIS PALPEBRARUM.

RARELY indeed does a sign or symptom of disease turn out to be of greater value than the original observer of it maintained. Such, however, according to L. Bard (*Lyon médical,* February 10th), seems to be the case with the sign of the orbicularis in the diagnosis of facial paralysis, which was described by Revilliod in the *Revue médicale de la Suisse romande* for October, 1889. M. Bard remarks that in cases of hemiplegia the paralysis of the temporofacial branch of the facial nerve is always much less marked than that of the cervicofacial, and that Revilliod's sign of the orbicularis is the most trustworthy means of demonstrating its existence. The sign is thus elicited: If a person with hemiplegia is asked to close both eyes at once, he closes them; he can with equal facility close the eye of the sound side while keeping that of the paralyzed side open, but he cannot close the eye of the paralyzed side alone while keeping that of the sound side open. This sign is said to be well-nigh constant in ordinary hemiplegia, provided the patient has preserved or regained sufficient consciousness. It is a necessary condition, however, that the patient should have been able to close either eye separately before the paralytic attack came on, and in regard to this we must depend upon the person's statement. Almost everybody has this power, but it seems that Boïadjew, a pupil of Revilliod's (*Thèse de Genève,* 1892), found that, out of 750 healthy persons, ten per cent. were incapable of closing one eye only, and twenty-five per cent. could close only one eye

alone (the left eye in seventeen per cent. and the right in eight per cent.). Inasmuch as these observations of Boïadjew's were made in Geneva, M. Bard suggests that they may have set the capability of closing only one eye higher than would be found to be the case in the world at large, from the facts that so many of the people of Geneva are watchmakers and that they are so generally practised in shooting.

M. Bard, as has already been hinted, rates Revilliod's sign higher than it was rated by Revilliod himself. It is as a distinguishing mark between facial paralysis of central and that of peripheral origin that Bard values the sign, for it is invariably lacking in the latter form. He admits, however, that Revilliod was inclined to think that the sign would prove to be constant in hemiplegia due to a central lesion, while it might be absent in certain cases of cortical hemiplegia due to a very limited lesion not involving the origin of the temporofacial branch.

THE THERAPEUTIC USES OF YEAST.

THE therapeutic possibilities of yeast grow apace. We have, from time to time, in our therapeutical notes and elsewhere, recorded the various uses to which yeast has been put in medicine. It is some considerable time since M. Thiercelin and M. Chevrey began their investigations into the use of brewers' yeast in the gastro-enteritis of children. They used, first of all, about a dessertspoonful of fresh yeast dissolved in from fifty to sixty grammes (approximately two ounces) of boiled water. After the administration of a purgative, this was introduced, at a temperature of 98° F., through a rectal tube, into the bowel, and caused to be retained as long as possible. The yeast was introduced three times daily. Subsequently, for convenience's sake, a small teaspoonful of dried yeast was used in place of the fresh. As a result of experiments on the subject, M. Nobécourt communicated to the Paris Society of Biology the conclusion that, while the vital processes of the *Torula cerevisiæ* were the principal causative factor in its action, there existed also simultaneously a chemical action. In 1900 Dr. Blancher (*Gazette hebdomadaire de médecine et de chirurgie,* February 10th), in a Paris thesis, showed that from one to two small teaspoonfuls of yeast in boiled water, administered *per os,* was even more efficacious than rectal lavements. He further showed that yeast was equally efficacious in the acute and chronic forms of gastro-enteritis of adults, in dysenteriform enteritis, in chronic mucomembranous enteritis, and also in the gastro-intestinal troubles accompanying typhoid fever.

M. Combemale reported to the *Société centrale de médecine du nord,* in April, 1898, a marvellous reduction of sugar to between one fourth and one third of the previous daily excretion in a case of glycosuria, with other attendant symptoms of amelioration.

Landau, in 1899, had reported good results from the injection of from ten to twenty cubic centimetres into the fundus of the vagina in forty cases of leucorrhœa.

Again, as we noted in a minor editorial in our issue for June 23d, 1900, M. Marie reported eight cases of pneumonia in which excellent results were attributed to the use of yeast, administered in the first of them in consequence of numerous painful boils.

Finally, we note that Dr. E. Roos, *Privat Docent* of internal medicine at Freiburg (*Semaine médicale,* 1900, No. 45; *Nord médical,* February 15, 1901), finds yeast to exercise a favorable influence over habitual constipation. Either fresh yeast, simply dried at a temperature of 86° F., or yeast the vitality of which has been destroyed by an hour's subjection in an oven to a temperature of 298° F., may be used. The dose of the former is seven grains and a half, to be taken *per os* twice or thrice daily; of the latter, the dose is one half less.

The chemical theory of the action of yeast gains color from the fact of the devitalized yeast being equally efficacious with the simply desiccated yeast. The favorable action is said to manifest itself from the second day, and to continue for some time after the cessation of the treatment. Some flatulent distention, and occasionally slight colic, may occur, but these are said to be avoided, or at least diminished, by the use of the sterilized yeast.

This seems to be a very simple mode of treatment, easy of application and inexpensive, and the remedy, in the form of compressed yeast, is obtainable in most places, while the complaints in which it is said to be of value are such as fall within the province of the general practitioner. There should not, therefore, be much difficulty in obtaining ample confirmation of the virtues attributed to it or proof of their non-existence.

THE PUBLIC SPITTING NUISANCE.

IT is satisfactory to find that, at last, some steps are being taken to make the public understand that the board of health's ordinance forbidding expectoration in public vehicles, etc., will be enforced. Operations were begun on April 3d by the arrest of about a score of per-

sons for violating the ordinance, and fines ranging from $3 to $5 were imposed. Large fines will not be needed if a proper method is employed. It is not so much the severity of punishment as its inflexible and persistent infliction that tells. Many err in the training of children by letting offenses pass lightly at one time, and visiting them with condign punishment at another. The thing wherewith to impress the child's mind is, not the infliction by an irate guardian of vengeance for an offense committed, but the inevitableness of unpleasant consequences, as inflexible in their occurrence as is any operation of nature, *e. g.*, that if the child touches the fire it will burn itself. The child soon learns that the fire is not angry with it, neither does it exercise vengeance when it burns. The result is simply a matter of course. And so it should be, also, with adult offenders. It is the constant dripping of water that wears away the stone. It must not be forgotten, in dealing with the spitting nuisance, that long-established habit is hard to eradicate, and it may be that for some time many well-meaning persons will thoughtlessly offend. For this reason it would be well that for the first two or three offenses, unless accompanied by evident contumacy, the offender should be dealt with by reprimand only. But it is also essential that even the thoughtless offender should suffer the inconvenience of an appearance in court, that the less well-intending may not obtain undeserved clemency.

THE PHYSICIAN'S RESPONSIBILITY IN CASES OF X-RAY BURNS.

The *Lancet* for March 23d, in a letter from its Paris correspondent, mentions a suit for damages brought by a lady against a physician before the Civil Tribunal of Paris. The lady had sciatica, and three times the physician subjected her thigh to the action of the Röntgen rays. The first sitting lasted forty minutes, and the second forty-five minutes. After the second sitting the thigh was red and inflamed, but the doctor made light of this fact and gave her a third sitting lasting an hour and a quarter. This was followed by a burn which confined the patient to bed for four months. Thereupon she sued to recover damages in the sum of 5,000 francs. The tribunal nominated Dr. Brouardel and M. Ogier as expert witnesses, and they submitted a report which the correspondent calls very remarkable. They took the ground that the doctor was not responsible, inasmuch as Röntgen-ray applications were not yet sufficiently understood in detail to enable anybody to say who would be injured by them and who would not, just as it was impossible to foresee which individuals of a body of men marching in the sun would be affected with sunstroke. At the same time, they said, it was to be regretted that the doctor had ignored the inflammation consequent on the second sitting. The court awarded the full amount of damages asked for, declaring that the doctor had acted imprudently, "more like a workman than a medical man," and that his apparatus was defective. This judgment, it is added, is subject to appeal. There can be little doubt, we think, that the doctor was "imprudent."

THE ADMINISTRATION OF THE CITY HOSPITALS OF NEW YORK.

In last week's News Items we published a statement, one that seemed to be final, to the effect that the Senate committee on cities of the legislature of the State of New York had struck out from the charter amendments those which provided that Bellevue Hospital and the allied hospitals should be given into the charge of a board of trustees. After we had gone to press, however, there came news apparently indicating a change of mind on the part of the committee, or else an error in the statement which had been given to the press. According to the later dispatches, the committee has decided to retain the charter revision commission's recommendations, and we now learn that the trustee plan for the administration of the hospitals in question has every prospect of receiving the sanction of the legislature. We discussed it at some length in our issue for March 2d, giving it our full approval. We are gratified, therefore, to learn of this final action on the part of the committee, and so, we do not doubt, will everybody be who is well informed as to the affairs of those hospitals and who has at heart the improvement of their administration.

THE BELL BILL.

The Bell bill is dead. The extraordinary "compromise," which it was supposed by its promoter would meet all difficulties, viz., the licensing of Christian Scientists to practise, only excluding them from treating surgical cases and cases of infectious disease, was foredoomed to failure. It is scarcely likely that people who deny the existence of disease at all can be trusted to be scrupulously exact in diagnosticating infectious from other disease, even assuming that ignorance was presumptive evidence of capacity to do so. On the whole, the proposition reminds us forcibly of the newly married wife's suggestion for the proper settlement of all domestic questions. "Now, darling," she is reported to have said, "in order that we may always pull well in harness together, let us agree that you shall decide all the big questions that are ever at issue between us, and I will settle all the little ones—and," she added, thoughtfully, "I will decide which are big ones and which are little ones."

THE PLAGUE IN CALIFORNIA.

The commission of experts appointed by the Secretary of the Treasury to investigate the condition in San Francisco as regards the existence of plague, has reported that there have been ten cases of plague in that

city since the beginning of the year, all of which have proved fatal. The disease has been confined to Chinatown, and has been only of the bubonic, or more mildly infectious, type; but proper precautions have been taken to prevent any grave developments, and the condition has never been such as to justify grave alarm. A committee of business men has consulted with the commission at Washington, and vigorous action has been adopted. All this is as it should be, and if this course had been adopted from the first, it is probable that, instead of inflicting injury on this important city, it would rather have prevented much detriment that has doubtless ensued upon the alarm created by the publicity given to ill-advised controversy.

THE RESPONSIBILITY OF THE WRITER OF FICTION.

A STATEMENT cited by the *Evening Post* for March 28th, if correct, points a very serious moral. It is there said that Dr. Wyllie, professor of medicine at the University of Edinburgh, summoned to visit a patient in a very low state, on inquiry, elicited the fact that the patient's favorite reading was *Sherlock Holmes*. The young man was in a very low state, and his tell-tale arm was dotted with hypodermic punctures. His admiration for the most popular of paper detectives had betrayed him into the cocaine habit. Dr. Wyllie uttered a severe stricture on Dr. Conan Doyle's knowledge of the action of drugs: "If such a man as Sherlock Holmes had existed, dosing himself as depicted by his creator, in a few weeks his opinion on anything would not have been worth having. Cocaine," said Dr. Wyllie, "is even more disastrous than morphine. It renders its subject vainglorious and pleased with himself, but blunts the intellect and blasts the imagination."

But there is even a more serious impeachment than ignorance or misrepresentation of the effects of the drug; and that is, heedlessness of the imitative suggestion it conveys. We are all familiar with the pernicious effects of suggestion as exercised on youth by trashy dime novels; but, whatever excuse can be made for lay purveyors of such putrescent literature, one ought surely to expect a literary physician to avoid opening the floodgates of suggestion of this sort.

THE ISOLATION HOSPITAL OUTRAGE IN ORANGE.

WE are glad to learn from the *New York Times* that five of the persons concerned in the recent wrecking of an isolation hospital in Orange, New Jersey, have been indicted and are likely to have to answer for their part in the wanton destruction of the hospital. Two manifestations of rank savagery have to be repressed in this instance—the assumption that a pest-house endangers the community and the contempt for law and order evinced in the forcible destruction of the hospital under the influence of that assumption.

News Items.

Society Meetings for the Coming Week:

MONDAY, *April 8th:* New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynæcological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, *April 9th:* New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Societies of the Counties of Jefferson (quarterly), Oneida (annual—Utica), Ontario (quarterly), Rensselaer, and Tioga (quarterly), N. Y.; Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Bergen (annual—Hackensack) and Cumberland (annual), N. J., County Medical Societies; Fairfield, Connecticut, County Medical Association (annual); Northwestern Medical Society of Philadelphia; Practitioner's Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, *April 10th:* New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York: Medical Society of the County of Albany; Tri-States Medical Association (Port Jervis, N. Y.); Pittsfield, Massachusetts, Medical Association (private); Philadelphia County Medical Society; Kansas City, Missouri, Ophthalmologcal and Otological Society.

THURSDAY, *April 11th:* Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; New York Laryngological Society (New York); Medical Society of the County of Cayuga, N. Y.; South Boston, Massachusetts, Medical Club (private); New London, Connecticut, County Medical Society (annual); Pathological Society of Philadelphia.

FRIDAY, *April 12th:* New York Academy of Medicine (Section in Neurology); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, *April 13th:* Obstetrical Society of Boston (private).

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Fourteen Days ending March 28, 1901:

AUSTIN, H. W., Surgeon. Detailed as chairman of a board, to be convened from time to time as necessary, for the purpose of re-examining rejected immigrants.

CLARK, TALIAFERRO, Assistant Surgeon. Granted leave of absence for thirty days on account of sickness.

EAGER, J. M., Passed Assistant Surgeon. Upon expiration of leave of absence to proceed to Naples, Italy, for duty, relieving Assistant Surgeon V. G. HEISER.

GOODMAN, F. S., Hospital Steward. To report to the director of the Hygienic Laboratory, Washington, for duty.

HEISER, V. G., Assistant Surgeon. Upon being relieved from duty at Naples, Italy, to proceed to Washington and report in person for duty.

LAVINDER, C. H., Assistant Surgeon. Granted leave of absence for ten days from March 28th.

MCMULLEN, JOHN, Assistant Surgeon. Upon being relieved from duty at Wilmington, N. C., to proceed to the Mullet Key Detention Camp, Florida, and assume command. To report at Washington *en route to* Mullet Key.

MATHEWSON, H. S., Assistant Surgeon. Granted leave of absence for three days from March 27th. To rejoin station at San Juan, Porto Rico.

MURRAY, R. D., Surgeon. Granted leave of absence for five days from April 9th.

RUSSELL, H. C., Assistant Surgeon. Granted leave of absence for eighteen days on account of sickness from February 21st.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera and plague were reported to the surgeon-general during the week ending March 30, 1901:

Small-pox—United States and Insular.

Los Angeles, California	Mar. 19	15 cases.	
San Francisco, California	Mar. 2-9	8 cases.	
Washington, District of Columbia	Mar. 18	16 cases.	
Jacksonville, Florida	Mar. 16-23	2 cases.	
Chicago, Illinois	Mar. 16-23	10 cases.	
Wichita, Kansas	Mar. 16-23	12 cases.	
Lexington, Kentucky	Mar. 16-23	2 cases.	
New Orleans, Louisiana	Mar. 16-23	14 cases.	2 deatbs.
Bay City, Michigan	Mar. 16-23	2 cases.	
Detroit, Michigan	Mar. 16-23	6 cases.	
Minneapolis, Michigan	Mar. 16-23	6 cases.	
Winona, Michigan	Mar. 16-23	10 cases.	
Omaha, Nebraska	Mar. 9-23	12 cases.	
Manchester, New Hampshire	Mar. 16-23	3 cases.	
Hudson County, New Jersey	Mar. 21	6 cases.	
Newark, New Jersey	Mar. 16-23	1 case.	
New York, New York	Mar. 16-23	41 cases.	6 deatbs.
Cincinnati, Ohio	Mar. 15-22	2 cases.	
Cleveland, Ohio	Mar. 16-23	43 cases.	1 deatb.
Toledo, Ohio	Mar. 16-23	1 case.	
Pittsburgb, Pennsylvania	Mar. 16-23	9 cases.	
Steelton, Pennsylvania	Mar. 16-23	6 cases.	
Greenville, South Carolina	Mar. 8-16	2 cases.	
Memphis, Tennessee	Mar. 16-23	26 cases.	
Nashville, Tennessee	Mar. 16-23	13 cases.	
Salt Lake City, Utah	Mar. 16-23	40 cases.	
Huntington, West Virginia	Mar. 8-16	12 cases.	
Wheeling, West Virginia	Mar. 8-23	2 cases.	
Milwaukee, Wisconsin	Mar. 16-23	2 cases.	
Ponce, Porto Rico	Mar. 11	13 cases.	

Small-pox—Foreign.

Prague, Austria	Feb. 23-Mar. 9	10 cases.	
Trieste, Austria	Mar. 2-9	2 cases.	
Rio de Janeiro, Brazil	Jan. 1-31	36 cases.	
Antwerp, Belgium	Feb. 23-Mar. 9	8 cases.	
Colombo, Ceylon	Feb. 8-16	1 case.	1 deatb.
Guayaquil, Ecuador	Feb. 2-Mar. 2		14 deaths.
Cairo, Egypt	Feb. 25		1 deatb.
Paris, France	Mar. 2-9		7 deaths.
Roubaix, France	Jan. 1-31		1 deatb.
Leipsic, Germany	Feb. 16-23		1 deatb.
London, England	Mar. 2-9	1 case.	
Newcastle-on-Tyne, England	Mar. 2-9	2 cases.	
Edinburgh, Scotland	Feb. 2-9	3 cases.	
Glasgow, Scotland	Mar. 8-15		20 deaths.
Bombay, India	Feb. 19-26		7 deaths.
Calcutta, India	Feb. 8-23		243 deaths.
Karachi, India	Feb. 10-24	23 cases.	10 deatbs.
Madras, India	Feb. 16-23		7 deatbs.
Yokobama, Japan	Feb. 16-23	1 case.	
Seoul, Korea	Feb. 2-9	Prevalent.	
Odessa, Russia	Feb. 23-Mar. 9	20 cases.	3 deaths.
Riga, Russia	Jan. 1-Dec. 31, 1900		174 deatbs.
St. Petersburg, Russia	Feb. 23-Mar. 9	12 cases.	1 death.
Warsaw, Russia	Feb. 23-Mar. 2		8 deaths.
Singapore, Straits Settlements	Feb. 8-16		2 deatbs.
Jaffa, Syria	Aug. 1900-Mar. 6, 1901	4 cases, 1 deatb in German colony.	
Jerusalem, Syria	Aug. 1900-Feb. 4, 1901	1,600 cases, and 35 or 40 per cent. deatbs.	

Yellow Fever.

Havana, Cuba	Mar. 8-16	2 cases.	2 deatbs.

Cholera.

Bombay, India	Feb. 16-23		6 deatbs.
Calcutta, India	Feb. 8-23		44 deaths.
Madras, India	Feb. 16-22		2 deaths.
Singapore, Straits Settlements	Feb. 8-16		4 deatbs.

Plague—United States.

San Francisco, California	Jan. 6-Mar. 2	10 cases.	10 deatbs.

Plague—Foreign.

Cape Town, Africa	Feb. 16-Mar. 4	55 cases.	11 deatbs.
Rio de Janeiro, Brazil	Jan. 1-31	15 cases.	9 deaths.
Hong Kong, China	Feb. 2-9		2 deatbs.
Bombay, India	Feb 19-26		1,118 deaths.
Calcutta, India	Feb. 8-23		520 deatbs.
Singapore, Straits Settlements	Feb. 4		1 death.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending March 30, 1901:

DISEASES.	Week end'g Mar. 23.		Week end'g Mar. 3	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	23	5	25	11
Scarlet Fever	607	40	709	38
Cerebro-spinal meningitis	0	4	0	0
Measles	316	4	313	8
Diphtheria and croup	300	59	268	47
Small-pox	41	6	41	10
Tuberculosis	278	165	286	195

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from March 23 to March 30, 1901:

ALLEN, IRA A., Captain and Assistant Surgeon, is granted leave of absence for one month, to take effect on or about April 20, 1901.

BEASLEY, SHADWORTH O., Major and Surgeon, will report to the commanding general, Department of California, for transportation to Manila.

CROSBY, WILLIAM D., Major and Surgeon, will relieve HENRY S. KILBOURNE, Major and Surgeon, of his duties as medical superintendent of the army transport service, New York, and will proceed to the Presidio of San Francisco.

FOGG, JOHN S., Captain and Assistant Surgeon, will proceed to San Francisco for transportation to Manila.

GARLINGTON, JOSEPH C., Acting Assistant Surgeon, is relieved from duty at Fort Mott. N. J., upon the arrival of JOSIAH W. RICHARDS, Acting Assistant Surgeon, and will then proceed to Fort Terry, N. Y., to relieve JOHN J. GILHULEY, Acting Asistant Surgeon, who will then proceed to his home for annulment of contract.

HACK, CHARLES W., Captain and Assistant Surgeon, is assigned to duty with the first detachment of recruits to be sent from Columbus Barracks, Ohio, to San Francisco for transportation to Manila.

LONGINO, T. C., Captain and Assistant Surgeon, will proceed to San Antonio, Texas, to accompany troops to be sent from that department to San Francisco, where he will report for transportation to the Philippine Islands.

TANNER, WILLIAM T., Captain and Assistant Surgeon, United States Volunteers, is assigned to duty with the Third Battalion, Eleventh Infantry, and will proceed to Washington Barracks, to accompany that battalion to the Philippine Islands, where he will report to the commanding general, Division of the Philippines, for assignment to duty.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for Two Weeks ending March 30, 1901:

CRAWFORD, C. A., Assistant Surgeon. Detached from the *Dixie* and ordered to the *Constellation*.

DAVIS, E., Assistant Surgeon. Detached from the Naval Hospital, Mare Island, California, and ordered home, with permission to delay *en route*.

DECKER, C. J., Surgeon. Order detaching him from the *Monocacy* and ordering him to the *Oregon* is revoked, and he is ordered to the *Newark*.

EVANS, S. G., Passed Assistant Surgeon. Detached from the *Concord* and ordered to the *Monocacy*.

GROW, E. J., Assistant Surgeon. Detached from the *Glacier* and ordered to the *Isla de Luzon*.

HIBBETT, C. T., Surgeon. Detached from the *Newark* and ordered to the Naval Hospital, Cavite, Philippine Islands.

LEACH, P., Surgeon. Order detaching him from the *Oregon* and ordering him to the *Monocacy* is revoked.

LEDBETTER, R. E., Assistant Surgeon. Detached from the *Constellation* and ordered to the *Chicago*, via the *Dixie*, to relieve J. R. WHITING, Assistant Surgeon.

MCCLANAHAN, R. K., Assistant Surgeon. Ordered to the Asiatic Station, via the *Solace*.

PICKRELL, G., Surgeon. Detached from the Naval Hospital, Mare Island, California, and ordered home.

SPEAR, R., Passed Assistant Surgeon. Detached from the *Isla de Luzon* and ordered to the *Concord*.

WHITING, J. R., Assistant Surgeon. Detached from the *Chicago* and ordered to the *Dixie*.

"Pink Eye."—An epidemic of "pink eye" is said to have appeared in Philadelphia.

Lake Forest College and Ferry Hall Seminary, Illinois, have been closed in consequence of an epidemic of mumps. All the sufferers appear to be girls, not one of the young men having taken the complaint.

Unlicensed Practitioner Fined.—An unlicensed practitioner who was arrested in February at Stanley, Wis., for practising medicine without a license, has been fined fifty dollars. The fine has been withdrawn on his promise not to continue to practise.

The Cause of Cancer.—Professor Gaylord, of the University of Buffalo, claims to have discovered the cause of cancer. He was to lay his evidence before the faculty of the medical department of the University of Buffalo on the 4th inst.

A Medical Library for Milwaukee.—The Milwaukee Medical Society has appointed a committee to investigate and report upon a proposal which has been made for the establishment of a medical library in a new office building where quarters have been offered rent free.

A Bill to Abolish Coroners in New York City.—Assemblyman Henry, on April 3d, introduced at Albany a bill to abolish the borough coroners and coroners' physicians in New York city, and establish in lieu thereof a staff of medical examiners, thirteen in number, at an annual salary of $5,000 each.

Vaccination Prosecutions in England.—The authorities of Leicester, the great anti-vaccination town of Great Britain, began the prosecution on April 3d of 60,000 defaulters under the vaccination acts. Six test cases had been started, but all had been withdrawn for various causes.

To Compel Hypnotists to Take Out Licenses.—The Senate committee on public health, at Albany, on April 3d, favorably reported Senator McCabe's bill compelling all persons professing to practise hypnotic treatment to take out a license. No license will be issued to hypnotists who have not put in four years of study and passed a successful examination.

The New Yale Medical School Building.—The contract for the new Yale Medical School building at New Haven has been given to the firm which has already put up about thirty buildings for Yale. The work will cost $96,000. Recently the Yale corporation received a gift of $100,000 from an anonymous donor for this new building.

Commencement Exercises.—The commencement exercises of the University Medical College of Kansas City, Mo., were held on March 26th. There were seventy graduates. After the exercises the Alumni Association gave its annual banquet in the Hotel Baltimore.——The University of Louisville, medical department, held its commencement exercises on March 28th at Macauley's Theatre, Louisville, Ky.

The Pennsylvania State Medical Council.—The State Medical Council met in the Internal Affairs Department at Harrisburg, Pa., on April 2d, and organized by the election of Dr. Henry Beates, Jr., of Philadelphia, as president, and Dr. H. S. McConnell, of New Brighton, Beaver county, as secretary and treasurer, in place of Dr. Foster, of Pittsburgh, who was not reappointed.

Surgical Instruments are Taxed.—Judge Colt, in the United States circuit court at Boston, has dismissed the petition brought by the Massachusetts General Hospital for a review of the decision of the board of general appraisers, holding that a case of imported surgical instruments was not entitled to exemption from duty under paragraph 638 of the Dingley tariff act. The goods are dutiable at 60 per cent. under the act. The instruments were for use in the hospital.

A Plan for Nursing the Sick Poor of Cleveland, O.—The Graduate Nurses' Association of Cleveland (O.) is making an effort to provide adequate nursing for the sick poor of that city by the organization of a system of district nursing. The society is composed of women whose daily work carries them among the sick, and many of them among the poor. It is proposed to place the organization of the work in the hands of a board of directors composed of representative men and women of Cleveland.

The New York Medical Society for Clinical Research is the name of an association which has recently been organized with the following officers: President, Dr. Gutman; vice-president, Dr. Mandel; secretary, Dr. Lubman; and treasurer, Dr. Spivac. A library and laboratory have been established with a view to encouraging young physicians in original clinical research. Any licensed practitioner who is a graduate of a recognized medical college is eligible for membership.

A Letter Blamed for an Epidemic of Small-pox.—An epidemic of small-pox at Saginaw, Mich., seems to have been traced to a letter. The official in charge of the quarantine squad traced the fact that the first patient was a young lady who had recently had a letter from her lover, a soldier of the United States army in Alaska, in which he stated that he was just recovering from small-pox. The epidemic seemingly started by this letter is said to have had altogether thirty-four victims.

The Anti-spitting Crusade.—On April 1st the board of health of New York city sent out seventy policemen of the sanitary squad in citizens' clothes for the purpose of arresting all violators of the law regarding spitting on the floors of street and railroad cars and other public vehicles, ferryboats or public buildings. About twenty arrests were made in Manhattan and Brooklyn boroughs, the offenders being arraigned in the police courts. Some were held in $500 bail for examination, some in $50 bail, some were compelled to pay small fines, and others were discharged with a warning.

Dr. J. T. Burdick Assumes Charge of State Soldiers' Home Hospital.—Dr. James T. Burdick, of Brooklyn, on April 1st assumed charge of the hospital at the State Soldiers' Home, Bath, N. Y., as surgeon-in-chief. Dr. O. W. Smith, of Union Springs, who has held the place since September last, on retiring, entered a protest with the secretary of the board of trustees, alleging he had the right to withdraw his resignation before it had been acted upon by the board. Dr. Smith, about three months ago, resigned, and then sent a letter withdrawing the

resignation, but the board accepted it, and appointed Dr. Burdick.

Kansas College of Physicians and Surgeons.—The list of the graduating class at the seventh annual commencement of this college is as follows: C. D. Vermillion, D. A. Iliff, J. T. Peery, Dora E. Bowman, Henry Wilson Owen, J. Gertrude Ingraham, Arthur J. Lind, W. Hal McLeod, Andrew S. Pavlish, Leonard S. Wagar, William A. Swarts, Ralph L. Funk, William T. Todd, A. D. Updegraff, J. Candor McLaughlin, Joseph A. Beebe, J. Carroll Montgomery, J. H. Holliday, Fred H. Evans, M. A. Stockwell, J. Edward Attwood, E. C. Wickersham, G. M. Anderson, Oscar Francis Marcotte, T. Arthur Bayley, S. Carroll Whinery, J. S. Fulton, Earl Delaskia Tanquary, Mamie J. Tanquary, Bertha Eliza Wiggins, Anna M. Beveridge.

Death of the Christian Science Bill.—On April 3d, by a *viva voce* vote in the Assembly at Albany, it was decided to recommit the Bell measure, which has also become known as the anti-Christian Science bill, together with its various amendments, to the committee on public health. When Mr. Bell called up the bill he offered three amendments. The first of these permitted only licensed physicians to use or prescribe medicines or drugs; the second prohibited any but a licensed physician from treating contagious or infectious diseases, or performing operative surgery, and the third amendment recognized the practice of osteopathy under certain restrictions. When a vote was taken to recommit the bill it was carried by so large a majority that there was no call for a division. There is no prospect that the bill will be heard from again at this session.

Dr. Abraham Jacobi's Golden Anniversary.—Dr. Abraham Jacobi completed his fiftieth year as a physician on Thursday, April 4th. On April 4, 1851, he graduated from the medical department of the University of Bonn. His semi-centennial anniversary as a physician was observed on Friday, April 5th, at the Academy of Medicine, where he received and entertained his friends in the medical profession. An interesting feature of the reception was that it was given by Dr. Jacobi, and not by his friends. Dr. Jacobi entertained his friends by reading a paper on German Text-books Half a Century Ago; History and Reminiscences. On Saturday, May 5, 1900, the seventieth anniversary of the birth of Dr. Jacobi was celebrated at a dinner held at Delmonico's, which was attended by more than four hundred friends and professional associates.

A Court Held in a Hospital.—St. Catharine's Hospital, in Brooklyn, was temporarily turned into a police court on March 29th, when a man, forty-four years old, a patient, was examined on a charge of attempted suicide. Mr. Lemon, the magistrate of the Ewen Street Police Court, accompanied by his official stenographer, a clerk of the court, a police captain, two court officers, and the assistant district attorney, conducted the examination. They were joined by Dr. Daly, who took the party to the man's cot. Two nuns were at his bedside. He could scarcely speak, and when the complaint was read to him and he was asked if he had tried to end his life, he replied feebly that he was guilty, and muttered something about not knowing what he was doing at the time. When the magistrate dismissed the case, the action brought a faint "Thank you" from the patient, who had shot himself a month ago because his physician told him he had consumption. The court proceedings were held in the hospital to relieve the police from keeping a patrolman stationed there.

The Special Lectures at the New York School of Clinical Medicine.—The first of the series of special lectures at the New York School of Clinical Medicine was held at the school, No. 328 West Forty-second Street, on Friday, April 5th, when a clinical lecture was delivered on the Examination of the Male Urethra by the General Practitioner, with clinical demonstrations, by Dr. Ferdinand C. Valentine. On Friday evening, April 12th, Dr. Thomas D. Crothers will lecture on Medical Questions of the Responsibility of Alcoholics, Opium and other Drug Takers. The rest of the series are as follows: April 19th, Complicated Fractures: Diagnosis and Modern Treatment, by Dr. Thomas H. Manley; April 26th, Diagnosis and Surgical Treatment of Prolapsed Kidney: With Clinical Demonstrations, by Dr. Augustin H. Goelet; May 3d, Treatment of Strangulated Hernia, by Dr. Carl E. Pfister; May 10th, Pelvic Trilogy in the Diagnosis of Diseases of Women, by Dr. A. Ernest Gallant; May 17th, The Technics of Major and Minor Amputations, by Dr. Robert H. Cowan; May 24th, Treatment of Obesity, by Dr. Heinrich Stern; May 31st, Diseases of the Stomach: Practical Examinations and Treatment, with Demonstrations on Patients, by Dr. Freeman F. Ward; June 7th, Psoriasis and Acne, Effective and Practical Methods of Treatment; Clinical Demonstrations, by Dr. W. R. Inge Dalton.

The Rocky Mountain Industrial Sanatorium and its Plans.—The avowed object of an organization of Denver (Col.) physicians in establishing and maintaining the Rocky Mountain Industrial Sanatorium, which has just been incorporated there, is to save the lives of tuberculosis sufferers. The organization aims to be national in its scope, and has the indorsement and support, it is asserted, of many of the foremost physicians of the United States. Its purpose is to aid those tuberculosis patients in poor or moderate circumstances who come to Colorado and other mountain States in the hope that the climate and altitude will aid in effecting a cure, and who, almost invariably, either from lack of means or proper direction, are immediately surrounded by conditions which preclude improvement or recovery. Their plan provides for the erection of a sanatorium about twenty miles from Denver, to be conducted as an industrial colony. A large amount of money will be required. This, it is expected, can be raised by the "cottage endowment plan." To secure these endowments by individuals, fraternities, clubs, societies, churches, college alumnæ, labor unions, etc., the Young Woman's Sanatorium Auxiliary has been organized. A branch of this auxiliary will be established in every city and town in the United States.

The Standardization of X-ray Methods.—S. H. Monell, M. D., chairman on the committee on standards of the Röntgen Society, in order to standardize the methods of x-ray work, has invited experts to send to him their suggestions on something over a score of points. Included among these are: Standard x-ray examination table, adjustable for all parts of the body; standard method of posturing each part of the body for a standard picture; standard means of fixing parts immovably during a standard exposure; standard complete definition of what a "standard exposure" should be (of medicolegal value); standard landmarks to be pictured in the negative as in-

herent proof that a standard exposure was made (a medicolegal necessity); standard technique for picturing correct relation of bones and joints; standard technique for picturing contrast for diagnosis of soft parts; standard technique for picturing the different calculi, vesical, renal, and gall-stones; standard technique for x-ray eye work; standard technique for x-ray heart and lung diagnosis; a standard leaflet of brief directions which the physician who does not do his own developing can send with his plates to any fair photographer as a ready guide to proper treatment of an x-ray negative to secure the picture; and, standard technique for therapeutic administration of x-rays with proper precautions.

The Bubonic Plague.—Foreign reports show that the plague is pretty well scattered over the world. There were fifteen new cases and nine deaths in January in Rio de Janeiro. Because of its appearance in Cardiff, Wales, the Canary Islands have proclaimed quarantine against vessels from Wales. Deaths from the plague are reported from Hongkong, while at Cape Town it has been spreading quite rapidly; in Mauritius there were sixteen new cases and fifteen deaths for the week ending February 1st. There were reports of the plague at three different places in Australia. It prevails in parts of Russia, and in the British East Indies, in Argentina, in the Straits Settlements, and has until recently been more or less prevalent in Japan and in Turkey. In the Patna district in India, 5,007 persons have died of the plague in three months, while there has been almost as large mortality in adjoining districts. In Bombay city 1,645 have died in that time, and 1,835 in Belgaum district.

Small-pox.—There seems to be little abatement of the disease in New York city, several new cases being reported almost daily. The health board's plan to have a new hospital on North Brother Island was defeated on April 2d by the Board of Aldermen.——Several new cases are reported at Newark, N. J., various points in Wisconsin, at Cleveland, O.; New Castle, Del.; in Webster county, West Va., where the circuit court at Addison adjourned because of the prevalence of the disease, and at Harrisburg, Pa., where a number of employees of a steel company quit work rather than submit to vaccination.——The Grand Jury of Orange, N. J., have brought in indictments against the five men believed to be implicated in the burning down of the pest-house on March 10th.——Pupils in the Philadelphia public schools must submit to compulsory vaccination. That is the opinion of the supreme court, which, on April 1st, dismissed the appeal of Charles T. Field from common pleas court decision refusing to order Martha L. Robinson, the principal of the Keystone Grammar School, to admit Mr. Field's daughter, who had not been vaccinated. Quoting from a previous decision, the court said: "School directors, in the exercise of a sound discretion, may exclude from the public schools pupils who have not been vaccinated." The school directors are the judges of the wisdom of the plan.——According to the monthly publication of the Marine-Hospital Service in the Treasury Department, small-pox still continues to be prevalent in many parts of the United States. Of the cases reported for the three months ending March 29th, there were 1,190 in Colorado, 2,251 in Kansas, 1,985 in Minnesota, 578 in Nebraska, 416 in New York State, 636 in Ohio, 690 in Oklahoma, 102 in Pennsylvania, 308 in Tennessee, 432 in Texas, 597 in Utah, 257 in Virginia, and a smaller number of cases in each of a number of other States.

The Baltimore County Medical Association.—The monthly meeting of the Baltimore County Medical Association was held on March 21st. Dr. H. Burton Stevenson presided. Interesting papers were read by Dr. R. Percy Smith, Dr. L. M. Allen, and Dr. J. W. Harrison.

The Associated Physicians of Long Island have accepted the invitation extended by Sag Harbor to hold their annual June session there, and a committee of citizens has been appointed to take the matter of entertainment in charge. About one hundred physicians are expected.

The Medical Association of the Greater City of New York.—At a stated meeting of this association to be held at the Academy of Medicine on April 8th, a paper will be read on Food as a Factor in the Causation of Disease, by Dr. Elmer Lee, to be discussed by Dr. R. E. Van Gieson, Dr. H. S. Stark, Dr. Edward Quintard, and Dr. C. N. B. Camac. Dr. Henry W. Borg will present a paper on Gliosarcoma of the Base of the Brain, Pressing upon and in Front of the Left Lobe of the Cerebellum, and Dr. Howard Lillienthal will make some remarks on the surgical aspects of the case.

The New York Academy of Medicine.—The section on surgery of the New York Academy of Medicine will meet on Monday evening, April 8th. The order of business will be: Presentation of patients: Case of cancer of the rectum, removed five years ago, with no recurrence, by Dr. J. F. Erdmann; a case of cancer of penis, with removal of glands by Lennander's method, by Dr. V. C. Pedersen; and a paper on Cancer of the Rectum, with Demonstration of New Methods of Examination, by Dr. J. P. Tuttle. The section on otology will meet on Wednesday, April 10th. The order of business is as follows: Exhibition of specimens and new instruments; presentation of specimen of tuberculosis of the ear, with history of a case, by Dr. H. L. Swain; Tinnitus Aurium; Some Remarks on its Causes and Treatment, by Dr. Thomas J. Harris; Tympanic Vertigo, Due to Obstruction in the Eustachian Tube, by Dr. William P. Brandegee.

Births, Marriages, and Deaths.

Married.

ELEY—FORREST.—In Crittenden, Virginia, on Thursday, March 28th, Dr. L. L. Eley and Miss Edith Forrest.

MURRAY—WOODS.—In Fair Oaks, Pennsylvania, on Monday, March 25th, Dr. Charles S. Murray and Miss Sarah Woods.

WISEMAN—STARCK.—In Hermann, Missouri, on Sunday, March 24th, Dr. F. W. Wiseman, of St. Louis, and Miss Ella Starck.

Died.

BALDWIN.—In Dover, N. J., on Monday, March 25th, Dr. Edwin C. Baldwin, formerly of Baltimore, in the eighty-seventh year of his age.

EVELYN.—In Cleveland, on Sunday, March 24th, Dr. Robert S. Evelyn.

LIGHTHILL.—In Newark, N. J., on Tuesday, March 26th, Dr. Edward B. Lighthill, in the seventieth year of his age.

LUCKETT.—In Washington, on Saturday, March 30th, Dr. William Fleet Luckett, in the sixty-third year of his age.

MAUGHS.—In St. Louis, on Saturday, March 23d, Dr. G. M. Maughs, in the eightieth year of his age.

NELAN.—In Pittsburgh, on Thursday, March 28th, Dr. James R. Nelan, in the fiftieth year of his age.

Pith of Current Literature.

Medical Record, March 30, 1901.

Some Fallacies of Therapeutics. By Dr. George L. Peabody.—The fallacy in the use of bitter substances as appetizers is one of the author's instances. Strychnine salts—if they have any effect in the way of sharpening the appetite after they reach the stomach—are efficacious only by virtue of a possible local irritant action. The author explains the action of these salts as being due to the sense of taste, or to the stimulation of the saliva, which, in turn, stimulates the secretion of the gastric juice, and this increased flow of gastric juice announces its readiness for work by calling for food to work upon. If this is the explanation, it discredits the use of similar agents in any other form than one which will stimulate the sense of taste, hence the uselessness of all methods of administering them in pills or capsules. The author refers to the popular ignorance of the fact that the phenomena of intoxication are in themselves incidents of little pathological moment; what the heart, arteries, and tissues generally object to is the damaging effect of the alcohol upon them, whether their owner gets drunk or not. In regard to tannic acid, the author demonstrates that there is no warrant for the belief that after its absorption it can produce styptic or hæmostatic effects upon remote organs; we can no longer hope to check bleeding from kidneys or uterus by giving tannin *per os.* The futility of giving ergot to arrest pulmonary hæmorrhage is commented upon, and the therapeutic uselessness of lithium carbonate and acetate is pointed out. The author regrets the present-day fallacies relating to gaseous or aërial disinfection; and he asserts, as his concluding instance, that the inhalation of oxygen is often practised upon very absurd premises. The sphere of usefulness of oxygen inhalation under normal atmospheric pressure is very limited.

Ionization in its Physiological and Pathological Relations. By Martin H. Fischer.—The theory of ionization offers a new field for investigation in the realm of medicine. Its application to the problems of physics and chemistry has elucidated many obscure points, and, in the solution of the problems of medicine, the author believes, it will yield yet greater results. In this article the author adduces some of the evidence to show that in dealing with the action of dilute solutions of inorganic substances we are dealing with the action of their constituent ions. This fact, he says, is ever to be borne in mind when we consider physiological, pathological, and pharmacological problems involving the presence of inorganic substances.

Creosote in Pneumonia: A Résumé. By Dr. I. L. Van Zandt.—The author has given creosote in pneumonia—one drop every three hours—with very good results, and he is somewhat disappointed if his case is not ready for dismissal by the third or fourth day. In cases that persist longer, there is generally an amelioration of symptoms and the coming of an appetite. There is generally a gradual decline in the fever, with only slight moisture of the skin, a critical sweat being rare. Of sixteen patients treated, four were dismissed on the second, five on the third, one each on the fourth, fifth, sixth, seventh, and eighth, and two on the tenth days. Several other writers quoted give similarly encouraging reports.

Orchid Culture in its Relation to a New, Improved, and Completely Effective Method of Disinfection. By Dr. J. M. W. Kitchen.—The author has found that, in the application of destructive vapors to disinfecting greenhouses, the greater the number of points of generation the greater the success, and he suggests that the same principle be applied to house disinfection, using several generators in a room, in corners, closets, and under beds.

Medical News, March 30, 1901.

Report of the Committee of the Medical Board of Bellevue Hospital, Appointed January 2, 1901, to Investigate and Report upon Questions Relating to the General Administration of the Hospital.—The inefficiency of the paid employees is pointed out as one of the things which is apt to render permanent improvement difficult. Complaint is made of the poor accommodations furnished to the staff, doctors and employees alike, and corrective changes are suggested. An increase in the *per capita* allowance is asked for. The illustrative statistics add special emphasis to the recommendations set forth.

Vaccination, Clinically Considered. By Dr. Frank S. Fielder.—In an extended article this subject is considered. The points particularly emphasized are: 1. Complete natural immunity to vaccination is practically unknown, and, in primary cases, delayed vesiculation, raspberry excrescence, and abortive course, mean poor virus. 2. Generalized vaccinia, aside from cases in which the eruption is spread by self-intoxication, is very rare. Cases of doubtful diagnosis may be tested by the inoculation of lymph from one of the vesicles into another subject. 3. Immunity is acquired about the time the areola is at its height—eight to ten days after vaccination. If small-pox appears at this time it will be mild. If the eruption appears before the disease has reached the areolar stage, the disease will not be much modified by the vaccination. 4. Vaccination of the pregnant woman does not protect her child. The fœtus may have small-pox *in utero.* A child born while the mother has small-pox is not protected, and will probably develop the disease before there is time to secure immunity by vaccination. 5. The duration of immunity to small-pox is probably five years, while the duration of immunity to revaccination is, according to the author, probably two years, or under. A person who is immune to small-pox can often be successfully revaccinated. Revaccination is as important as primary vaccination. 6. All vaccine virus should be subjected to rigid physiological tests before issuance, and should be retested monthly so long as it is on sale. 7. Vaccination should be performed under aseptic precautions, and the virus must be thoroughly rubbed, scratched, or pricked in. Vaccination shields do more harm than good. 8. Cases of infected vaccination should be cared for by the physician—not by the mother. 9. The destruction of the vesicle does not impair the protective power of vaccination, and if signs of mixed infection appear, the vesicle should be opened and the wound cleaned and treated upon general surgical principles.

The Method of Preparation of Vaccine Virus in the Vaccine Laboratory of the New York City Health Department. By Dr. J. H. Huddleston.—The calves are chosen for their health and the good quality of their skin. After vaccination they are killed, and if disease is found at autopsy, the virus obtained from them is rejected. The posterior abdomen and the inside of the thighs of female calves are the surfaces chosen for inoculation, and aseptic precautions are taken in an

operating room with modern equipments. On the sixth day after vaccination the virus is collected, weighed, and emulsified by passing it through a mill on which a mixture of sixty-six per cent. of glycerin and thirty-three per cent. of water flows. The proportion of virus to glycerin and water is usually one to three. Fresh virus always contains a large number of saphrophytes, but the majority die in a few weeks; those that remain are non-pathogenic. The virus is tested before its issuance on five unvaccinated children, and, after issue, retests are made at more or less regular intervals.

Boston Medical and Surgical Journal, March 28, 1901.

The Embryological Basis of Pathology. By Charles Sedgwick Minot, LL. D.—In his discussion of pathological differentiation, the author concludes that: (1) The process in its essential features is identical with the process of normal differentiation; (2) the character of a tumor depends primarily upon the layership of the cells producing it; (3) normal differentiation impedes and limits the formation of tumors, precisely as it does of further normal structures, so that tumors arise most readily from undifferentiated tissues and may then be heteroplastic; arise less readily from differentiated tissues and are then always homoplastic; and arise unreadily, or not at all, from the most highly specialized tissues. Substituting the term "differentiated tissue" for "tumor," each of these three conclusions might be advanced as a law of normal development. To the physician, physiological morphology promises to surpass greatly in practical importance even the bacteriology of our time, and the author believes that when we understand the physiological factors which bring about structure, we can acquire control over cellular differentiation, and shall ultimately be able to prevent some of the most formidable diseases over which now we have little control. The diseases more particularly referred to, the author designates as morphogenetic—due to errors of morphological differentiation.

A New Method of Treating Fractures. By Dr. Leonard F. Hatch.—The author's principle is to convert all compound fractures into simple ones. In the case of simple fractures he makes them compound and then makes them simple. He asserts that we should not be deterred from operating on fractures by fear of sepsis, and that it is unscientific to adopt a blind way when a better presents. Operative intervention would be warranted if it did nothing more than to relieve the pain and swelling, which it certainly does. It shortens the process of repair at least one week, and it reduces the chances of deformity and non-union to a minimum. Fifteen illustrative cases are appended. The results are encouraging and, in several cases of fractured patellæ, the advantages of the operative method are clearly demonstrated. The author also writes in favor of the ambulatory splint for fractures of the leg.

Mumps in Pneumonia; Boroglyceride. By Dr. Charles W. Dulles.

A Brief Summary of Nine Cases of Lobar Pneumonia Treated by Ice Pack. by Dr. George L. Collins.—In these cases contemporary signs of bronchitis were not considered to contraindicate the use of the ice pack. High temperature was the indication in each case. Lowered temperature was the indication for removal. The number of white corpuscles invariably began to fall with the temperature, but reached normal in no less than one week after the temperature was normal. The ice pack had no apparent effect in either shortening or prolonging the duration of the physical signs.

Journal of the American Medical Association, March 30, 1901.

Recent Advances in Dermatology which are of Service to the General Practitioner. By Dr. L. Duncan Bulkley.—Referring to phototherapy and the x-rays, the author states that it is perhaps too soon to form a correct opinion of the real value of this method of treatment. He recalls the enthusiastic reports attending the earlier use of Koch's tuberculin in lupus, and he believes that there is reason to fear that the hopes held out by the Finsen phototherapy may also prove illusory.

Hyperacidity a Cause of Skin Diseases. By Dr. W. R. Inge Dalton.—The author is inclined to think that the bond which connects the diatheses of the dermatoses with gout, rheumatism, diabetes, arthritis, and asthma is generated by indiscretion of diet; that the chyme passing in a hyperacid condition from the stomach through the pylorus into the second stomach entails such increased labor upon the duodenum that its contents cannot be rendered sufficiently alkaline for physiologic metabolism. This acid dyscrasia he believes to be the *fons et origo* of the pathologic lesions, which lead certainly to nearly all diseases of the skin, save the contagious exanthemata.

Acute Suppurative Folliculitis of the Scalp. By Dr. William S. Gottheil.

Operations for Injuries to the Median and Ulnar Nerves. By Dr. R. Brindley Eads.—In these cases, provision of ample operating space is the first requisite to success. Suppuration may be prevented by cleanliness, hæmostasis, and avoidance of chemical irritants and drainage tubes. Chromicized catgut and fine silk furnish the best suture material. Tension may be overcome by position, and loss of substance by nerve stretching and bridging by the flat method. Immediate suture of clean nerve ends accurately approximated is conducive to early functional restoration. Relaxation by position, rest, and protection by suitable splints, are conducive to successful union. Asepsis in primary, and antisepsis and asepsis in secondary, nerve suture should be the practice of to-day.

Pathological Conditions Found in Meat Inspection. By D. E. Salmon, D. V. M.—A brief review of the meat inspection service illustrating the importance of having experienced and educated men on guard, to withdraw affected carcases from the meat supply of the country.

The Treatment of Prolapse of the Rectum. By Dr. Joseph M. Mathews.—The author concludes that: (1) In all cases of prolapse of the rectum of the second or third degree, colopexia is to be preferred to all other procedures; (2) it is the least dangerous of any surgical procedure advised for prolapse; (3) the uninterrupted suture should be used in preference to the interrupted, especially in cases where the mass is large or the walls of the gut much thickened.

Sanitary Conditions of Peking. By Dr. John Inglis.—The conditions are those of unspeakable filth, and the author believes that one of the conditions that ought to be required of China before admitting her to the society of enlightened nations, is that she should make her capital less dangerous as a place of residence by ridding it of the unsanitary conditions that give rise to the enormous prevalence of those diseases that are

the product of filth. Sanitary science applied to Peking would make it as healthy a city as New York or Chicago.

Thyreoid Tissue in the Larynx and Trachea. By Dr. Otto T. Freer.

Open Treatment of Suppuration of the Knee Joint. By Dr. W. J. Mayo.

Quantitative Tests for Proteolysis. By Dr. A. L. Benedict.

The Rage for Rapid Operating and the Importance of Saving Time in Surgical Operations. By Dr. John S. Miller.—The author points out that, in a complicated abdominal case, the anæsthesia and the exposure and manipulation of the peritoneal cavity for from half an hour to three hours, with a physically bankrupt patient, is a very important factor in the prognosis. Time, therefore, is as important an element to success as asepsis or correct methods in operating.

Venereal Disease as a Social Problem. By Dr. W. C. Gates.

Circumcision in Restricting the Spread of Syphilis. By Dr. Harold N. Moyer.

Report of the Special Committee of the Section of State Medicine of the American Medical Association, Appointed to Inquire Whether and When the Gonorrhœic may be Permitted to Marry, and Whether the Matter is a Proper One for Regulation by Statute.

Purulent Otitis—Its Treatment and Prevention by the Family Physician. By Dr. H. Gradle.

Primary Union in a Gunshot Wound. Report of a Case. By Dr. Albert Soiland.

Case of Typhoid in an Infant. By Dr. Minnie C. T. Love.

Philadelphia Medical Journal, March 30, 1901.

Atmocausis: Its Value in the Treatment of Severe and Uncontrollable Uterine Bleedings (Uterine Arteriosclerosis). By Dr. Samuel W. Bandler.—While the value of atmocausis in other conditions is still a question of personal experience, the author asserts that there is no doubt that uterine bleedings, especially the bleedings of the climacterium, and the uncontrollable hæmorrhages occurring at this period and in earlier years, are positive indications for its use, especially when curettage and other local methods are of no avail. As the author's experience and the investigations of others seem to demonstrate that the greater proportion of such cases is due to local degenerative changes, he concludes that atmocausis, if not a specific, is at least the best method of treatment for uterine arteriosclerosis.

The Coexistence of Carcinoma and Fibroma in the Corpus Uteri. By Dr. W. A. Newman Dorland.—This coexistence may manifest itself in one of three distinct ways, given in their order of frequency as follows: 1. Fibromyoma of the corpus uteri with carcinoma of the cervix. 2. Fibromyoma of the corpus uteri, with associated adenocarcinoma of the endometrium. 3. True cancerous degeneration of an adenomyoma, the malignant changes originating in glandular vestiges included in the uterine growth, or the carcinomatous disease invading the benign growth by extension from an endometrial adenocarcinoma through contiguity of tissue. The author's case belonged to the third class.

Shock in Abdominal Operations. By Dr. Fenton B. Turck.—The author emphasizes two things. One is the decreased resistance against infection when shock is present. The second is the increased resistance against infection, produced by the internal application of heat while preventing shock, or reducing shock when present. Especially is this most marked when the heat is applied within the colon, stomach, or the abdominal cavity, the latter two locations being the most effectual.

A Practical Modification of the Phenylhydrazine Test for Glycosuria. By Dr. Robert N. Wilson.

How to Prevent Stammering. By Dr. G. Hudson Makuen.—Few, if any, children stammer from the outset. Though a tendency to stammer is inherited in many cases, in all cases stammering is an acquired defect, and a child stutters because he has not yet learned to combine the art of ideation with that of oral expression. As the trouble arises from faulty mental action, the first indication is to direct the mental process into normal channels. The author asserts that careful direction and management at the very inception of the trouble will almost surely prevent the formation of the habit.

Bell's Palsy Associated with Complete Anæsthesia in the Territory of the Fifth Nerve. By Dr. James Hendrie Lloyd.

Lancet, March 23, 1901.

Public Health and Housing: The Influence of the Dwelling upon Health in Relation to the Changing Style of Habitation. By Dr. J. F. J. Sykes.—The third of the Milroy lectures upon this subject. After discussing the influence upon the public health of the various domestic conveniences (water closets, sinks, etc.), of the usage and misusage of dwellings, and of pressure of population and overcrowding, the author briefly summarizes the question of the healthy housing of the people as follows: The relief of the pressure of population will ultimately be brought about by the improvement of the means of transport between the suburbs and urban centres; the building of additional houses in the suburbs; the attraction to the suburbs of the better classes and those able to live at a distance; and the slow but ultimate relief of the pressure in the middle zone by the movement and circulation of the population and the gradual vacating of houses occupied by single families and subletting in separate dwellings. The remedy for the dilapidation and deterioration of dwelling houses will be brought about by the reconstruction of the worst areas and houses into healthy flats; the adaptation of the best streets and houses of an unhealthy "floor" type to a modern "flat" form of construction to suit the altered mode of usage; and the supplementing of sanitary laws and bylaws with the dwelling as the basic unit.

Diseases and Disorders of the Heart and Arteries in Middle and Advanced Life. By Dr. J. M. Bruce.—The second of the Lettsomian lectures upon this subject. In this article the author describes the clinical characters and course of the affections of the heart and arteries in connection with various influences, such as tobacco, alcohol, gout, obesity and glycosuria, cardiac strain, syphilis, and nervous strain.

Blackwater Fever. By Dr. J. W. W. Stevens.—The author concludes that blackwater fever is essentially a malarial infection in which quinine is the most common immediate determining cause of intoxication. Bearing in mind that the absence of parasites does not necessarily exclude malaria, there is actual evidence of the existence of a malarial infection in blackwater fever, brought from the following five points of view: (1) existence of parasites during the attack; (2) pigment and uninuclear percentage increase; (3) parasites before the

attack; (4) parasites after the attack; and (5) post-mortem evidence.

Protection from malaria will ensure protection from blackwater fever. Complete protection from malaria may be attained without the taking of any quinine, by paying scrupulous attention to clothing and the use of the mosquito net. It is only exceptionally that the action of quinine can be excluded in cases of blackwater fever; in such cases it is suggested that isolation may be responsible for the attack. In all the author's cases quinine had been given, and the interval between its administration and the onset of hæmoglobinuria was very constant —*i. e.,* from four to ten hours.

Three Cases of Acute Diffuse Septic Peritonitis Resulting from Appendicitis; Operation; Recovery. By W. G. Richardson, M. B.—The three cases here reported are strikingly similar and are typical of the "fulminating" form of acute appendicular inflammation which is the most fatal of all varieties. In the initial stages they were not distinguishable from ordinary cases of appendicular inflammation in which recovery could take place either by resolution of the inflammatory process or by limitation of the disease to the formation of an abscess; yet in the more advanced stage, and without warning, the life of each patient was placed in immediate danger and death could only be averted by immediate operation, performed with the minimum amount of preparation that could be desired. In each of these cases there was a premonitory stage, lasting for a few hours, during which the patient felt unwell and uneasy in the abdomen. This was followed by the sudden development of acute symptoms, which subsided somewhat after several hours of severe pain. This lull was followed in about twenty-four hours from the initial acute attack by strikingly violent and sudden increase of all symptoms, and in seven or eight hours the abdomen was found to be full of pus. In each case the appendix was seen at the operation to be acutely inflamed, without any surrounding adhesions, and to have a gangrenous perforation through its walls. In all the three cases here reported the abdomen was simply mopped out with gauze, and gauze wrung out in normal saline solution was used as a drain, instead of a drainage tube. The gauze was easily and painlessly removed on the fifth day, and all the patients made good recoveries. The author makes it a rule to remove the appendix in all very acute cases of appendicular inflammation which at the end of twenty-four hours do not improve in *all* the symptoms. He believes that by so doing a large number of lives have been saved.

Resection of the Superior Cervical Ganglion of the Sympathetic for Glaucoma and its Results. By H. W. Dodd, F. R. C. S.—The author reports a case of glaucoma, occurring in a woman aged forty-four years, in which the removal of the superior cervical ganglion on each side was immediately followed by a marked reduction to normal of the tension of the eyeballs. The patient's eyeballs remained soft for about two months, when symptoms of glaucoma reappeared, and a month later the eyes had returned to the same state as they were in before the operation was performed. Therefore, although in this case the immediate effects were extremely favorable for a few days, the permanent result of the operation for the cure of the glaucoma was *nil.* The central origin of chronic glaucoma may be a fact, but if it is so, the removal of the superior cervical ganglion apparently does not interrupt the connection with the eye. Either the connection is not by this route or some other means of communication is established very soon after the resection of the ganglion.

The Elimination of Arsenic through the Hair and its Relation to Arsenical Poisoning. By E. Knecht, Ph. D., and W. F. Dearden, M. R. C. S.—Samples of hair taken from six people (males) were submitted to analysis. Two samples were from well-marked cases of arsenical beer poisoning, another from a patient who had been taking one ninth of a grain of arsenic a day for a long time, and three from healthy individuals. In the first three, arsenic was found to be present in the proportions of from 0.3 to 1. in 10,000. Arsenic was also found in the hair of the healthy individuals, but in the most minute quantities. The estimation of arsenic in the hair may prove to be of immense value in medico-legal cases, especially in the case of exhumed bodies, as the hair is one of the last parts of the body to decompose. The method employed was Sanger's modification of the Marsh test.

A Short Account of a Fatal Case of Laryngeal Diphtheria Complicating Measles. By G. J. Maguire, M. B. —The author reports the case of an infant, aged eighteen months, suffering from measles, who suddenly developed laryngeal stenosis leading to suffocation. Tracheotomy was performed, but to no purpose. No membrane could be seen. At the autopsy, however, the larynx was found to be almost occluded by a thick, diphtheritic membrane, cultures from which showed the presence of the diphtheria bacillus. Had there been no post-mortem examination in this case it would have escaped recognition and a focus of infection would not have been notified to the local health authorities.

British Medical Journal, March 16, 1901.

The Causation of Cancerous and other New Growths. By Dr. J. G. Adami.—In this article the author discusses the various theories as to the causation of new growths and their classification, and advances a theory of his own. The main arguments in favor of the parasitic origin and infectious nature of malignant growths are as follows: 1. The increase in frequency in malignant tumors in civilized communities during the last eighty years is out of proportion to the possible action of any factor, save the gradual spread of some infective agent. 2. The incidence of the disease is frequently found to be localized to certain villages, and even to certain houses. 3. The lesions produced by the growth of malignant tumors within the organism are comparable with those induced by certain known infective agencies, and a close analogy can be drawn between the tubercle and the dissemination of tuberculosis, and the primary cancer nodule and the metastatic cancers or sarcomatous growths. 4. In a large proportion of cases certain intracellular and extracellular bodies are to be recognized, which are most numerous in the young growing edge of the tumors. 5. In rare cases the experimental inoculation of fresh cancer material from one individual to another has succeeded.

Although there are objections to each of these arguments, yet the author favors the parasitic theory. The strongest objection to the old cell "rest" theory is that, while the misplaced cells may be a predisposing cause of tumor formation, they cannot be the primary cause. Some change in the surrounding conditions is demanded. But, whatever the origin of the tumor proper, however it is started, whether by a parasite or from a cell "rest," what makes the tumor is the assumption by the primary cells of that tumor of the habit of growth in place of the habit of work, and, according to the extent of this replacement, so do we get the various grades of

tumor formation from the most benign to the most malignant. The author carefully sums up the various points brought forward, one after the other, in arriving at this conclusion. According to this theory, microbes and their products may be one of the causes originating localized cell proliferation in the first place, provided that (1) they bring about stimulation rather than irritation, or irritation of so mild a type that the cells are stimulated to increased metabolism which does not go on to degeneration; and (2) provided that the microbes and their products continue in action for a sufficiently long time to set up the habit of growth. According to the stage of cell development in which this habit becomes impressed upon the cell, so do we have the various grades of benign and malignant tumor formation. But this continuance and persistence of microbic action must not be regarded as essential. If microbes do originate malignant tumors, they do not continue in the living state. Once the habit of growth is acquired, the presence of the microbe is no longer needed. According to the author, the line of research which promises the surest results in the future lies in the direction of testing various methods of arresting the growth of the tumor cells without injury to the organism in general, a work such as has been so ably initiated by Coley in this country.

On the Occurrence of Pyrexia in Cancer and other Diseases of the Liver, and in Cases of Gall-stone. By Dr. C. O. Hawthorne.—The author discusses the occurrence of fever in cancer of the liver, and calls attention to the fact that pyrexia does not necessarily mean the presence of any complication. There are cases of cancer with accompanying pyrexia in which no complication can be discovered after death, and, on the other hand, it is common to find in the neighborhood of a cancerous liver inflammatory changes of the existence of which during life there was entire absence of specific evidence. The pyrexia may be distinctly intermittent and preceded by a sharp rigor, suggesting the "intermittent hepatic fever" of Charcot; it should be remembered that Charcot does not confine the occurrence of this intermittent fever to cases of gall-stone. A combination of jaundice, intermittent fever, and hepatic enlargement demands very careful consideration before deciding on gall-stone on the one hand, or malignant disease on the other. Pyrexia also occurs in abscess or hydatid cyst of the liver, and has been noted in cases of cirrhosis of that organ, even when of the atrophic or multilobular type.

Digestion Leucocytosis in Cancer of the Stomach. By Dr. C. Douglas.—The author has studied the occurrence of digestion leucocytosis in cancer of the stomach. It has been stated by several observers that the normal increase in the number of the leucocytes during the digestion of a meal does not occur in cancer of the stomach. The author found that in eleven cases of cancer of the stomach digestion leucocytosis was absent in only six (54.5 per cent.), while it was well marked in four (36.3 per cent.), and inconstant in one (9.1 per cent.). He concludes that digestion leucocytosis essentially depends on the digestive and absorptive powers of the stomach, and that it may or may not occur in cancer of the organ, according to the degree of impairment of its functions.

The Palliative Treatment of Carcinoma Uteri. By G. R. Leighton, M. B.—The author reports a case of inoperable cancer of the uterus, in which large doses of opium were given for the purpose of prolonging life and relieving pain. The tincture of opium was used, and the patient gradually worked up to eight ounces, or 264 grains of opium, a day; on some days twelve ounces, or nearly 400 grains of opium, were taken. The patient's condition was improved in every way, and her life was prolonged at least two years. Throughout the whole of the last two years there was no difficulty with the bowels, no head symptoms, and a plain milk diet was well taken.

The Application of Romanowsky's Stain in Malaria. By W. B. Leishman, M. B.—The effects produced by Romanowsky's staining are due to a red dye which is extracted from alkaline solutions of certain kinds of methylene-blue, when to such a solution is added a small quantity of a very weak watery solution of eosin. Its great value as a differential stain for the malarial parasite lies in its intense affinity for nuclear chromatin. Two solutions are necessary. *A.* A one-per-cent. solution of "medicinal" methylene-blue in distilled water, rendered alkaline by the addition of 0.5 per cent. of sodium carbonate. This should stand in a warm room for some days before using. *B.* A 1:1,000 solution in distilled water of "Eosin extra B. A." These stock solutions will keep indefinitely. For use, each solution must be further diluted with distilled water in a proportion of one to twenty-five, and an equal volume of each diluted solution is poured on the coverglass specimen of blood in such a way that they come in contact with the film at the moment of mixing. The specimen is left in the stain for from half an hour to an hour; it is then decolorized in absolute alcohol for two seconds, washed in water, dried, and mounted. Or, instead of using alcohol, the specimens may be decolorized by leaving them in running water for some time. The red corpuscles will be found to be colorless, while the nuclei of the leucocytes and the blood plates will be stained a ruby-red. Should malarial parasites be present, they will be readily recognized; their bodies are stained blue, their nuclei ruby-red. The ring forms can be recognized with the greatest ease. The stain has a specific action upon the red corpuscles infected by tertian parasites. Bright red dots or points appear throughout such an infected cell (Schüffuer's points). By the use of this stain, mixed infection with different varieties of malarial parasite is readily diagnosticated. The article is accompanied by a colored plate which shows clearly and beautifully the appearance of malarial parasites stained by Romanowsky's method.

The Influence of the Dwelling upon Health. By Dr. J. F. J. Sykes.—The third of the Milroy lectures upon this subject.

March 23, 1901.

The Diagnosis and Treatment of Intussusception. By C. P. B. Clubbe.—The onset of intussusception in children is nearly always sudden, being manifested by an attack of pain, followed by vomiting. A natural stool is usually passed soon after the first attack of pain. The attacks of pain become more frequent, and within a few hours some blood is passed by the bowel. The pulse rate and temperature are usually normal. Examination of the abdomen discloses the presence of a sausage-shaped tumor, in the line of the colon. Should the abdomen be too resistant for a satisfactory examination, chloroform should always be given. In some cases the intussusception may protrude through the anus, and be mistaken for a prolapsed rectum. Intussusception may occur during an attack of diarrhœa and a diagnosis of dysentery be made, based on the presence of blood and slime in the movements. The author believes injections to be a useful and safe mode of treatment: in eight per cent. of his

cases, they have brought about a cure. The injections may be given by means of an ordinary enema syringe or an irrigator, and may consist of warm oil and water. An anæsthetic should be given, the buttocks raised, and from ten ounces to one pint of fluid injected. Should the tumor have disappeared, a minute dose of morphine should be given, and the child put to bed. If there is no return of the symptoms in forty-eight hours, the case may be considered cured. If there is any return of the tumor within that time, proceed at once to the operation. When the tumor is small and in the line of the ascending colon, incise to the right of the rectus muscle. In other cases the incision should be in the middle line. Deliver the tumor through the incision, and, by squeezing from below, force out the intussuscipiens. Do not attempt to pull out the entering bowel. Where reduction is impossible, the gut must be resected. After the intestines have been returned, close the bowel with through-and-through silkworm-gut sutures. These should never be removed before the tenth day.

Autoreduction of Hernia "En Masse" as a Cause of Abdominal Obstruction. By W. J. Walsham, F. R. C. S. —In this communication the author calls attention to a cause of abdominal obstruction which has hitherto received little consideration—*i. e.,* where the patient has reduced the hernia himself *en masse,* and has then come under notice as suffering from obstruction. During the past few years the author has met with seven such cases, three of which are reported in this article. An early diagnosis is of the greatest importance. Given an accurate diagnosis and early surgical intervention before the integrity of the intestinal wall has been seriously affected, the strangulated gut can be at once cut down upon, the operation can be quickly completed with very little disturbance of the abdominal contents, and with almost a certainty of success, whereas the reverse would probably be the case if the diagnosis was only made during a prolonged exploration attended by free manipulation of the intestines and consequent general implication of the peritoneal cavity.

Some Practical Points in the Diagnosis and Operative Treatment of Perforated Gastric Ulcer. By R. C. B. Maunsell, M. B.—The points in reference to diagnosis to which the author draws attention are: 1. The pain, which begins in the epigastrium, spreads, but does not shift its position. 2. There is no pain on micturition, which is a frequent sign in peritonitis of the lower abdomen. 3. Thirst is not intense, and there is no tossing about, as in hæmorrhage. 4. There may be no distention in muscular subjects, the tympanites and free gas being only shown by the encroachment on the thoracic area. 5. The pulse cannot be relied upon in forming an early diagnosis. 6. The statement sometimes made that a "stomach note" excludes perforation is unwarrantable, as a perforated and a collapsed stomach are by no means synonymous terms. 7. Liver dullness is diminished or absent in almost every case. The best time for an operation is as soon after the diagnosis as it can be methodically undertaken. It is never too late to operate unless the patient is moribund. The important part of the operation is the cleansing of the peritoneal cavity. The author douches first, and then carefully wipes out the pelvis, superior surface of the liver, and inferior surface of the diaphragm with large gauze pads held in the hand. Through-and-through fishing-gut sutures should be used to close the abdomen, as they exert no capillary action between the non-aseptic peritoneal cavity and the wound.

A Case of Hour-glass Stomach: Non-malignant; Gastro-enterostomy. By C. P. Childe, F. R. C. S.—The author reports the case of a woman, aged fifty-one years, upon whom he performed a gastro-enterostomy, thinking the case to be one of malignant disease of the pylorus. The patient sank steadily after the operation and died on the fifth day. At the autopsy, the case was found to be one of hour-glass stomach, due to cicatricial contraction of an ulcer of the stomach situated near the pylorus. At the operation the jejunum was stitched to the second or distal compartment, thus failing to benefit the condition of things in the slightest.

Ulcer of the Stomach; Acute Hæmatemesis; Gastrotomy; Arrest of Hæmorrhage at the Bleeding Spot; Venous Thrombosis in both Legs; Recovery. By H. B. Angus, M. B.—The author reports the case of a woman, aged nineteen years, the salient points of which are covered in the title of the article. There are two classes of such cases which demand surgical aid: (1) When hæmatemesis is often repeated until it is threatening life; (2) copious recurrent arterial hæmorrhage. The venous thrombosis in the saphenous veins of both limbs was not considered to be of septic origin, the constitutional disturbance being slight and there being no pus formation.

A Case of Gastric Fistula; Operation; Death. By C. F. M. Althorp, M. B.—The author reports a case in which he attempted to close a gastric fistula. The patient developed pneumonia and died on the sixth day. At the autopsy the wound in the stomach was found to be infected, and showed no attempt at healing.

Perforated Ulcer of the Stomach. By W. H. Horrocks, M. B.—The points of interest in the case here reported are: 1. The absence of any indication of gastric ulcer before perforation. Latent ulcers of the stomach are generally situated near the cardiac end, and close to the lesser curvature. 2. The absence of any apparent exciting cause for perforation. 3. The pain and tenderness correctly localized the position of the ulcer, and the marked tension of the abdominal wall at this part made the diagnosis more certain. 4. The repeated movements of the patient spread the extravasated material over the whole abdomen. 5. The cleansing power of the peritonæum over its lower zone was markedly shown.

A Case of Subphrenic Abscess; Operation; Recovery. By Dr. H. J. Campbell and Dr. T. J. Wood.

Four Cases in which the Murphy Button was Used. By G. P. Newbolt, F. R. C. S.—The author has used the Murphy button in four cases. In three of these the result was all that could be desired; in the fourth case (one of intussusception in a boy aged four years) the patient died within twelve hours of the operation. In each instance Lembert sutures were used over the button, relieving the tension of that part of the intestine.

A Case of Acute Intestinal Obstruction Due to a Papillomatous Ovarian Cyst and a Carcinoma of Small Intestine, Treated by Ovariotomy and Enterectomy; Recovery. By H. Savory, M. B., and W. G. Nash, F. R. C. S.

Case of Extreme Stenosis of the Small Intestine in an Infant. By Dr. E. W. H. Groves.—Chronic intestinal obstruction in an infant, apart from peritonitis or intussusception, is extremely rare, so that the case here reported is of great interest. The stenosed area of the ileum was three quarters of an inch long and admitted a probe with the greatest difficulty. The jejunum and part of the ileum were much dilated. The condition was almost certainly congenital. The child practically died of starvation.

Notes on the Anatomy and Surgery of Meckel's Diverticulum. By G. A. Clarkson, F. R. C. S.

Diseases and Disorders of the Heart and Arteries in Middle and Advanced Life. By Dr. J. M. Bruce.—The second of the Lettsomian lectures upon this subject.

Gazette hebdomadaire de médecine et de chirurgie, March 10, 1901.

Dementia of Puberty.—M. Paul Lerieux, in a review of the subject, says that the dementia of adolescence must be ascribed to cortical lesions which are due to some form of self-intoxication, probably of sexual origin. The author thinks that the thyreoid extract should be tried as a remedy. [The article is merely a *résumé* of authoritative writings on the subject.]

Clinical Study of Deciduoma Malignum.—M. G. Métoz, in his thesis, reviews the ætiology, pathogenesis, symptoms, and treatment. The examination of a patient who complains of hæmorrhages, he says, should exclude epithelioma of the cervix, submucous fibroids, and metritis, other diseases having been eliminated. A careful intra-uterine examination should follow, and a microscopic study of removed *débris* should be made. Curettage, followed by applications of zinc chloride, should first be done. If bleeding continues and new foci of disease can be demonstrated, hysterectomy should be performed without delay.

Wiener klinische Rundschau, March 10, 1901.

Unusual Case of Adrenal Tumor.—Dr. A. Schittenhelm reports the case of a man who died of a medullary carcinoma of both adrenal bodies. He presented no symptoms beyond a dull pain in the back, cachexia, and increasing weakness. None of the usual signs of adrenal disease were present. Five days before death, however, the patient was seized with violent cough with expectoration, severe diarrhœa, and high but irregular temperature. Numerous metastases were found in different organs.

Toxicity of Expired Air. By Dr. Emanuel Formanek. (*Continued article.*)

Pyloric Spasm in Infants. By Dr. A. Köppen. (*Continued article.*)

Centralblatt für Chirurgie, March 16 and 23, 1901.

Study of Röntgen Plates.—Dr. K. Ludloff recommends the use of an opera glass at a distance of from three to ten feet from the Röntgen plate. The picture upon it becomes intensely more distinct in all its details. Much will be seen which will escape ordinary vision.

Morphine Before Ether.—Dr. W. Reinhards uses one hundredth of a grain of atropine combined with one third of a grain of morphine, subcutaneously, one hour before the administration of ether. It aids in the narcosis, and the atropine is at the same time a cardiac and respiratory stimulant. No bad effects were observed and the secretion of mucus during anæsthesia has been decidedly diminished.

Benzine in Surgery.—Dr. Felix Franke uses benzine in preference to ether for the removal of fat or grease from the skin. It is cheaper, it does not cool the skin as disagreeably as ether does, and is never painful, even when applied over inflamed surfaces or in open wounds. The odor is occasionally disagreeable, but this is its only drawback.

Technics of Apply Splints. By Dr. Ferdinand Bähr.

Centralblatt für Gynäkologie, March 9 and 16, 1901.

Two Cases of Hæmatoma of the Abdominal Wall during Pregnancy.—Dr. W. Stœckel reports these cases, in which, without violence or injury of any kind, hæmatomata developed in the layers of the abdominal wall. In one case the right epigastric artery was the source of hæmorrhage; in the second, the anastomotic network between the superior and inferior epigastric arteries.

The Control of Sterilizing Apparatus. By Dr. Sticher.

Remarks on the Disinfection of the Hands. By Dr. P. Strassmann.

Riforma medica, February 14 and 15, 1901.

The Spectroscopic Appearances of Blood Charged with Carbonic Oxide and Allowed to Decompose. By Dr. Carlo Raimondi.—The spectroscopic appearances of blood charged with carbonic oxide and allowed to decompose are different from those observed in normal blood. Carbo-oxyhæmoglobin is very resistant. It may be identified when hæmoglobin and hæmatin are decomposed and show only traces of recognizable residue. The recognition of this fact is important, from a medicolegal point of view, in cases of suspected carbonic oxide poisoning. A future paper will be devoted to the consideration of the appearances of the blood in different stages of decomposition.

February 16, 18, and 19, 1901.

Concerning Secondary Meningitis following Lobar Pneumonia. By Dr. Giuseppe Pollaci.—The author has found four cases of meningitis in fifty-five autopsies on persons affected with lobar pneumonia in the years from 1880 to 1896. A study of these cases has enabled him to draw the following conclusions: A diagnosis of meningitis complicating lobar pneumonia cannot be made when only one or two of the symptoms that indicate an inflammatory involvement of the brain membranes are present; but if the case presents the symptom-complex of meningitis in its entirety, there is no doubt that a meningeal inflammation exists. We must remember that cerebral symptoms may be due to the toxines of pneumonia, and not to the meningitis.

Vratch, February 10, 1901 (February 22, New Style).

Concerning Diseases of the Cerebellum. By Dr. P. I. Schatiloff.—The clinical localization of lesions in the central nervous system is still very imperfectly worked out, in spite of recent advances. This is especially the case with diseases of the cerebellum, for very often the clinician must content himself with vague statements concerning the nature and location of the lesions, as the disease frequently runs its course without any symptoms of importance. The author, therefore, considers it wise to review the modern data of cerebellar physiology before reporting his case. (*To be continued.*)

On the Affections of the Upper Respiratory Passages in Rheumatism. By Dr. E. B. Blumenau.—Attention was called to the connection between affections of the throat and acute articular rheumatism as early as 1855 by Trousseau, and by Clark and Ogle. A commission appointed by the British Medical Association in 1885 found that an inflammation of the tonsils precedes acute articular rheumatism in almost twenty-five per cent. of all cases, and, since then, the publication of numerous cases of this kind leaves no doubt that there is a clinical

form of amygdalitis that deserves the designation "rheumatic sore throat." It is well known that the tonsils are an avenue of entry for a number of various bacterial poisons, as that of scarlatina, diphtheria, etc.; but as the bacterial cause, if any, of rheumatism is still unknown, the relation between rheumatism and amygdalitis is not quite clear. It is possible, however, that the germs of putrefaction and the diplococcus of Fraenkel which are found in the secretions of inflamed tonsils may have something to do both with the amygdalitis and the rheumatism. Yet one cannot say with certainty that the various inflammations of the joints that are described as rheumatism are really one affection, for even the fact that the salicylates do not prove efficient in every case of rheumatism shows that there must be various causes at the back of these joint affections. There is no doubt, however, as to the clinical and ætiological connection between certain cases of amygdalitis and acute articular rheumatism. The tonsils are presumably the place of entrance of the rheumatic poison. The author examined twenty patients with acute articular rheumatism on the first day of their entrance into the hospital, and found that a sore throat had been present in three of these before the onset of the joint pain. In addition, he reports three cases in which there had been amygdalitis, followed by rheumatism, one case of inflammation of the cricoarytenoid articulation due to rheumatism, and one case of inflammation of this joint due to influenza followed by typhoid fever.

On the Physiology and Pathology of the Interventricular Sæptum. Syphilis of the Interventricular Sæptum. By Dr. M. J. Breitman.—No text-book on physiology speaks of the function of the interventricular sæptum in the contraction of the heart, and it is impossible to remove a portion of the sæptum for experimental purposes. This experiment is performed for us in a very striking manner by syphilis. A gumma may develop in the sæptum, or cicatricial changes may occur in it, while the rest of the heart may remain perfectly normal. The altered sæptum ceases to functionate properly, and the activity of the heart undergoes certain changes which can only be referred to these lesions in the sæptum. The clinical symptoms of syphilitic sæptum are identical, whether there is a gumma or a cicatricial process, except that they are more marked because the area affected is greater. Alterations in the sæptum may not give rise to any symptoms, and may cause sudden death in apparent good health. The effect of these changes is always an interference with the contractions of both halves of the heart muscle, leading in fatal cases to failure of the heart's action. In cases in which such changes in the sæptum give rise to symptoms, there is a well-defined clinical picture. In very rare instances the whole heart muscle is interfered with as a result of changes in the sæptum, and this indicates that in some way the lesion has affected the nerves of the heart. Such cases are characterized by irregular pulse, brachycardia or tachycardia, præcordial anxiety, and attacks of syncope. As a general rule, changes in the sæptum affect the right ventricle before the left is influenced, because the former is the weaker of the two halves. In such cases dyspnœa is a prominent symptom. The symptoms of perforation of the sæptum are the same as those of patent foramen ovale, and therefore need not occupy us here. As regards the effect of syphilitic changes in the auricles, it is probable that they correspond to the results of changes in the ventricles, although they are less marked.

Hydrorrhœa Nasalis. By Dr. A. F. Eckert (*continued*).—The disease in question is quite rare, Bosworth having collected only eighteen cases in 1889, including two of his own. Since then, the clinical reports published bring the number of cases on record to forty-two. The symptomatology of these cases is not at all uniform, the only symptom that is present in all cases being the discharge of watery fluid from the nose. An entire series of these cases presents cerebral symptoms of a severe character, and the author's case, therefore, cannot be classed with these. In others, a fracture of the base of the skull was found at the autopsy. According to Freudenthal, the source of the serous fluid cannot be readily determined without a chemical analysis, and such an analysis showed in his case that the fluid was of cerebrospinal origin. In the author's case the chemical characters of the fluid did not correspond to those of cerebral fluid, for it did not contain any sugar. In Freudenthal's case the fluid was observed to escape between the nasal sæptum and the middle turbinal bone, just as in the author's case. There is no doubt that, in the cases recorded, the sources of the fluid were widely different, although in all the discharge escaped from the nose. The connection between cough and hydrorrhœa nasalis is not quite clear. The treatment consists in the use of cocaine, the application of the constant electric current, the local use of aristol, and the administration of strychnine and atropine, as well as attention to general health.

Letters to the Editor.

ELECTRICITY IN GOÎTRE.

241 Wellesley Street, Toronto, *March 5, 1901.*

To the Editor of the New York Medical Journal:

Sir: In your issue of February 23d I notice a communication from Dr. Jehiel Lefler in reference to a case of sudden death in goître under electrical treatment, reported by me in the October number of the *Canada Lancet*. Had Dr. Lefler, before reviewing the article in question and criticizing the treatment adopted, taken the care to read the original article, he would not have displayed the lack of knowledge of the facts of the case which his letter indicates. In the beginning, he digresses somewhat to mention his own uniformly satisfactory results in the treatment of exophthalmic goître, stating, however, that in order to obtain the best results possible and to be positively free from any and all danger, a properly selected instrument and a competent electrician are absolutely and positively essential, thus making the quite unwarranted assumption that these requisites were wanting in the case under discussion; hence the fatal result. Briefly, I should like to correct some of the doctor's mistakes or misapprehensions. In the first place, the case was not one of exophthalmic goître, but one of ordinary colloid goître, without the symptoms of Graves's disease, and was so reported; consequently, his discussion of the increased dangers in the electrical treatment of that disease is quite foreign to the case reported.

The instrument used was a Waite and Bartlett apparatus—battery, controller, and meter—the one used in the Toronto General Hospital. That the treatment was carried out with skill and care, I think that the name of the electrician who operated in the case is a sufficient guarantee, Dr. C. R. Dickson, a past president of the American Electrotherapeutic Association, and electrician to four different hospitals in Toronto. If electricity had anything to do with the fatal issue in this case, I think we may fairly assume that it was not due to

any fault or lack of skill in technique on the part of the operator or to an unsuitable apparatus.

Dr. Lefler's opinion as to the cause of death is precisely the same as the one expressed by me in the autopsy report—irritation of the recurrent laryngeal nerve with spasm of the glottis and consequent asphyxia.

It is scarcely necessary for me to say that I am quite in accord with the doctor as to the necessity for skill and care in the use of electricity in these cases. It is well to bear in mind, however, that sudden death in goître, apart from any treatment, occasionally occurs, either from direct pressure on the trachea or on other important structures in the neck, and in the case reported by me the patient had nearly died on a previous occasion in an attack that came on without any evident exciting cause, much in the same way as the one that ended fatally.

In conclusion, Dr. Lefler is to be congratulated on the uniformly happy results he has had in the use of electricity in the treatment of exophthalmic goître, an experience very different, I am sure, from that of most clinicians who have tried this agent.

H. B. Anderson, M. D.

SEXUAL INTEMPERANCE.

Leavenworth, Kansas, *March 20, 1901.*

To the Editor of the New York Medical Journal:

Sir: Truth comes to us in fragments. We have lately received pieces—or solid chunks—of it from Dr. Drennan on the above-mentioned subject.

In your issue of February 16th her critics have also given us bits of truth. It seems now to be generally admitted, even by the theologians, that the doctrines of evolution are true. The special training and experience of the medical fraternity would seem to lead it irresistibly to the adoption of evolution as the very cornerstone of the physician's foundations of thought and belief. Nevertheless, when theological views coincide with the facts of science, as a part of Dr. Rose's quotations prove they sometimes do—the medical profession should give them a cordial and grateful reception. Dr. Talmey's contention that man is not the only male animal who abuses himself and his female can be shown to be true. Instances of the abuse of the female would be much more common but for the fact that such female is endowed by Nature with more adequate physical means of defending itself, as compared with the human female, against the undesired embraces of the male. The human female must appeal to a higher court—the moral nature of her companion—although too often her appeal is unheeded. But to the statement that animals live in polygamy, there are many exceptions, as witness the class of birds, excepting the rasorial or gallinaceous. Then, too, many species have a season specially devoted to procreation, as in the *Cervidæ* and *Phocidæ*. All the lower animals seem to be largely under the influence of this law, except as modified by artificial environment. No doubt it is true that thousands of women, each of whom gives birth to a child every year for several successive years, may be found who enjoy good health. It is equally true that thousands of women miscarry for several successive years and yet retain good health. Still, these results for both classes are the exception and not the rule. It is also true that thousands of women are crushed, mentally and physically, by too frequent parturition, the children which they bring forth in dread and sorrow inheriting more or less the acquired infirmities of their mothers. Beecher said: "If a man is born right at first, he does not need to be born again, and to be born right you must begin with his grandfather."

In the opinion of your correspondent the main arguments of Dr. Drennan have not been weakened by her critics. There is one lesson that every one must learn—the great lesson of self-control. It is often difficult, but no one is safe, morally or physically, until he has thoroughly learned it. He who considers the pleasure of sexual intercourse as primary, and procreation as secondary, is never satisfied. There is "no bottom to the cistern of his lust." Like begets like. If parents wish their children to have the virtue of self-control, they must first learn to practise it themselves. Perhaps it is true that the majority of men in the prime of life could not be induced to totally abstain from sexual intercourse during those periods when the wife usually has a feeling of repugnance to the sexual act. So much the worse for the men, their wives, and their children. "He is a free man whom the truth makes free, and all are slaves besides."

Walter F. Morgan, M. D.

INCONTINENCE OF URINE AND CLITORIDECTOMY.

20 West Forty-fifth Street,
New York, *March 26, 1901.*

To the Editor of the New York Medical Journal:

Sir: I notice in your issue of March 23d an editorial on Extirpation of the Clitoris for Incontinence of Urine, incited by a recent report of such an operation by a French surgeon on a woman twenty-eight years of age, the removal of the almost constantly erect clitoris being at once followed by a complete cure of the urinary incontinence. You conclude your editorial by saying, very properly, that "some indication is desirable before an epidemic of clitoridectomies for enuresis sets in." The French surgeon's experience is not unique, for his case reminds me of a similar one in which I performed the same operation for the same urinary condition, with the same favorable result, some years ago.

A girl, fifteen years of age, was admitted to my service at Mount Sinai Hospital for complete urinary incontinence, the cause of which was unknown. The girl's behavior and peculiar facial expression, as well as the congested appearance of the external genitals, especially the clitoris, aroused in me the suspicion that masturbation might be the cause of the enuresis. I therefore caused her to be watched, and she was detected by the nurse several times in the act of masturbation. As it was impossible to restrain her from this act without putting her in a strait-jacket, and as the enlarged and turgid clitoris showed that the practice had been indulged in for some time, I decided to try the experiment of removing the clitoris, feeling that this was justifiable under the circumstances, especially if the result was favorable, and that, even if unfavorable, I need not fear the fate of Baker Brown, of London, who, it may be remembered, some forty years ago, was expelled from the London Obstetrical Society for removing the clitoris of several young women who suffered from nymphomania. Fortunately, we have progressed in many ways during the last forty years, and medical men are no longer ostracized for performing operations which offer a reasonable chance of success, however problematical they may appear to be at first.

I removed not only the clitoris, but also the labia minora, which were much hypertrophied, and the girl at

once regained control of her bladder. Before she left the hospital, completely cured of the enuresis, her altered behavior and facial expression, due to the cessation of masturbation, were plainly noticeable. She remained under observation for about a year, and continued in perfect health. Of course, I do not mean to advise clitoridectomy for enuresis unless it is fairly evident that the irritation of the clitoris by masturbation or disease is the cause of the urinary incontinence.

PAUL F. MUNDÉ, M. D.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.

Meeting of March 7, 1901.

The Vice-president, Dr. CHARLES L. DANA, in the Chair.

Alcohol as a Food.—The VICE-PRESIDENT introduced the topic for discussion by referring to the need of hearing more of the scientific aspect of this question and less of the purely sentimental side. He said that in his personal study of about 350 cases of alcoholism in Bellevue Hospital he had noted that over two thirds of this number had begun drinking before the age of twenty, and that the habitual drunkard could not stand, on the average, more than about fifteen years of such life, or about 3,000 intoxications, before the system succumbed.

Dr. HERMANN M. BIGGS pointed out that the type of drinking had changed in recent years, for, whereas in the early years of his service in Bellevue Hospital there had been much cirrhosis of the liver and a common history of free indulgence in spirits, at the present time the vast majority of the alcoholic patients gave a history of taking from one to three drinks of whiskey a day and of four or five pints of beer. This change in the habit of drinking had been associated with an alteration in the character of the lesions. Cirrhosis of the liver had gradually given place to such degenerative effects as disease of the heart, blood-vessels, and kidneys. A search through the records of the health department had shown that in the last twenty years there had been but slight increase in the death rate from alcoholism, hepatitis, and hepatic cirrhosis, in spite of the large additions to the population, while in this period there had been an increase of almost 150 per cent. in the deaths from disease of the heart and vessels, with a striking augmentation of the number of deaths from kidney disease. And this was true not of our country alone. During the same period lager beer had largely replaced the weiss beer formerly consumed in Germany, and this change had been associated with a very large increase in the number of deaths from disease of the kidneys.

Dr. M. ALLEN STARR commented upon the very different effects of whiskey, brandy, and gin on the individual, and instanced this as proof that the physician, in his study of alcoholism, must bear in mind that he was not dealing with the effects of alcohol *per se*, but with the effects of this agent in certain combinations. Alcohol seemed to affect the parts of the brain which were the most highly organized, the lower centres of the brain and spinal cord not being apparently susceptible to its influence. Berkeley had shown that alcohol acted on the brain by dissolving, as it were, the dendrites, and so rendering the cells incapable of receiving impulses from other cells. Speaking of the care and treatment of inebriates, Dr. Starr said that it was not very common to find a recovery from chronic alcoholism in the form known as periodical drinking—*i. e.*, where there was a complete cessation of the drinking in the interval. These cases were examples of moral obliquity rather than of true insanity. He was of the opinion that moral suasion was often more potent in such cases than medicinal treatment. As these individuals were neurasthenic, if their neurasthenia could be relieved, their ability to resist the drink-craving would be correspondingly augmented. The only reformed drunkards of whom he had knowledge had been saved, not by medical, but by religious influence. An effort should be made to secure the legal commitment of chronic alcoholics to institutions in which they could be prevented from procuring liquor.

Dr. ALEXANDER LAMBERT said that, of the 24,300 patients admitted to Bellevue Hospital last year, over twenty-five per cent. had been in the alcoholic wards. He had tried the experiment last summer of threatening the "repeaters" with the workhouse if they were again admitted to the alcoholic ward, and this had had the effect of reducing the average number of this class for the next six weeks from sixty to twelve. As soon as these persons had discovered that this was only a threat, and was not to be put into execution, the number of such admissions had quickly risen to the former figure. It seemed to him that the outlook from treatment must be discouraging, unless we had some law permitting the detention of the alcoholic subject until he was sufficiently recovered to allow of his safe discharge from custody. Statistics were then quoted to show the enormous number of defective and diseased children among the progeny of alcoholic parents.

Dr. JAMES EWING said that he had been studying the effects of alcohol on the ganglion cells. On gross examination, the brain of one who had died of delirium tremens presented a characteristically marked venous engorgement, and Nissl's or Golgi's stain revealed changes apparently identical with those produced by sunstroke, tetanus, and rabies. There was a complete disappearance of the chromatophilous bodies, and the distribution of the lesions pointed to a general circulating poison as the cause. As a rule, the spinal cord did not exhibit such marked lesions as the ganglion cells in the cortex of the brain. Certain experiments on the lower animals, while failing to produce delirium tremens because of the alcohol acting as a fatal irritant, still, apparently, justified the deduction that alcohol acted chiefly on the more highly organized cells of the nervous system. In the brain of the chronic alcoholic were found evidences of wear and tear in the presence of large deposits of pigment in the ganglion cells.

Dr. JOSEPH COLLINS discussed the subject of *The Law and the Inebriate.* He quoted extensively from the laws of various countries regarding the habitual inebriate, and insisted that this class of persons could be effectually reached only by legislation. Legislation of this order had been desultory and entirely unsatisfactory in our own country; it had been of a fairly effective kind in most of the provinces of Canada, while New Zealand and Switzerland had led the world in this very important matter.

Dr. S. A. KNOPF called attention to the important part played by alcoholism in the production of tuberculosis. He averred that statistics proved that twenty-five per cent. of children committed to sanatoria for the

treatment of tuberculous diseases were the offspring of alcoholic individuals. It was a prevalent but erroneous opinion that alcohol was a very useful agent in the treatment of consumption. If given in sufficiently large doses to control the temperature, it would make the patient a confirmed alcoholic. For the treatment of inebriates, he would depend upon moral suasion and hypnotic suggestion. Poor tenements and poor cooking, such as was practised by the tenement-house population, were largely responsible for alcoholism.

Dr. George L. Peabody said that he agreed with Dr. Knopf regarding the last point made, and he also thought that ignorance of the effects of alcohol, even among otherwise well-informed persons, was an important factor in the production of alcoholism. In these days of working under great pressure, the fatigue experienced at the close of the day was a strong temptation to indulgence in alcoholic drinks. It should be known and appreciated that most of the so-called "bitters" on the market contained from forty to fifty per cent. of alcohol. Ladies were often led into taking sherry wine simply because it was called a wine, when in reality it was a spirit, containing from thirty to forty-five per cent. of alcohol. The speaker then referred to the "gold cures," and said that he had been informed by a physician who had been in one of these institutions that it was the practice in places of this class to give daily hypodermic injections of a golden-colored liquid which contained strychnine and atropine, but no gold. After this treatment had been continued for a certain length of time the patient was told that the desire for liquor had been largely controlled, and that he could help himself to some liquor in the presence of the physician if he desired to satisfy himself of the truth of the contention that the treatment employed had produced such an effect on his system that liquor would no longer agree with him. Those who accepted this invitation, from whatever motive, were then given what they supposed to be the regular hypodermic injection of "gold solution," but, as a matter of fact, a good dose of apomorphine had been smuggled into the solution. The effect of such treatment, both physical and mental, could easily be imagined.

Book Notices.

The Medical Examination for Life Insurance and its Associated Clinical Methods, with Chapters on the Insurance of Substandard Lives and Accident Insurance. By Charles Lyman Greene, M. D., Clinical Professor of Medicine and Physical Diagnosis in the University of Minnesota. With Ninety-nine Illustrations. Pp. xiv-9 to 426. Philadelphia: P. Blakiston's Son & Company, 1900. [Price, $4.]

Those of us who look beneath the surface of things about us for the causes which underlie them must often have reflected upon the phenomenal growth in this country of the various forms of life insurance, mutual and stock companies, assessment and benefit societies.

To us the explanation is not difficult. Probably no race or nation of men has a keener sense of moral responsibility than our own, and none is less disposed to lay up wealth against a time of need. The American is fond of the comforts of life, and he is not willing to forego them for the benefit of those who succeed him, except in so far as is absolutely necessary to protect the helpless during their period of need. He believes that his children should go out to battle with the world just as he has had to do, and, once they are started, his sense of responsibility for their success ceases. To our mind, the peculiar capacity of life insurance to afford protection during this period of helplessness is that which has made it so important and distinctive a part of our civilization, and, if our view is correct, we may expect that it will grow and increase in importance with the growth of our nation in population and in wealth.

But we, as practitioners, have much more than a philosophical interest in life insurance. It is the one great industry to the success of which the technical skill of the physician is an indispensable requisite, and from which the profession derives no inconsiderable portion of its revenues. It is therefore the one business in which physicians should have at least some training and for which they should, if possible, prepare themselves during their student days. Curiously, it is only recently that the medical schools have become alive to this need and have taken up examining for life insurance as a part of their proper work. From the standpoint of these reflections, the book which lies before us may be said truly to "fill a long-felt want." It is a text-book of life insurance for students and practitioners, and its author is to be congratulated upon the excellence of his work.

The book opens with a brief historical review of the business from the earliest times and an intelligent statement of the scientific foundations upon which it now rests—for the vague guesswork of a hundred years ago has been replaced by a definite knowledge of the laws of mortality among large numbers of men.

This opening chapter is very readable and should give the student a better grasp of the subject than he has ever had before. The succeeding chapters are devoted to an interesting discussion of the relations of the medical examiner to the agents and the companies, and especially to the applicants for insurance. The difference in the point of view of the physician toward his patient and toward the applicant for insurance is well described—and, to our mind, this is the very kernel of the subject. However well trained in his profession a physician may be, he is not a good medical examiner until he has acquired this point of view, and, on the other hand, if he has it, he may be a very good examiner even if his medical attainments are but scanty.

The other important branches of the subject, "a review of the questions usually asked in medical blank forms," "heredity," "occupation," "the rôle of inspection in physical diagnosis," "the examination of the chest and abdomen," and "the examination of urine," all are well treated of. It may be that a mistake has been made in the chapters on examinations of the heart and lungs in that they are too exhaustive. Fortunately, it is an error on the safe side. Our own idea is that physical diagnosis is a necessary part of the medical training of every physician, whether he studies life insurance or not, and he acquires his knowledge from his instructors in the class-room and the clinic and from special text-books on that subject. When, later in life, he wishes to learn over again any portion of the subject, he at once makes use of his old friends, the text-books of his student days. What he needs in a life insurance text-book is not a formal restatement of the entire subject, however thoroughly done, but rather a brief outline of the salient points of diagnosis—in short, he wants suggestions. We have not seen in many a day a book so full of suggestion, so reminiscent of the widest range of clinical experience, and we regret that that

tone was not introduced to the same extent into this single portion of the work. As we have already said, the fault, if fault it is, is on the side of too great thoroughness. Dr. Greene is evidently a careful student and teacher of diagnosis, and he has done his work so thoroughly that even this criticism may smack too much of captiousness.

In "the examination of urine" our author very sensibly avoids any reference to some of the more delicate tests for albumin, and very pertinently says that the essentials of a good test for albumin are "simplicity, a reasonable degree of delicacy, and decisiveness." Examiners will do well to follow his advice.

A chapter is devoted to "the insurance of substandard lives," a subject which is sure in the fulness of time to occupy a very large place in life insurance medicine and to tax more fully the resources of the practitioner than the present routine selection of standard lives. If a life is unexceptionable, it requires the exercise of but moderate skill to determine the facts and submit a record of them to the company interested; but, if it is impaired far beyond the limits of an average healthy life, only the nicest discrimination and the most mature judgment will suffice to place a proper valuation upon it. Until very recently our English cousins had this substandard field all to themselves. Within a few years, however, as Dr. Greene points out, one of the great American companies has undertaken to insure almost all types of impaired lives, and it seems to us that this position must sooner or later be adopted by life organizations generally. When this time does come, it is to be hoped that the standard of the profession in life insurance examining will be found to have advanced sufficiently to fully satisfy the demands of the business.

The book is well printed on good paper, has been carefully indexed, and is altogether an admirable exposition of the subject. It should be found in the library of every examiner for insurance.

Sexual Debility in Man. By F. R. Sturgis, M. D., formerly Clinical Professor of Venereal Diseases in the Medical Department of the University of the City of New York, etc. Pp. 14 to 432. New York: E. B. Treat & Company, 1900. [Price, $3.]

Dr. Sturgis has written a most readable book; while it does not lack interest or spice, it is, nevertheless, scientific and deeply grounded. The work opens with three chapters on the anatomy and physiology of the male sexual organs. These are followed in turn by chapters on masturbation and onanism, spermatorrhœa, pollutions, prostatorrhœa, sexual impotence, and sterility.

The author takes the view that masturbation is not followed by sequels of such dire consequence as have been generally preached and believed. While functional results are not rare, and even, in exceptional cases, more serious disturbances follow the habit, the general denunciation of masturbation is not agreed to by the author.

Spermatorrhœa he regards as a disease *sui generis*, and separates it distinctly from pollutions. The author does not share the groundless notion that spermatorrhœa leads inevitably to impotence and sexual uselessness.

The treatment of the various conditions considered is lucidly and fully given, and hopefulness mainly characterizes what he says. All measures are to be tried; none to be neglected, if necessary.

The book is most interesting and should have, as it no doubt will, a wide audience. The printing and illustrations are good.

Eye, Ear, Nose, and Throat. A Manual for Students and Practitioners. By William Lincoln Ballenger, M. D., Assistant Professor of Otology, Rhinology, and Laryngology in the College of Medicine of the University of Illinois (College of Physicians and Surgeons); Professor of Otology, Rhinology, and Laryngology in the Chicago Eye, Ear, Nose and Throat (post-graduate) College, etc., etc., and R. G. Wippern, M. D., Professor of Ophthalmology and Otology, Chicago Eye, Ear, Nose, and Throat College. Series edited by Bern B. Gallaudet, M. D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York; Visiting Surgeon, Bellevue Hospital, New York. Illustrated with 150 Engravings and 6 Colored Plates. Philadelphia and New York: Lea Brothers & Company, 1900.

This manual belongs to the series of pocket textbooks issued by this well-known firm of publishers. It is fully illustrated and its mechanical work is beyond criticism. The authors have done their part of the work well and have wisely confined themselves to concise presentations of the various topics, avoiding all mooted points and the various discussions which fill up so much space in many books. While these are of interest to specialists and find an appropriate place in large treatises, they are not of utility in such a manual as the one here noticed. The book will serve as a valuable introduction to more pretentious ones.

Hygiene der Prostitution und venerischen Krankheiten. Bearbeitet von Dr. A. Blaschko. Mit 1 Kartenskizze und 2 Kurven im Text. Handbuch der Hygiene herausgegeben von Dr. Theodor Weyl. Zehnter Band. Erste Lieferung. Jena: Gustav Fischer, 1900.

The author of this monograph was one of those who attracted great attention at the Brussels conference last year by his unalterable opposition to the legalized regulation of prostitution and by the tenable position he assumed. The present work may be considered as a review of his attitude on the subject. He discusses in fullest detail the failure of regulation to regulate, giving as reasons the instigation by the legal measures to concealment of venereal disease, to the propagation of secret prostitution, to the inadequacy of examinations, and to the failure of physicians to report cases coming under their notice. The author gives a sketchy history of prostitution, discusses the distribution of gonorrhœa and syphilis, and, in his philosophy, regards prostitution as a necessity and a safeguard to the community. The work contains, also, directions for the treatment of the two principal venereal diseases and gives methods of preventing the spread of these ailments.

Although the author offers no remedy looking to the restriction of prostitution, the work must be regarded as an authoritative statement from one who has thoroughly canvassed the subject. To the resident of New York it should be especially interesting at this time.

BOOKS, ETC., RECEIVED.

A Manual of Practical Hygiene for Students, Physicians, and Medical Officers. By Charles Harrington,

M. D., Assistant Professor of Hygiene in the Medical School of Harvard University. Illustrated with Twelve Plates and One Hundred and Five Engravings. Pp. vi-17 to 729. Philadelphia and New York: Lea Brothers & Company, 1901.

A Treatise on Appendicitis. By George Ryerson Fowler, M. D., Professor of Surgery in the New York Polyclinic, etc. Second Edition, Revised and Enlarged. Pp. 7 to 235. Philadelphia and London: J. B. Lippincott Company, 1901. [Price, $2.50.]

The Technique of Surgical Gynæcology. Devoted exclusively to a Description of the Technique of Gynæcological Operations. By Augustin H. Goelet, M. D., Professor of Gynæcology in the New York School of Clinical Medicine, etc. Pp. 7 to 340. New York: Internal Journal of Surgery Company, 1901.

Hypnotism and Suggestion in Therapeutics, Education, and Reform. By R. Osgood Mason, A. M., M. D., Fellow of the New York Academy of Medicine, etc. Pp. vii-344. New York: Henry Holt & Company, 1901.

Hypnotism. A Complete System of Method, Application, and Use, prepared for the Self-instruction of the Medical Profession. By L. W. De Laurence, Instructor at the School of Hypnotism and Suggestive Therapeutics, Pittsburgh. Illustrated. Pp. 5 to 256. Chicago: The Henneberry Company, 1901. [Price, $1.50.]

Retinoscopy (or Shadow Test) in the Determination of Refraction at One Meter Distance, with the Plane Mirror. By James Thorington, A. M., M. D., Professor of Diseases of the Eye, Philadelphia Polyclinic, etc. Fourth Edition, Revised and Enlarged. Fifty-one Illustrations, Twelve of which are Colored. Pp. xviii-19 to 89. Philadelphia: P. Blakiston's Son & Company, 1901. [Price, $1.]

Miscellany.

Osteopathy and Medical Gymnastics and Massage.—The following argument was prepared by Dr. H. V. Barclay, of New York, to be presented at a hearing on the Seymour bill in Albany on February 27th:

"I have the honor to appear before you as a representative of the New York Medical Gymnastic and Massage Society, a society incorporated under the laws of this State May 8, 1898, and founded for the advancement of medical gymnastics and massage, its membership being open to physicians and to those who hold no medical diploma.

"Having acquainted ourselves with the history, practice, methods, and claims of osteopathy and its institutions of learning, our society has decided to send representatives here to protest most strongly against the passage of the present bill, intended to give them rights and privileges. Our reasons for so doing are: 1. That osteopathy, in spite of its claims to the contrary, is not a new school, nor a complete school, of medical practice; they are therefore not in position, as they confess themselves in their alleged text-books, to treat all forms of disease. Osteopathy, in principle, is nothing else or more than a certain form of massage and gymnastics, which, as we know, is a mechanical treatment, known from the earliest days of history, and which is based on scientific principles and the results of experience and modern research, and now recognized and employed by the medical profession all over the civilized world. But osteopathy is not even a complete system of medical gymnastics and massage, since its operations embrace only a few manipulations, chiefly pressures applied to nerves and bones, and certain movements intended for passive stretching of contracted muscles and fasciæ. In reading their text-books I have not found a single thing of value but what has been known in the past. 2. We oppose the passage of this bill because osteopathy, as you have already heard mentioned in the remarks of physicians representing the Medical Society of the County of New York, claims to cure and benefit a large number of diseases which, on account of their causes and pathology, are entirely unsuitable for such treatment; nay, it is harmful and dangerous to patients suffering therefrom, and numerous instances have come to the knowledge of the members of our society in which positive harm has been done. The osteopathic practice is, therefore, a menace to public health.

"As a matter of fact, any impartial person who will take pains to investigate the practices and claims of osteopathy will find that the system rests largely on false claims and pretenses, which, if not wilfully held forth, can only be due to ignorance. And that this is so is not surprising, when we learn that instruction in osteopathy can be had at this day, as it could be and has been had in the past, in courses lasting from two to six months, personal attendance often not being necessary; and many are those who hold diplomas from this kind of schools. And these are the people who shall be allowed to practise legally and independently according to this bill. But even if those who in future may desire to obtain a license to practise osteopathy must qualify as provided by this bill, they will, nevertheless, be entirely unfit to be allowed such privilege, for the reason, as before stated, that their practice reduces itself to a very small part of regular medical practice, and as operated and practised by them is very often either entirely wrong or open to serious objections and doubts, which has been sufficiently demonstrated by other speakers.

"Masseurs and gymnasts who are not physicians will always be necessary and will be welcomed and supported by the regular medical profession, since, on account of the nature of their work, no physician, with the exception of those who have specially devoted themselves to this practice, will have the time, physical strength, technical dexterity, and skill requisite. But, while osteopaths are opposed to the regular medical profession and desire to apply their treatment exclusive of other treatment, the regular masseur and gymnast sees in his line of work only a part of regular therapeutic measures, and, although his is very often the only treatment required, he is not opposed to other beneficent treatment by the physician. Indeed, he is glad to have the physician at his side and have him point out the diagnosis, and is always grateful for information that will assist him to carry the treatment to a successful issue; in other words, he desires to cooperate with and work in harmony with the medical profession, who need him as much as he needs them. This is as it should be. The best men of our craft are already recognized and respected by the medical profession, upon whom they depend for their work, and had the medical profession at large recognized us in the past as they appear to do now, I dare say that osteopaths, common rubbers, and charlatans of various descriptions would never have had a chance to gain entrance into this State."

Twisting of the Pedicle in Hydrosalpinx.—M. Cathelin (*Revue de chirurgie,* February), as the result

of a detailed clinical study, formulates the following proposition: Every tense subumbilical tumor, fluctuating, dull on percussion, and mobile, with previous painful paroxysms and ending in an outburst of severe pain, extremely intense in the lower part of the abdomen, with vomiting, constipation, and without fever, should call to mind a hydrosalpinx with twisted pedicle.

Modern Gunshot Wounds.—Dr. E. F. Robinson (*Annals of Surgery,* February) thus sums up his conclusions in an article on Gunshot Wounds in the Philippino-American war: 1. The modern gunshot wound is generally aseptic, and should be treated on this supposition. 2. Asepsis is due chiefly to the character of the bullet, and the early application of first-aid dressing; and, in a minor degree, to the velocity of the projectile. 3. Primary hæmorrhage from modern gunshot wounds is exceedingly rare, the blood-vessels being displaced rather than cut by the rapidly moving projectile. 4. The "explosive effect" of the modern bullet is much less common than recent military literature would indicate. This peculiar destructive effect is produced by the character of the tissue struck, as well as by the great velocity of the bullet. 5. Gunshot wounds of chest are rarely infected. Simple antiseptic treatment, with aspiration of pleura in cases of severe hæmorrhage, is all that is necessary. 6. Gunshot wounds of knee-joint are usually aseptic, but, if infected, demand immediate amputation to save life. 7. Excision of elbow is always a justifiable operation in severe shattering or infection of that joint. Resection of bones of other joints is rarely necessary, erasion or amputation being preferable. 8. Injuries of nerves from gunshot wounds can often be benefited by operative interference or resection. 9. In modern military surgery, abdominal section for gunshot wound is not justifiable; the patient's best chance of recovery lies in conservative treatment without operation.

The State of the Liver in Erysipelas.—M. Roger and M. Garnier (*Revue de médecine,* February) consider that an important difference can be established between the streptococcic liver and the other varieties of liver infections. In streptococcic infections, the liver is only relatively attacked; it influences the course of the infection even more than it is influenced by it. The lesions that present prior to the cells being attacked aggravate considerably the prognosis of erysipelas. However, it is important to establish a distinction between erysipelas and the other streptococcus infections. Fatty degeneration is more frequent and more marked in the subjects of erysipelas; but it is probable that it was preexistent in a number of cases and that it only explains the mechanism of death by exposing to us hepatic insufficiency. A difference, on the other hand, must be made between the streptococcus infections of adults and erysipelas of young children; in the latter, the changes, save in one case, are but slightly marked, their cells seeming to resist the streptococcic toxines better than those of adults. In short, whatever form they assume, the streptococcic infections, even when prolonged, provoke diffused more frequently than very profound lesions; the changes are uniformly disseminated throughout the lobule. The erysipelatous liver is thus distinguishable from the divers anatomical types that we have described in studying the scarlatinal liver.

The Treatment of Chlorosis.—Dr. Seymour Taylor (*Clinical Journal,* January 2d), in a clinical lecture, delivered at the West London Hospital, says that the conclusions which he has arrived at in the treatment of chlorosis may be briefly summarized as follows: First, the carbonate of iron is the most efficacious remedy. Second, whatever preparation of iron may be prescribed, it must be fresh and free from oxidation. Third, until the intestinal canal is clear and the digestive functions are in good order, no preparation is of much or any avail. But this is not all. Chlorosis refuses to come within such a simple limitation as this implies, and consequently we meet with cases in which all these precautions have been taken and yet failure results from our treatment. The reason, he finds, is that there is more than one type of chlorosis. There is the type in which dyspepsia and stomach symptoms are the most pronounced, and these are more pronounced still as the pallor increases. Secondly, there is the neurotic type, in which hysteria and other nervous manifestations are so common. This patient is often thin and ill-nourished. There is yet a third type in which pallor and breathlessness are the marked features. These patients are for the most part plump, well-nourished young women. All these varieties show, sooner or later, if left to themselves, symptoms which, to say the least, are highly suggestive of gastric ulcer. In the dyspeptic class he invariably treats the dyspepsia first. It may be that it requires a week or month or even longer before we restore the proper functions of the stomach, but until this happy period arrives he is averse to the exhibition of any ferruginous remedy. He has records of a good many failures mentioned in this line of practice. Therefore he gives a simple stomachic mixture containing bicarbonate of sodium, hydrocyanic acid, and gentian, to which may be added cascara, euonymin, or other purgative, if necessary. At the same time the patient is rigidly dieted. The patient of the neurotic type is often more difficult to relieve. The want of nutrition may be attributed in part to dyspepsia, which is also present, and in part to the disinclination to take food, which is a frequent symptom; this condition borders on the anorexia nervosa which Gull described. Here valerian is of great use, and the ammoniated tincture may be added to the prescription. Afterward, when food is being assimilated, we may add cod-liver oil after meals, and possibly also iron, such as steel wine, which we often give to delicate children. The third type may begin to take iron earlier than the others, and arsenic may be given in addition. Some physicians contend that arsenic is the saving remedy, and that, when iron fails to relieve, it can be supplemented or supplanted by arsenic. Whether this is so or not, arsenate of iron beginning with $\frac{1}{36}$th of a grain three times a day is a valuable remedy.

But, whatever preparation of iron is selected, the careful estimation of the percentage of hæmoglobin in the blood is strenuously insisted on. This estimation should be made at least once a week, and the preparation changed from time to time if no progress be made.

In other words, the measure of the utility of a prescription will be given by the hæmoglobinometer. If the weekly examination of the blood shows a steady—it may not be a great—increase in the amount of hæmoglobin, then that prescription may be continued. But if, on the other hand, the amount of hæmoglobin stands still, or is even diminished, another preparation of iron must be found. Dr. Taylor finds that the percentage of hæmoglobin after careful administration of a proper and suitable preparation of iron, varies from 1 per cent. to 3 per cent., the average being 2.11 per cent. This computation is taken from forty-three cases in his out-patient work.

Original Communications.

GERMAN TEXT-BOOKS HALF A CENTURY AGO; HISTORY AND REMINISCENCES.*

By A. JACOBI, M. D.,

NEW YORK.

In the year 1847, when I commenced the study of medicine, it was not what it is to-day; least of all was it cosmopolitan, it was thoroughly national. There was an English medicine, there was a French medicine, and there was a German medicine. The sober and practical turn of the Anglo-Saxon mind was never drawn away from its direct methods of clinical observation and teaching. Not even John Hunter's categorical dictum, "Do not think, try"—that means experiment—was an exception to this general rule; and no theoretical teaching like that of Brownianism, though British in its origin, ever controlled English thinking as it did that of the continent.

In France, while the greatest man in its political life was spreading all over Europe the results of the great revolution through violence and murder, a young scientist revolutionized medical science by his genius and hard work. That is what Bichat did when he studied the physiology and histology of the organic tissues. After him, there are three names that will immortalize France, though her political existence may have disappeared from the records of the world. Laennec, preceded only by Auerbrugger and Corvisart, who had long been forgotten, remodeled diagnosis by percussion and auscultation. Magendie created experimental physiology and pharmacology by introducing alkaloids, such as quinine, morphine, veratrine, strychnine, piperine, and emetine, and bromine and iodine into practical therapeutics. Broussais overthrew ontology—though he proclaimed one of his own—localized disease, urged preventive and abortive treatment, studied the anatomical lesions of morbid processes, substituted the method of anatomical thinking for the merely clinical and empirical observation of the sick, and thus was the intellectual author of that reasoning and knowledge which later were known under the name of the Vienna school. Indeed, not only did Broussais transmit to the latter his anatomical way of thinking, but, unfortunately, he also taught them to be satisfied with the observation of coarse anatomical lesions and with the name of a diagnosis, adding the assurance that those lesions must terminate fatally; that, indeed, every case of sickness would either get well spontaneously or was absolutely hopeless, and that treatment was powerless.

These famous men, surrounded or followed by dozens of other great minds, gave France its superiority during the first half of the century down to the time when I began my studies. Meantime, Germany—poor and forlorn, divided into hundreds of political shreds, large and small, tyrannized and robbed by her dukes and bishops and princelings of every calibre, annihilated by Napoleon, whom she finally expelled through the unbounded enthusiasm of what was considered a holy war—Germany evolved a peculiar romantic fanaticism which controlled her literature for a decade, with unfavorable results on science. Then came decennia of brutal political reaction and cruel suppression of every ideal effort, police and military violence, and the dungeons filled up with the flower of the country. Schiller long before had extolled "freedom, though in chains"; chains, indeed, were plentiful, and that sort of freedom made Germans transcendentalists. Their method of studying Nature was imagination. Even Kant, the mathematical thinker, taught them to construe things *a priori*. Then came Schelling.

According to Schelling, "the greatest problem of the science of Nature is the development of the first law, from which all the rest of the laws of Nature may be deduced," or, in other words, it is the greatest problem "to find Nature in its greatest simplicity." Such a law, whose existence he simply postulates, must (so he says) "have a more sublime foundation than that of sensual experience; that foundation can be attained only by speculation on the basis of transcendental philosophy." It need not be said that a system built on this poetical and metaphysical theory could not but have, when applied, the saddest influence on medicine and the study of Nature in general.

The books of several decades of that period are absolutely obscure, abstruse, unintelligible, and verbose. That they ever taught anybody is impossible; it is impossible to-day to translate them into any—even the German—language. Inflammation, for instance, in the words of the elder Marcus, was the condition in which the "electrical essence is affected in the dimensions."

The whole literature was full of such nonsense, and full of contempt for the unphilosophical, practical foreigners, for Bright and Laennec.

There was, however, a professor of theology, Paulus, in Heidelberg, who, in spite of living in metaphysical occupations and accustomed to accept traditions, saw these errors of medicine distinctly. He saw danger to medicine in Schelling's philosophy, called its influence "tragic" and "pickpocketism," warned against speculative theories invented in the study room, and attributed the low status of German medicine, when compared with the French, to faulty methods.

Hill, Schoenlein, the clinician, and Liebig, the chemist, having prepared the medical minds, the Vienna school, Rokitansky, Skoda, Hebra, and many others roused immense enthusiasm. Broussais's French doctrines, good and bad, were readily accepted. Only his

*Read at a reception given by Dr. Jacobi to his friends, in the New York Academy of Medicine, on Friday evening, April 5, 1901, in commemoration of the fiftieth anniversary of his graduation in medicine.

ontological gastro-enteritis, the *fons et origo* of every ill, was replaced by Rokitansky's doctrine of the crases of the blood, which after a very few years was unmercifully slaughtered by Rudolf Virchow.

In Rokitansky's opinion, there was nothing in medicine worth knowing except the anatomical lesions. Skoda's ill success in his careless experimentation with remedies also contributed to the confirmation of Broussais's nihilism, in spite of the vigorous protests of Laennec.

At that time, Dietl (1804-1878), professor in Cracow, expressed himself (1851) as follows: "The ampleness of our knowledge is not proportionate to the results of our practical labors. Our ancestors cared much for the success of their treatment; we, for the result of our investigations. Our tendency is purely scientific. The physician must be judged according to the amount of his knowledge, and not according to the result of his cures; it is the investigator, but not the healer, that is to be appreciated in the physician. As long as medicine is art, it will not be science. As long as there are successful physicians, so long are there no scientific physicians. Our power is in knowledge, not in deeds."

These articles of a narrow-minded creed met with the strong approval of Joseph Hammersik, who had been professor in Prague since 1849, and was removed in 1853 on account of the grossness of his nihilism, which was recognized, together with other irregularities, as a positive danger to the sick in the hospitals.

As a result of their teachings, what had been observed in France during the prevalence of crude anatomism was repeated in the German-speaking countries, viz., this therapeutic nihilism found its adherents among the young and utterly inexperienced. History always repeats itself. To-day we are just emerging from a period in which a subordinate branch of ætiological research, of the greatest import, it is true—I speak of bacteriology—like a young Napoleon, threatened to fill the whole field of medical science and art, and so disordered the monomaniac minds of the young that they saw no medicine, past, present, or future, except in the northern exposure of the laboratory windows or in the bottle wilderness of the dingy laboratory of their own school, in their own city, of their own country.

The learned and older and wise men, such as Helm (1875), of Pavia and Vienna; Hebra (1880), of Vienna, and Duchek (1882), of Vienna, while readily accepting and practising both anatomical and diagnostic teachings, reestablished the belief in the responsibility and the results of the practitioner.

Oppolzer's name should never be forgotten among the great and wise benefactors of medical practice (1871); he taught in Prague, Leipsic, and Vienna, and as early as 1848 thus expressed himself in his inaugural address at Leipsic: "Those are greatly mistaken who believe that a modern physician is he who examines a patient most carefully, auscultates and percusses, and is satisfied when the autopsy corresponds with his diagnosis. Such a medical man does not comprehend that the most sublime aim of all medical service is the healing of the sick."

In connection with Oppolzer, the name of Wunderlich, of Leipsic, should not be forgotten. He was one of the first, perhaps *the* first, outside of Austria, to appreciate the labors of Rokitansky, Skoda, and Kolletschka. In a little book on French medicine and the young school of Vienna, he proved not only the presence of many new facts in their writings, but of absolutely new points of view.

That was the time in which the physicians of Germany, ignorant, nebulous, unacquainted with all that had been done in France, and with the fact that the Vienna school was only the continuation and evolution of Laennec, looked upon Vienna as the new Mecca and on its teachings as absolutely new discoveries. About that very time a number of old journals died of inanition, and new ones took their place.

Never was there among the teachable minds such a sudden intellectual revolution. After a very few years the first volume of Virchow's *Archiv* made its appearance. What it means for the history of medicine in the second half of the nineteenth century, and for all time to come, you all know. No matter how many errors have been committed since, from that time on there are no "schools" in scientific medicine. It became clear to all that there could not be parties in medicine any more than in physics, chemistry, astronomy, or mathematics, and that intriguing, blind, or eccentric persons might be able to blind the ignorant, semi-instructed, or credulous public, but not to influence the quiet, systematic biological methods of hard-working investigators.

In that time, from 1847, I had the good fortune to begin the study of medicine, in which I am still engaged. Modern medicine was born about the middle of the century; it has been young since, and will always remain so, for its methods are biological, those of the study of Nature such as she is. It has freed itself of every sort of transcendentalism. It can afford to do without metaphysics and creed, and is, therefore, as tolerant as it is becoming more profound and more independent.

Not long before Stieglitz, an old and widely learned practitioner, had expressed himself in 1840 in the following terms: "German medicine has sunk so low and is so emasculated as to make any shaking up desirable. Whatever gives it a new direction will be wholesome, though new errors or perversities may result therefrom."

But recovery from the turbid ocean of what was called "nature philosophy" was close at hand. In 1842 two new journals appeared, viz., Roser and Wunderlich's *Archives of Physiological Medicine,* and Henle and Pfenfer's *Magazine for Rational Medicine.* Both of these gathered around their flags not only many of the young and unprejudiced, but also the numerous middle-aged

or older men who had followed the new paths hewn in the thicket of German nebulosity by the anatomical and diagnostic results of Parisian and Viennese industry and genius. It was the time of a general upheaval in science, religion, and politics. Oppolzer's address was delivered in 1848, the very year of the German revolution. I still see an older friend in Greifswald, who, from the table on which he had posted himself, waved the newly-arrived pamphlet and exclaimed: "Here is another revolution, a real declaration of independence!"

Among the number of the older men of the reformers was Krukenberg, in Halle (who died in 1865), a clear, skeptical, and consistent man, the upholder of the unity of medicine. August Hirsch says of him, quoting a biography, that the separation of medicine and surgery appeared to him unnatural and repulsive, and he threw all the powers of his sarcasm over those who profited by the hypocritical claim of jealous superiority. You need not believe, however, that, to judge from general appearances, he meant to castigate the surgeon. At those distant times, when surgery had not yet profited by the later results of laboratory and experimental chemical and physiological research, he alluded to the clinician and not the surgeon.

Two other men were Romberg (1843), in Berlin, whose text-book on diseases of the nervous system appeared from 1840 to 1846, and whom I saw but once when I was a young man, and my own dear old teacher, Friedrich Nasse (1851), in Bonn. He was as learned as he was humane; theoretical and practical, pious and critical, a follower of Messmer and of Laennec, experimenter and teacher, and, as I experienced in my own person, first a good hater and then a loving protector.

He was born in 1778, and died a few weeks after he graduated, on April 4, 1851, Carl Otto Weber, the great investigator and surgeon of Heidelberg, who died in 1867 of diphtheria contracted by sucking out the wound of a tracheotomized child—the patient recovered, the physician died—and me. Nasse was a disciple of Reil, a moderate follower of Schelling's philosophy, at those times a good physiologist, pathological anatomist, and a thorough clinical teacher, and, at the same time, a believer in animal magnetism to such an extent as to try to make his hearers enthusiastic over it. Once he wished me to go to Holland to magnetize a young hysterical lady, which office I declined. On the other hand, he made me inject the subcutaneous tissue of rabbits with putrid material, to study its effect.

His writings were many, from those on animal magnetism (together with Ennemoser, who explained the relations of Adam to Eve by that alleged force, and taught how to magnetize the trees in the field and the child within the mother) to experiments on the elimination connected with the respiratory changes of the blood (Meckel's *Archiv,* 1816), regeneration of nerve tissue (Müller's *Archiv,* 1839), combustion and respiration (1846), and a large number of essays on physiological and psychiatric subjects. He was the strongest adherent of Laennec, and never tired of drilling us for hours daily, for the eighteen months I worked under him, in auscultation and percussion and chemistry, in spite of the element of mysticism in the great man's nature. Indeed, the facilities for clinical instruction in my university were far superior to those of most German universities, not to speak of our own medical schools in this year, 1901. Almost all of the second half of the third year of study, and all of the fourth year, were filled exclusively with clinical and operative work; from morning to night we were engaged in the medical, surgical, or obstetrical hospital wards, in the operative courses, or in practice among the poor of the town, who were attended by the clinic. We had to report on every case, and our histories and our prescriptions were scrutinized, the latter not only for their appropriateness, but also for their expressiveness. Every prescription for which the apothecary charged more than "drei Silbergroschen," about seven cents, was closely criticised. You see, our young men at present are less favored. It seems we shall have to wait a long time before every medical school will have its own hospital for the constant employment of eager students.* During the years in which I studied medicine, from 1847 to 1851, viz., three semesters in Greifswald, two in Göttingen, and three in Bonn, some of the principal discoveries or applications of old ones were made. Some should be mentioned. In 1847 ether anæsthesia was used in obstetrics by Hammer, in dentistry by Delabarre; prismatic glasses were employed by Kreke and Donders; chloroform was introduced into obstetrics by Simpson; the scapula was extirpated by Fergusson; faradization was recommended by Duchenne; unstriped muscle fibres were described by Kölliker; Semmelweiss discovered in the autopsy of Professor Kolletschka, who died of sepsis, the same lesions that are found in puerperal fever. In 1848, Crusell, of Finland, explained the indications of galvanocaustics; the quantitative analysis of urea was taught by Bunsen; and Malmsten discovered the *Trichophyton tonsurans.* In 1849 Arnott taught local anæsthesia by cold; Bernard performed the "piqûre" of the fourth ventricle and caused diabetes; Pollender found bacilli in animals infected with anthrax; Hutchinson invented the spirometer; and Meigs found thrombosis to be a cause of death in puerperal women. In 1850 another American, William Detmold, of New York, opened an abscess in the brain and was roundly abused as an American swindler, even in the sixth volume of Virchow's *Archiv;* the velocity of nerve irritation was measured by Helmholtz; the finger was described by Notta; and I. Walker proved the infectious character of secondary syphilis. In 1851 Helmholtz invented the ophthalmoscope and studied the duration and course of the induced current. Virchow

*In many other respects that period of which I speak is quite remarkable.

discovered the sheath of the cerebral vessels; Bernard explained the vasomotor function of the sympathetic nerve; and Romberg published his studies on tabes dorsalis.

An interesting fact connected with the history of the grand and lovely man is the fact that he advised (Hufeland's *Journal,* 1811) the use of the thermometer in scarlatina as a result of the observations made in Bielefeld, 1809, where he practised medicine before being called to the professorship of clinical medicine in the newly established university of Bonn, in 1818.

What there was of experimental general pathology at those times had been established by John Hunter. But there was no ætiological basis for the theory or practice of medicine. Until the middle of the century the majority of diagnoses were symptomatic. Cyanosis, fever, icterus, diarrhœa, apoplexy, dropsy, paralysis were considered full-fledged and scientific diagnoses. Not long before my time Puchelt said that gastricismus changed into a gastric fever, and gastric fever into typhus.

All this old Nasse would not allow. Both his teaching and his friendly sarcasm made us look for causes, for an anatomical diagnosis and for proper indications.

Altogether, this mixture of many sound, and oft-times unsound, theories and tendencies was usual in those early times of his, when hardly any German university was free from the influence of Schelling's philosophy.

Among my teachers thus influenced to a certain extent was Moritz Ernst Naumann (1861), who wrote a general pathology, in six big volumes, but did not expect us to know all of them—for he was a kind, humane, and genial man; also August Franz Joseph Mayer, an anatomist; Weber, the anatomist, who, after having learned that I, though a poor boy, was the possessor of his anatomical atlas with life-size pictures, forgave me for having studied anatomy and dissected in other universities.

Christian Heinrich Bischoff was the professor of materia medica. One March morning, in 1851, my friend Weber and I paid the prescribed calls previous to the approaching oral examinations, Weber in his own, I in a borrowed swallow-tail and silk hat. You permit this, and other reminiscences. *Senectus loquor*—and you told me last year I was seventy.

Weber was Bischoff's nephew, so he addressed him with "uncle." "I am not uncle, I am for you these months der Herr Geheimrath. Your ignorance is not relieved by the honor of your relationship to me." And to me he said: "My dear sir, what shall I say to you who have insulted me, the honored man of science, in my own lecture-room, and told me in the presence of a hundred hearers you would never come again, and marched out? Don't you see that you cannot help being absolutely ignorant, even more so than this other young man?"

Nothing was left to us but to beat a hasty retreat and to learn his unintelligible, preposterous text-book by heart. So we did. This is my diploma.

Harless was the professor of the history of medicine. He told us both that we had never attended his lectures; he excused me on account of not having been in Bonn more than three semesters, but Weber had no such plea, having had all his eight semesters there. He assured us solemnly that he had been the prop of science, "die Stütze der Wissenchaft," for fifty years; and he did not see much help for us; but still, you see, this is my diploma.

Our surgeon was Karl Wilhelm Wützer, whose memory should ever be green. He was a splendid anatomist and a skilful operator. After Jobert de Lamballe, he was the most patient and, therefore, in spite of clumsy instruments, successful operator for vesicovaginal fistulæ. His great experience made him believe in the ubiquity and omnipotence of syphilis, therein preceding Fournier and Erb. I still see him scrutinizing us with his piercing but good-natured little eyes, and quietly suggesting, "Everybody is a little syphilitic."

He wrote very little. The time when every teacher, would-be teacher, and looking-forward-to-the-near-time-of-being teacher, had to write a text-book, had not yet arrived. Our text-book on surgery was, therefore, *Chelius,* without any title but *Chelius.* My edition, the one before you, is of the year 1846. I believe, before it disappeared and gave way to Billroth's and to Bardeleben's books, there were two dozen editions. I had another teacher of surgery before him who hardly ever wrote a line and who won the fond admiration of all. That was Baum, in Göttingen. He was the director of a country hospital in the far East when he was called to the professorship of surgery in the University of Greifswald.

When Dieffenbach died in Berlin, in 1847, Baum was proposed with Bardeleben as his successor. In the same year he left Greifswald for Göttingen; there I followed him to enjoy his teaching and that of Frerichs, who at that time, with Virchow in Würzburg and Rokitansky in Vienna, was the only man who taught in Germany pathological anatomy and histology. Baum was a good, practical teacher, a fine operator, a lovely, sweet character, and learned beyond what we thought to be the legitimate right or destiny of any single man. All his immense library went into the possession of an American, Nicholas Senn; I think it forms part of the vast donation in books that that singularly gifted and active man has presented to the Rush Medical College. Thus is the distance between two hemispheres and two half centuries bridged over. Never think or say that the doings or the sayings of an individual man must needs amount to nothing. History, it is true, makes men; but there are men that contribute to making history.

Let me add a few more words on hill-clad, jovial Göttingen. There I enjoyed the lectures and the laboratory exercises of Wöhler and of Wiggers, who was only

laboratory professor, and the assistant of the immortal chief, Wachler. Wachler contributed a great deal to the recognition of the unity of the universe by teaching the identity of inorganic and organic matter. It was he who synthetically constructed urea and laid the foundation of organic chemistry. Perhaps you will appreciate the enthusiasm the quiet, quaint little man could rouse in his students on taking a look at these text-books of his; it was the greater, the more I had suffered in Greifswald, in 1847, from the fossil that taught what he thought was zoology and natural history. He wanted us to swallow the doctrine that nitrogen and carbon were only compounds of hydrogen and oxygen, and even hydrogen was not simple. His teaching was quite congruous with what he introduced as an incontrovertible example; he did not see why all the elements could not be derived from one element, as all mankind, white, black, green, and red, came from the one Adam.

Conrad Heinrich Fuchs, who died in 1855, was my clinical professor in Göttingen. He published several essays on historical and pathological subjects, a text-book on the morbid changes of the skin (1840), and one, in two volumes, on *Surgical Nosology and Therapeutics* (1844-1846). It follows the Schönleinian system, is very learned, and contains much that is original, but suffers from the exaggerated application and display of his philosophical learning in this, that he coined any number of jaw-breaking technical terms. But his scientific conscience was sound.

At the meeting of 1841 of the Association of German Naturalists and Physicians, during the discussion of a paper read by Haeser on the parasitic nature of diseases, he expounded what he and others meant when they called themselves the "naturhistorische Schule"—natural-historical school of medicine. It was not to be taken as an exclusive theory, but the name indicated only the tendency of modern medicine to introduce and follow the same methods that were employed in the rest of the natural sciences.

I may here also mention the other clinician of Göttingen, Professor Conradi. His best and really good part was his first assistant, Dr. Schraeder; he percussed and auscultated with us and made the diagnoses for his superior officer, who was strong in ætiology. Conradi would never rest until the patient, worried and weary by his persistent cross-examinations, would reluctantly admit that some time before falling sick he had drank something cold. Triumphantly the little, old, wrinkled man would turn to us, smile knowingly, and whisper: *"Ja, ja, ein kalter trunk."*

In Göttingen I also attended the lectures and demonstrations of Conrad Langenbeck, the father of Max and the uncle of the famous Bernard Langenbeck. Langenbeck was, in my time, until Baum came and took surgery —listen, if you please—professor of anatomy and of surgery and of ophthalmology. That was the period in which the bacilli and the cocci had the best of it. He taught and worked before the era of anæsthesia, when accuracy and lightning speed were the characteristics of the operator. The story was told of an amputation of the thigh of his, which was performed in the presence of an eminent British guest. When Langenbeck took the knife, the Englishman opened his spectacle-case; when he had adjusted his glasses, the limb was off.

The most brilliant of my Göttingen teachers was Hermann Lotze (1817-1881), philosopher and naturalist. As early as 1842 he wrote his *General Pathology and Therapeutics as the Science of Natural Mechanics (Allgemeine Pathologie und Therapie als mechanische Naturwissenschaften).* He was one of the few I have met in my life that gave the lie to the observation that the most eloquent men were seldom successful teachers.

Rudolf Wagner was our physiologist and embryologist (1805-1865). In 1835 he discovered the germinal macula in the human ovum, and in 1853, together with Meissner, the tactile bodies. In his discussions with Carl Vogt, the German-Swiss zoologist, anthropologist, and revolutionist, in which he displayed his biblical piety, he was sadly worsted, but his fame will last on account of his actual services. The greatest of them is, perhaps, the *Handwörterbuch der Physiologie,* in these four volumes, to which Frerichs and many others contributed their classical labors.

Let us return to Bonn. Our obstetrician was Hermann Friedrich Kilian, who died in 1863. He was a good Lutheran in this, that he loved wine, woman, and song: *"Wer nicht liebt Weiber, Wein und Sang, der bleibt ein Narr sein Leben lang."* He was a jovial story-teller, mostly on obstetrical lines. They all began with the words "In a cold, dreary, stormy November night." When he began to look solemn, we would all hum "In a cold, dreary, stormy November night," and never were mistaken. He was rather human. He thought so much of himself that he could not endure the good repute of others, even of students. When he was told that two candidates for the honor of the doctorate were excellent men and would pass a brilliant examination, he felt he must be of a different opinion and show their worthlessness. So, after the oral examination, he proclaimed that Weber and Jacobi were failures after all, and he had always known it. But the general wrath excited in university circles by that pronunciamento was too much even for him, and when he came to criticise our examination papers he gave vent to his overjoyed enthusiasm over their alleged excellence.

His text-book was learned and practical; its teachings were of the greatest service to me in the many hundreds of five- or ten-dollar cases I attended nearly half a century ago, in the tenement-houses of New York, not infrequently perched on a wooden stool all night in the company of the parturient woman and the bugs and roaches of her dwelling, waiting for the baby that I had to take, to wash, and to dress, for better, for worse.

Of other medical officers of the University of Bonn,

I should mention Dr. Schaefer, the first assistant of the surgical clinic, admired and beloved by all of us on account of his skill and the practical sympathy he showed us. The next was Dr. Louis Lehmann, the assistant to the obstetrical clinic. He died only last year, at what people call an advanced age, though he was only seventy-five, at the mineral spa of Oeynhausen, where he lived several dozens of years and published, besides a text-book on the spas of Europe, a number of scientific papers connected with that topic. The third and most illustrious of them was Dr. Hermann Weber, the first assistant of the medical clinic, now Sir Hermann Weber, of London, where he has lived since 1851. He is the eminent climatologist and consulting authority on subjects connected with mineral springs, climate, tuberculosis, etc. In Bonn he favored me and was interested in me, as he told me some time ago, because he found me different from the rest and rather queer. In the clinical town practice, of which I had a good deal, he was of great service to me. But lately we discussed the case of poor old "Abraham" of the "Judengasse," a man of seventy-eight years, who had double pneumonia. The treatment at that time consisted in many big doses of tartar emetic and of venesections, of which I made two on his foot. He had tartar emetic, two venesections, and me for a doctor, and, still, he got well. Doctors have their fate, like books; and sometimes it happens that their "work follows after them." Sometimes, however, they follow their work, as, for instance, that young doctor whom Kussmaul mentions in his charming *Reminiscences.* He relates: "The young doctor was stopped by two funerals. Anxious to get on, he inquires whose funerals they are. 'But, Herr Doctor,' says a bystander, 'they are the patients you saw yesterday.' 'Not possible!' says the doctor; 'I had three of them.'" The story does not say whether he did follow his work, but, sometimes indeed, our work follows after us. There was, for instance, in the pauper practice of Bonn, a family named O——, to which I was sent to treat a young child. It was in 1850. There were the retarded and irregular pulse, the vomiting, the occasional flush, the slow rolling of the eyes, and the ominous up-and-down movement of the upper lid of tuberculous meningitis. When I expressed my sorrow at the unavoidable termination, I was told that they had lost eleven children before, mostly of the same disease. The case was not closed with the autopsy, for when I had been in New York a few months, there called Mrs. O——, who had migrated while I preferred to be idle in Prussian state prisons, and was engaged in building up a respectable and successful business. She told me she thought highly of me because I recognized the illness of her last child, though I was only a "clinicist," and engaged me as her doctor. We were good friends for forty years, thinking much of each other—she of my medicine, I of her picture frames—until she died a few years ago.

I now introduce a few of my old books, such as I have not mentioned before. Carl Friedrich Canstatt, who died in 1850, first a general practitioner and finally professor in Erlangen, whose great handbook, in four volumes, with a supplement, you see here, was never affected by metaphysical theories. This great work, which he commenced in 1841, like his *Diseases of Advanced Age* (1838) and previous ophthalmological papers, was founded on pathological anatomy and chemistry, physical diagnosis, and practical experience. It was, therefore, the bible of German medicine, until finally Niemeyer, with his lucidity, directness, and beauty of language, and, lastly, Strümpell, who exhibits the same wonderful qualities, took his place in the esteem of the medical public. It is a great work, and the wonder is that one man could furnish it, so learned, practical, crudite, and of immense size. It compares favorably with the brilliant cyclopædias that every country has brought forth in the last decades.

My chemistry professor, Friedrich Ludwig Hünefeld, under whom I studied in Greifswald from 1847 to the autumn of 1848, published a *Chemistry of Jurisprudence* which was highly esteemed in my time; but this book here, by Heinrich Schürmayer, of Heidelberg, on *Forensic Medicine,* was superior to the few works that had appeared on the same subject since Johann Peter Frank (1821), Adolph Henke (1843), and Wildberg (1850) tried to establish the new doctrine on a sound, scientific basis.

Johannes Lenni's books on zoology and on botany were much used. The author was a Catholic priest. Lehmann's *Physiological Chemistry* was an epoch-making work, and is classical this very day. Eydam's *Electricity and Magnetism* contained everything known up to 1843. Von Gaal's, with an appendix by Neller, on physical diagnosis, was a superior work, with good plates.

One of the special text-books much used at that time was Werthmüller's *Augenheilkunde.* To me it was of special value and proved of more than local service—that is, however, what every specialistic work should be—for, strapped over my revolting abdomen, it protected me against seasickness when, in forty-three days, I crossed the Atlantic on the good Boston three-master *Trimountain,* Captain Rea, in September and October, 1853. That trip closed my European life, the last two years of which, after my graduation, had been an entire loss to me.

When, nearly a year ago, Osler praised me publicly for not having written anything for publication in the seven years following my graduation—not even this paper, which contains my experience in a cholera hospital with which I was entrusted after returning from a short dissipation in the Schleswig-Holstein war in 1850, has ever seen the light—he did not know that in nearly two years of those seven I never saw a square inch of paper or more than an infinitesimally small pencil which I concealed in my hair. When I saw the light again, the French Republic had been destroyed nearly two years

and the world had changed its shape. But medicine had meanwhile contrived to further evolve the new methods in which I was raised, and I found myself at home again under the folds of its flag inscribed with the gospel of biological research. Thus, I had something to live for. I rejoiced in the fact that medicine was no longer, would never again be, the victim of a single theory or the work of an individual man, but the results of ever so many thousands laboring in all countries and languages with the same methods for a common aim. That is what kindled the hope and enthusiasm of the forlorn young refugee who, in October, 1853, landed under the shadow of Bunker Hill, though there was nobody to receive him but the crisp autumn air of a free country, and though the shore was not covered with sick people that waited for his arrival or looked forward to his ministrations.

A SHIELDED PISTON SYRINGE FOR URETHRAL AND VESICAL IRRIGATION.

By J. RILUS EASTMAN, M. D.,

INDIANAPOLIS.

The usefulness of permanganate of potassium irrigation in the treatment of gonorrhœal urethritis has been established beyond cavil. There remain, however, differences of opinion as to certain details of technics involved in the execution of these irrigations.

Since Janet, a few years ago, enunciated his now well-known precepts concerning the use of permanganate solution—hot, often copiously, and under pressure—considerable time and art have been devoted to the invention and perfection of apparatus for the accurate application of these principles. The result is a departure from the older methods of treatment in gonorrhœa, amounting to revolution.

Janet's original irrigation apparatus consisted of an ordinary rubber fountain syringe bag, to which was attached a rubber tube bearing a blunt or conical hard-rubber nozzle. The anterior urethra was irrigated by fitting the nozzle to the meatus and releasing a pinch-cock, and the posterior irrigation accomplished by distending the anterior urethra with the solution and elevating the syringe-bag or reservoir to a height sufficient to overcome the resistance of the cut-off muscle—seven or eight feet.

The apparatus devised by Valentine is somewhat more complicated. It consists of a glass percolator jar held in a sliding frame. The force of the irrigating stream is regulated by raising or lowering the jar. A piece of rubber tubing, six feet long, is attached to the funnel-shaped lower end of the percolator, and into the distal end of the tubing is introduced a blunt glass nozzle of any desired one of several forms. The tubing is provided with a notched trigger pinch-cock and with a glass finger-bowl-like protective shield, which is placed just back of the butt of the nozzle, serving to prevent soiling of the operator's apparel by the permanganate solution as it spurts from the meatus. Valentine has more recently devised, for home use, an irrigator fashioned upon the general principles indicated above, but constructed almost entirely of soft rubber. His contrivances and writings have been largely instrumental in bringing the irrigation treatment into popular favor in America.

Chetwood, likewise, has devised an excellent appliance for urethral irrigation. This consists of a blunt nozzle with an afferent and an efferent tube, which permits moderate distention of the urethra and provides for the emptying of the urethra without withdrawal of the instrument. The shielded hard-rubber nozzle used by Lydston is simple, ingenious, and useful.

In all the appliances mentioned above, the fountain syringe principle is employed, the sliding frame, percolator, and peculiar nozzles representing modifications

Fig. 1.

only. They may, therefore, be considered together. They have in common several objectionable features:

First, They are not easily sterilizable.

Secondly, In any solution of potassium permanganate there may be present small crystals. These will gravitate to the bottom of the syringe-bag or percolator and will be first to enter the patient's urethra, perhaps causing distressing irritation. If the weaker irrigation solutions were always made from strong "stock solutions" this accident might be avoided, to be sure; but the strong solution is not always at hand.

Thirdly, In cases where it is not desired to force the cut-off muscle and irrigate the posterior canal, it is not easily possible to instantly shut off the current when the muscle is discovered to be relaxing.

Fourthly, It is difficult to accurately gauge the pressure.

Fifthly, It requires considerable time to fill the bag or percolator for each irrigation.

In view of these features, the writer has found it convenient, in irrigating according to Janet's teaching, to dispense with every complicated apparatus and to use a large metallic piston syringe armed with a rounded, blunt nozzle and provided with a movable protective shield. This instrument possesses the following advantages:

First, It is easily and entirely sterilizable.

Secondly, The solution is taken from the top of a column of liquid, as, for example, in a large graduate (see Fig. 1), and crystals that may be present in the bottom of the receptacle are not taken up.

Thirdly, With the piston syringe the pressure exerted may be finely gauged by the resistance against the operator's thumb pressing the piston.

Fourthly, The force of the current may instantaneously be lessened or the stream entirely cut off.

Fifthly, The use of the instrument is attended with no inconvenience or loss of time.

Sixthly, It is easily transportable.

Seventhly, It is simple in construction and application.

It consists of a five-ounce metallic piston syringe with detachable blunt nozzles. A thin-spun metal shield (see Fig. 2) surrounds the barrel. The shield is made movable, in order that it may be held up while the nozzle is introduced into a graduate or other vessel for filling. The syringe being filled, the shield is pushed down along the barrel and fastened by a slot-and-pin catch about an inch behind the tip of the nozzle.

FIG. 2.

With this instrument the precepts of Janet and Valentine can be carried out to the letter—*i. e.*, the solution of potassium permanganate can be introduced hot, often, copiously, and under pressure. It greatly simplifies the technics of irrigation. With the Valentine apparatus the procedure is made unnecessarily laborious, absolutely nothing being accomplished which cannot be done equally efficiently with the simpler shielded piston syringe. The latter has been made for me by W. H. Armstrong & Co., of Indianapolis.

THE CORRECTION OF THE DEVIATIONS OF THE NASAL SÆPTUM, WITH SPECIAL REFERENCE TO THE USE OF THE AUTHOR'S FENESTRATED COMMINUTING FORCEPS.*

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THE importance of a normal nasal sæptum in the human economy is so uniformly recognized that various writers have been led to discuss the subject, and many operators have devised different methods for the correction of the numerous deformities to which the sæptum is subject.

Nearly every one of these methods is found to possess some merit and to have advantages over others in certain particular cases or conditions, but the method that has proved most efficient in the hands of the writer does not seem to be clearly understood by the majority of operators, and I therefore take this opportunity to explain its many merits and advantages.

It should be distinctly understood at the outset that no one method is equal to all the requirements of every case, for the deformities of the sæptum are so infinitely varied that such a claim for any one method would be as absurd as it would be to attempt to make one tool or implement do every kind of mechanical work.

Classification.—To classify all the numerous malformations to which the sæptum is liable is well nigh impossible. The frequent designation of different deflections of the sæptum by the terms "zigzag," "sigmoid," "letter S," "angular," "ridged," "bowed," etc., which apply to the shape of the deflection alone, are quite inadequate, for they simply describe the conformation of the deflection, without reference to its location, whether it be in the cartilaginous or osseous portion.

The only classification, therefore, which, from an anatomical standpoint, is at all satisfactory, is that made with reference to the anatomy of the sæptum as first proposed by Jarvis. According to this classification, therefore, we have: First, deviations of the osseous

* Read before the Twenty-Second Annual Meeting of the American Laryngological Association, Washington, D. C., May 3, 1900.

portion—that is, the perpendicular plate of the ethmoid and vomer, either alone or combined; secondly, deviations of the cartilaginous portion—that is, the triangular cartilage; and, thirdly, a deviation of the osseo-cartilaginous portion, comprising the anterior part of the perpendicular plate of the ethmoid and the posterior part of the triangular cartilage, the anterior superior portion of the vomer and the lower border of the triangular cartilage, the region where these different portions are joined (Fig. 1).

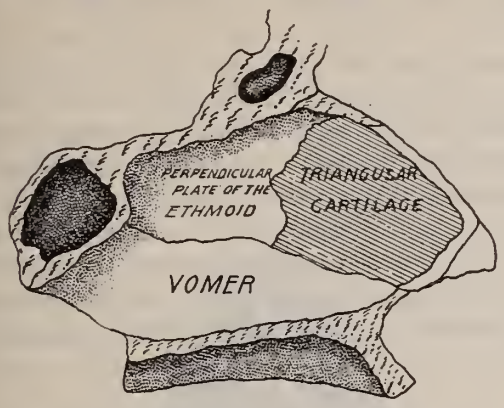


FIG. 1.—Showing the component parts of the sæptum.

Figs. 2, 3, and 4 are diagrammatic illustrations of a horizontal section through the centre of the sæptum, the length of the osseous and cartilaginous portion being at this point about equal. If the section were through the lower border of the sæptum it would be almost entirely bony, owing to the forward prolongation of the anterior portion of the vomer. In some instances there may be a combined deviation of the entire sæptum, termed "bowed sæptum" (Fig. 5), when it describes one long curve, both vertically and anteroposteriorly, from one end to the other. Other classifications, therefore, need not be considered. Such conditions as exostoses (Fig. 6) or encondromas (Fig. 7), located on one side of the sæptum only, which give the sæptum on that side the appearance of being deflected, demand attention here only when associated with deviations of the sæptum requiring correction.

Frequency with which Different Portions are Deviated.—With reference to the frequency with which these different portions of the sæptum become distorted, it is found that the posterior part of the osseous portion is but rarely deviated alone; and even when occurring in connection with that of the other portions of the sæptum, it is found in only about five per cent. of cases.

Next in frequency comes the deviation of the cartilaginous portion alone, found in about twenty per cent. of cases; whereas the osseo-cartilaginous portion (the junction of the perpendicular plate of the ethmoid or of the vomer with the triangular cartilage) is found deviated in about seventy-five per cent. of the cases coming under observation. Twenty per cent. is a very liberal estimate for the frequency of the deviation of the triangular cartilage alone; for when the deviation is confined to the anterior half of the sæptum, the anterior portion of the perpendicular plate of the ethmoid and of the vomer are in most cases deviated with it.

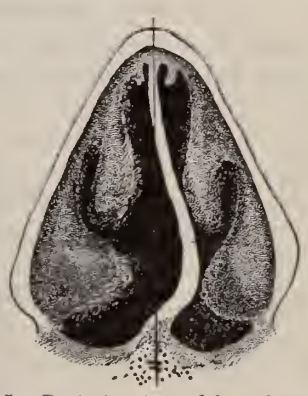


FIG. 5.—Deviation termed bowed sæptum.

Thus it is readily seen that a method adapted for the correction of deviations of the cartilaginous portion of the sæptum alone should be employed in but twenty per cent. of the cases, while a method specially adapted for the correction of deviations of both the osseous and osseo-cartilaginous portions is required in eighty per cent. of all deviations of the nasal sæptum.

FIG. 2.—Deviation of the posterior portion of the vomer.

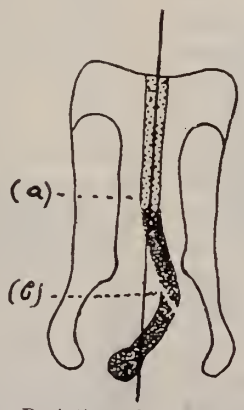


FIG. 3.—Deviation of the triangular cartilage, with dislocation at its columnar attachment.

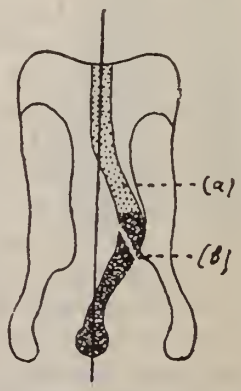


FIG. 4.—Deviation of the osseocartilaginous portion.

(*a*) (*a*) The osseous portion to be fractured in changing the direction of the deflection of the cartilage. (*b*) (*b*) The oblique line of incision through the cartilage.

The Writer's Method and the Principles on which it is Based.—The method which the writer has found to

meet these requirements is one which he has employed for ten years, and which he presented before this association nine years ago.* It is one that meets the different requirements in the greatest number of cases, needing, in a limited number of cases only, to be supplemented by other methods or by the use of special instruments suited to deal with certain particular and localized conditions.

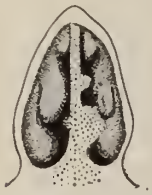
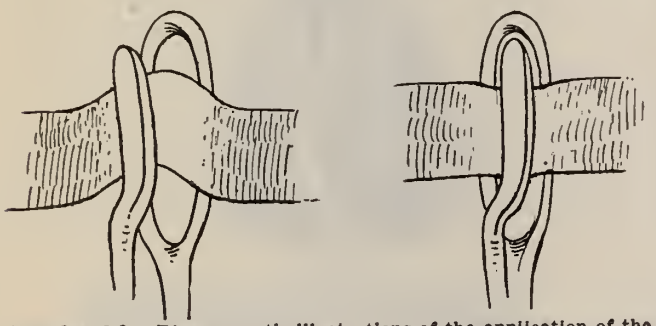


FIG. 6.—Illustrating exostosis of the sæptum.

FIG. 7.—Illustrating ecchondroma of the sæptum.

This method is based on the principles of a force being applied to one side of the sæptum, indenting it between two opposing points of resistance placed on the opposite side, as illustrated diagrammatically in Figs. 8 and 9.



FIGS. 8 and 9.—Diagrammatic illustrations of the application of the principle of the fenestrated forceps in fracturing a deviated sæptum.

Description of the Instrument and Method of Using It.—The application of the foregoing principle to deviations of the sæptum is made by means of a fenestrated forceps, one blade of which is made in the form of an ovate ring, termed the "ring, or female blade," and the other made in the form of a long, narrow, rounded blade, termed the "single, or male, blade" (Fig. 10); the latter fitting loosely into the former, so as not to unduly compress or lacerate the sæptum. The blades are attached to the handle by a curved neck, or stem, sufficiently long to pass around the frenum of the nostril so as to avoid compressing it when the force of the blade is applied to the sæptum. The forceps is made with blades of different sizes to meet the requirement of different-sized nasal passages or sæptum, or deflections, as the case may be.†

On straightening a deviated sæptum, the male blade is inserted into the nostril on the convex side of the deflection and the ring blade on the opposite side (Fig. 11), when, by closing the blades, the deflected portion is crowded into and partly through the opening far enough to forcibly indent the central portion and fracture it without disturbing or bringing a strain on other portions of the sæptum. The distance to which the single blade is forced into the ring blade is governed by a set screw in the handle, and the extent to which it should be allowed to pass into the ring blade is governed by the thickness of the sæptum, the position and degree of the deflection, and the size of the blades employed.

In straightening a deviated sæptum, no matter if the deflection is confined to the cartilaginous portion alone, it is of the utmost importance that the bone at, or adjacent to, the attachment of the cartilage be fractured. By so doing, the change in the direction of the attachment of the cartilage is made in the bone (*a, a,* Figs. 3 and 4), so that, so soon as the fractured bone is reunited and becomes firm, it permanently holds the cartilage in its new position. With this point made clear, the superiority of the ring forceps over the flat-bladed forceps, like Adams's forceps, must at once be apparent.

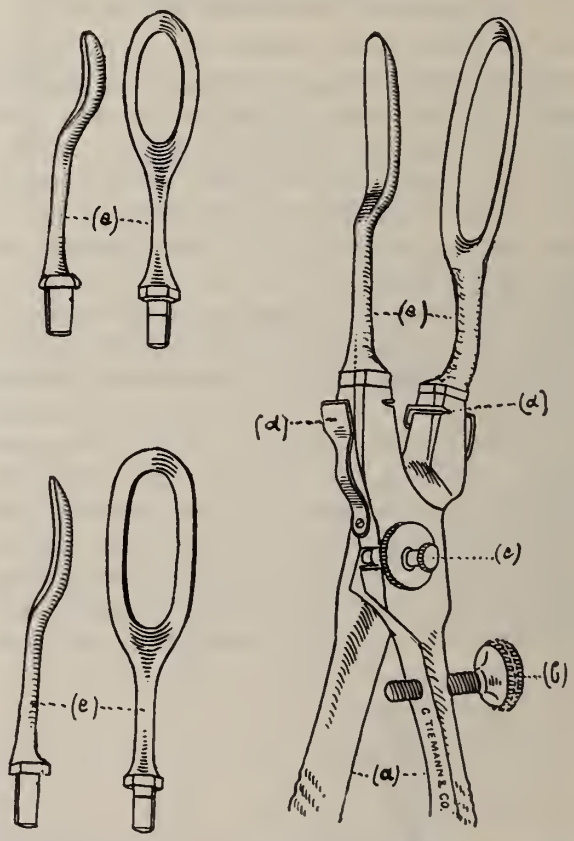


FIG. 10.—Showing the various parts of the instrument. (*a*) the handles with blades attached; (*b*) the set screw for regulating the adjustment of the blades; (*c*) lock permitting the handles to be detached from each other; (*d*) (*d*) spring catch for holding the blades firmly in the handle; (*e*) (*e*) (*e*) blades of different sizes that fit into the handle.

With flat-bladed forceps it is only possible, except by twisting the blades, to bring the bend in the sæptum up

Transactions of the Thirteenth Annual Meeting of the American Laryngological Association, 1891; also *Transactions of the Fifteenth Annual Meeting of the American Laryngological Association*, 1893, page 83.

† To simplify the instruments the necessary blades of different sizes are made separately and fitted to one handle, which George Tiemann & Co. have very admirably put up for me in one case, together with the other instruments to be used in connection therewith.

to the median line, which never suffices to fracture the cartilage, and but seldom the bone, and then only when the bend in the bone is so great, and the blade of the forceps sufficiently wide, to bring a large amount of force to bear at the centre of the angle. As it is only by twisting the forceps that a fracture of the bone can be brought about, it is readily seen that, the moment the blade is twisted, the sæptum must either be lacerated or loosened at its attachment, to accommodate the greater

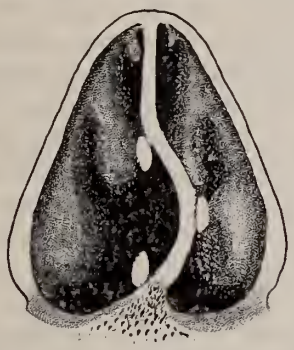


FIG. 11.—Showing in outline the position of the blades in fracturing the sæptum.

distance of the line through the centre between the blades; whereas, by means of the fenestrated forceps, very little force is required and no strain is brought to bear on adjacent portions of the sæptum, and the line of the contour of the deflection is made shorter by having the angle or bent portion crowded into the fenestrated blade, as illustrated diagrammatically in Figs. 8 and 9.

By this method, therefore, the well-known dangers recognized as attending the fracture of the vomer by flat-bladed forceps (like the Adams forceps, which requires twisting and wringing of the forceps, causing laceration of the parts, possibly disturbance of the upper attachments of the perpendicular plate of the ethmoid, and brain complications) are avoided. By this method, also, by the selection of proper-sized blades, the fracturing of the sæptum can be limited to the deflected portion only, or to any part desired, without disturbing the other portions of the sæptum.

This method, while especially adapted, as I have said, for the correction of deviation of the osseous and osseo-cartilaginous portions, is also of service in cases of moderate deviations of the cartilaginous portion alone, by simply fracturing the adjacent bone around the deviated cartilage and forcing the central deflection of the cartilage into the fenestrated blade. With this instrument, also, the cartilage can usually be fractured sufficiently to overcome the elasticity without the necessity of incising or lacerating it, and this can be accomplished by no other method with which I am acquainted. Then, by holding the sæptum in position by a support placed in the previously occluded side for a few days, until sufficient inflammatory exudate has been thrown out or ossification of the fractured bone has taken place, so as to maintain the angle of the deflection in its new and straightened position, the necessity of maintaining a support to the sæptum for a considerable time, until the resistance or elasticity is overcome by prolonged pressure, as generally advocated, is avoided.

Providing for Redundancy.—It is self-evident that a deflected sæptum is larger or wider and longer and has a greater extent of surface than a straight one. But, on straightening the sæptum, much of this redundancy of the cartilaginous portion can be accommodated by the mobility and flexibility of the cartilaginous portion of the dorsum of the nose and of the lower portion bounded by the frenum; whereas, in the osseous portion, the redundancy is accommodated by the impaction and crowding together of the fragments, if sufficiently comminuted by the forceps. When, however, the bend in the cartilaginous portion is large, it is not only advisable, but often necessary, to provide for the redundancy by incising the cartilage in order to allow the severed portions to slide past each other.

Methods of Incising the Cartilage to Provide for Redundancy.—The method of incising the sæptum that has given me the most satisfactory results, is by making the incisions oblique, so that the ends of the fragments will slide past each other like two wedges (Figs. 12 and 13), and at the same time permit a portion of the cut surfaces to remain in apposition for union to take place.

The greater the redundancy, and the more acute the angle of deflection, the greater will be the lapping at the end, and, accordingly, the incision should be correspondingly more oblique, to permit the proper coaptation of the cut surfaces. When the deflection is horizontal, forming a ridge on one side and a corresponding groove on the opposite side, the incision should be hori-

FIG. 12.—Showing the oblique incision longitudinally through the cartilage.

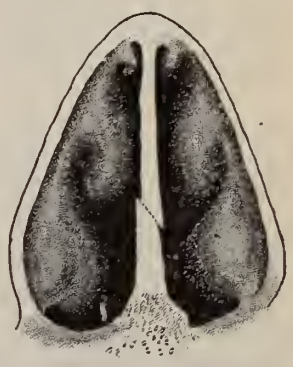


FIG. 13.—Showing coaptation of the cut surfaces after the sæptum has been straightened.

zontal only. When this groove and ridge run up and down through the centre of the cartilage, the incision should be vertical; but when the deflection consists of the combination of a vertical and a horizontal bend, so as to make it somewhat conical, as if a pressure had been applied at one point, indenting the sæptum, the incision should be both vertical and horizontal (*a, a* and *b, b*, Fig. 16), and each should be made through the sæptum obliquely and along the direction of the axis of the greatest bend or convexity. The incision of the car-

tilage should be made from the convex side with a small nasal cartilage knife (Fig. 14), with the finger in the opposite side, or in free nostril, for a guide. In order to make the incision oblique, the use of the knife is necessary, for with cutting scissors it is possible only to make the incision at right angles to the plane of the sæptum.

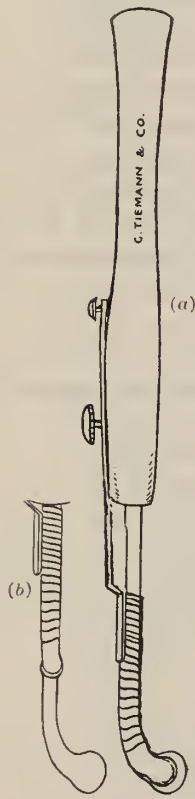


FIG. 14.—(a) Nasal cartilage knife, having a shield for regulating the depth of the incision when it is not desired to cut entirely through the sæptum; (b) shield thrown back when not required.

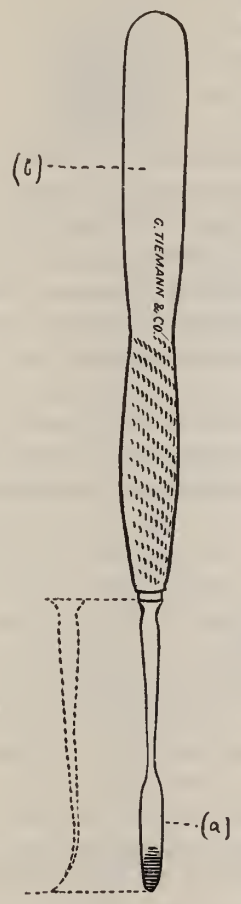


FIG. 15.—Perichondrium elevator and sæptum spatula combined. (a) Perichondrium elevator; (b) Sæptum spatula for putting the sæptum in line after the use of the forceps.

On making the incision, if it is to be horizontal, the knife should be passed in carefully to the further point of the convexity and the cut made on drawing the knife forward; if a vertical incision is to be made, the knife should enter at the upper portion of the bend and the cut be made downward. In many cases it is necessary only to make the incision through the cartilage to the under side of the perichondrium on the other side. This can be done very readily with the finger on the opposite side of the sæptum, when, by the careful use of the knife, the approach of the blade can at once be detected as it passes through the cartilage. The perichondrium can then be raised for a short distance from each inner edge of the cut surfaces sufficiently to allow the upper fragment to slide under. This can very readily be done with a small elevator made for that purpose, as represented in Fig. 15 (a), which is passed through the incision and directed by the finger in the free nostril. In other cases, when the deflection is moderate in degree and it is desired only to change the directions of the angle or to overcome the resistance or elasticity of the cartilage, the elevation of the perichondrium is unnecessary.

In this way a wound of the mucous membrane in the concave side of the sæptum is avoided, obviating the necessity of obstructing the nostril with any form of dressing, as the support of the fragments is maintained entirely from the previously obstructed side.

Before the incisions are made, the sæptum should be carefully explored to ascertain the amount of thickening, and whether ridges, spurs, or adhesions, are present, requiring removal, before the straightening is undertaken. This can be much facilitated by the use of suprarenal extract and cocaine. Frequently, and especially if the turbinated bodies are enlarged or the sæptum so much deflected as to obscure the vision of the convex side, the use of a small nasal sound, or of the sæptometer, will be required. Frequently, however, the most accurate information can be obtained by exploration with the finger, which, if well oiled, is readily introduced into the concave side, and the yielding nature of the cartilage and turbinated bodies will permit the little finger to be crowded well into the convex or occluded side.

In some cases the nature of the deflection may be such that all the spurs or ridges on the cartilaginous or bony portion cannot be readily removed before the operation. In such cases the sæptum can be straightened first and any irregularities that may remain removed afterwards.

The Operation for Straightening the Sæptum.—After the preliminary operations for excrescences or redundancies have been performed and any necessary incision made, the fenestrated forceps, with blades of suitable size, is introduced, with the ring or female blade on the concave side of the sæptum, the male blade being

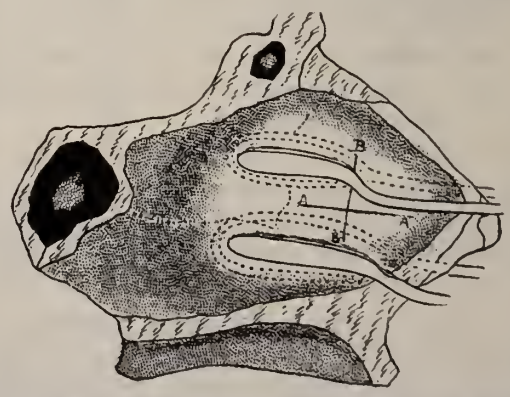


FIG. 16.—Showing the application of the forceps in fracturing different portions of the sæptum. *A A* and *B B*, horizontal and vertical incisions through the cartilaginous portion of the sæptum.

very readily crowded into the obstructed nostril on the convex side (Fig. 11). The forceps is so constructed that the blades are separable like those of an obstetric forceps, which is readily locked after the blades have been introduced. When the blades are in proper position, the lower portion, or the junction of the cartilage with the anterior portion of the vomer, should be fractured; then

the junction of the cartilage with the perpendicular plate of the ethmoid, so that all the resistance or elasticity has been entirely overcome.

In the selection of the blades in each particular case, it should be made with reference to the size or length of the deflection. In some cases, however, the deflection in the osseo-cartilaginous portion will be very much greater than the size of the meatus, so that a ring blade large enough to cover the deflection cannot be introduced, in which case a portion of the deflection can be broken up at a time, the position of the forceps being changed, or different-sized blades selected according to the site of the part to be fractured (Fig. 16), and new portions of the deflection grasped until the deflected portion has been sufficiently broken up and the elasticity removed to allow it to be placed in the median line.

In many cases there is a deflection or dislocation of the triangular cartilage at its attachment with the vomer, associated with a dislocation or deflected attachment of the vomer itself along the maxillary ridge. This can ordinarily be corrected by forcibly holding the forceps down to the floor of the nose, as shown in Fig. 17, and, by catching the lower portion of the ring blade over the stump of the maxillary ridge, a sufficient

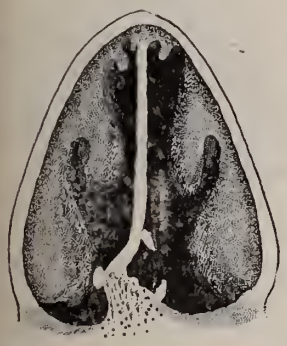


Fig. 17.—Dislocation and deflection along the maxillary ridge, and the application of the forceps in correcting it.

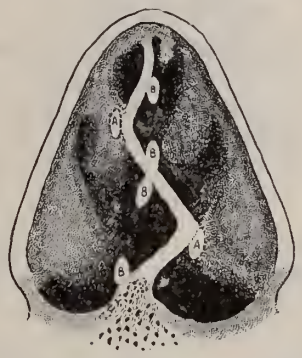


Fig. 18.—Zigzag deflection, showing how the forceps is reversed in correcting it.

pressure can be brought by the single blade to fracture the attachment and set the sæptum over to its proper position. In case ossification is too firm, the operation can be facilitated by loosening with the chisel or saw the bone at its lower attachment.

When there is a double deflection, forming a "zigzag," or "sigmoid," deflection, the centre of which is usually found along the line of the attachment of the triangular cartilage with the perpendicular plate of the ethmoid, it is necessary to reverse the blades of the forceps for the two sides, forcing one portion over in one direction and the other portion over in the opposite direction, as shown in Fig. 18. But, owing to the occasional difficulty in some cases of maintaining the parts in position after a double operation, it is frequently advisable to make each deflection a separate operation, the second one being performed when the parts are thoroughly fixed in place after the previous operation.

After the forceps is used, and before the dressing or support is introduced, the sæptum should be carefully explored with the small nasal spatula, as shown in Fig. 15 (*b*), or with the finger, to ascertain if all the elasticity of the fractured portion has been overcome. If any elasticity still remains, this should be overcome by the use of the forceps at the point of resistance.

When this has been accomplished, the sæptum should be put in the median line preparatory to the introduction of the dressing. For this purpose the nasal spatula or perichondrium elevator is admirably adapted, although in many cases the flat-bladed Adams forceps, having parallel blades, is exceedingly serviceable for putting the fragments and the entire sæptum exactly in the median line.

Method of Dressing or Support.—Among the various devices for holding the sæptum in place, I have found no support so satisfactory, and at the same time so thoroughly aseptic, as a plug made of sterilized cotton or gauze wrapped around a small metal plate to give it firmness, and of the requisite size to fill the nostril comfortably. This is placed in the previously occluded nostril or the convex side toward which the sæptum has been deflected. In case there has been a double deflection, one should be placed on each side, opposite the point of previous convexity; the other nostril, or the formerly concave side, where no support is necessary, being left free for respiration.

The advantage of this form of support over the hard-rubber tube or the various other mechanical appliances that have been devised for this purpose, is that the nasal passages can be made and maintained thoroughly aseptic, which is impossible when these other appliances are used; and, moreover, the healing of the wound is not only more readily promoted, but the danger of erosion of the wound, thereby preventing healing and endangering hæmorrhage, is entirely avoided.

Simpson's Berney's compressed cotton tampons, if they have been sufficiently sublimated previously to compression to maintain them thoroughly aseptic, are an ideal dressing for this purpose; although care will have to be exercised lest too large a sponge be selected, that may, after becoming wet and expanded, force the sæptum over beyond the median line.

Preparation of the Parts for the Reception of the Dressing.—Before a dressing or support is introduced, and, in fact, before the operation is undertaken, the nasal passages should be thoroughly cleansed by syringing with a warm borated bichloride solution, 1 to 5,000, and after the operation has been performed they should be again thoroughly cleansed with the same solution. The parts are then dried with sterilized cotton, dusted with an antiseptic powder, as iodoform or urophen, and the dressing introduced. The dressing, however, before introduction, is saturated with the bichloride solution, to which may be added a small amount of tannin to check any prolonged oozing of blood, which sometimes takes place when spurs have been removed and other

cutting done preliminary to the operation of straightening the sæptum. If the nostril and the dressing have been made thoroughly aseptic and the dressing carefully and properly inserted, it can, if of cotton, be left *in situ* for from three to four days before removal. It can then very readily be removed without pain or discomfort by slightly dazing the patient with a few whiffs of chloroform. The nasal passage is then thoroughly irrigated with the bichloride solution, anæsthetized by cocaine, and a fresh plug similar to the previous one introduced. This is left *in situ* for two days longer and removed.

By this time the sæptum is usually self-supporting, sufficient provisional callus or inflammatory exudate having been thrown out to render the parts rigid enough to require no further support. It is, however, advisable to watch the sæptum, to see that there is no sagging back, necessitating further support for a few days longer. If it is necessary, a hard-rubber or aluminum tube can now be used to advantage. It should be entirely smooth and without perforation, which can serve no purpose except to afford a lodging-place for discharges to decompose in.

Local and General Anæsthesia.—In performing the operation for deviated sæptum in children, the use of general anæsthesia, preferably chloroform, is always necessary, and usually in timid adults also, although in many cases it can be performed by the use of local anæsthesia alone.

Usually, with adults, I do all the preliminary work under cocaine, aided by suprarenal extract, and then, with the whole sæptum thoroughly anæsthetized, a small

FIG. 19.—Exostosis and ecchondrosis at angles of deflection with enlarged turbinated bodies.

FIG. 20.—Showing transfer of obstruction by straightened sæptum in Fig. 19, if enlargement of turbinated bodies is not removed.

amount of chloroform, a few whiffs, is given, just sufficient to daze the patient while the fracturing is being done. For the other portions of the operation, chloroform is entirely unnecessary, and no pain or special discomfort should be experienced by the patient.

We may briefly summarize the *modus operandi* of straightening a deviated sæptum by this method as follows:

After the extent and position of the deflection has been clearly ascertained, the special plan of operation required in each particular case is determined upon. If we find in the passage on the concave side of the sæptum a greatly enlarged middle or inferior turbinated body, as we frequently do (Figs. 12 and 19), this should be reduced to its normal dimensions, and the parts healed, before the operation is undertaken; otherwise, we would simply transfer the nasal obstruction to the opposite side by straightening the sæptum, as shown in Fig. 20.

If we find an exostosis or an enchondroma (Fig. 19) at the angle of the deflection on the convex side, as we usually do, this should first be removed with a saw, trephine, or cartilage knife, as the case may require.

If the deflection is confined to the osseocartilaginous portion alone, or is associated with deviation of the cartilage, by fracturing the osseocartilaginous region, so as to change the angle of the attachment of the cartilage, and holding it in place until healed, the deformity can be readily corrected.

If the deviation is confined to the cartilage alone, by fracturing the osseocartilaginous portion it can readily be put in the median line.

If the deviation of the cartilage is concave or indented, fracturing or incising the cartilage itself may be necessary.

If moderate in amount, simply incising the cartilage from the convex side through the point of greatest convexity to the perichondrium on the opposite side, under the guidance of the finger in the free nostril, so as to destroy the elasticity of the cartilage, may be a sufficient supplement to the osseocartilaginous fracture.

If the deflection in the cartilage is so large that the redundancy must be provided for, more extensive incisions through the cartilage are necessary. These should be made obliquely, either entirely through the sæptum to permit the cut ends to slide past each other (Figs. 12, 13, 19, and 20), or only to the perichondrium (Fig. 21), which is raised from one edge for a distance sufficient to allow the other edge to slide under as the case may require.

With these preliminaries completed, the sæptum is fractured and put in the median line, the parts made aseptic, the dressing or support introduced, and the sæptum maintained in the median line until ossification and fixation of the parts have taken place.

If the operation has been carefully and properly performed and all elasticity or resistance at the seat of the deformity has been thoroughly overcome, a support for five or six days, until fixation of the parts by plastic exudate has taken place, is, in ordinary cases, all that is or should be required.

Later, when the sæptum has become firm and the healing process completed, any slight irregularities can be trimmed off, leaving the sæptum on both sides straight and smooth, without concavities or depressions to serve as a lodging-place for mucus or other discharges.

Without detracting from the methods of others,

which in many cases are admirable for the correction of the particular deformity to which they are specially adapted, I shall briefly summarize the special advantages that can be claimed for the superiority of this method over other methods for the correction of the various deviations of the sæptum.

First. The facility and ease with which, in every instance, the osseous and osseocartilaginous portion of the sæptum can be fractured and all resistance removed without incising, or even lacerating, the sæptum, may be noted.

Secondly. By fracturing the anterior portion of the osseous sæptum and changing its direction by putting it in a straight line together with the cartilaginous portion, so that, when this osseous portion becomes reunited in its new position and firm ossification has taken place, the cartilaginous portion is firmly held in its new position. As osseous tissue does not readily bend, this must necessarily act as a firm post or support, to hold the cartilage in its new position, very much in the same manner as the direction of the hang of a door is changed at its hinges, as illustrated in Figs. 3 and 4.

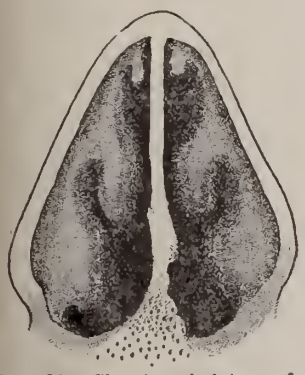


Fig. 21.—Showing bulging of mucous membrane after straightening the sæptum when the perichondrium has been raised at the time of the incision of the cartilage.

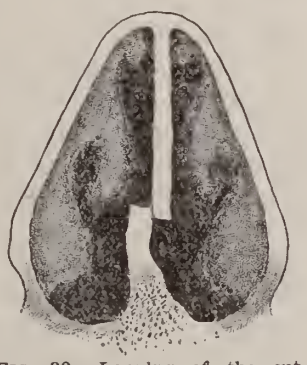


Fig. 22.—Lapping of the cut surfaces after straightening the sæptum when a right-angle incision had been made.

Thirdly. Moderate deflection of the cartilaginous portion of the sæptum can also be fractured with the forceps and the elasticity overcome, without the necessity of incising the cartilage.

Fourthly. By this instrument, wrinkles and curves can very readily be smoothed out, no additional operative measures being required, except for the removal of spurs and ridges or the breaking up of adhesions or attachments that may have previously formed.

Fifthly. By this method, dislocations of the triangular cartilage at its articulation with the vomer, or dislocations of the latter at its maxillary attachment, can very readily be reduced and the parts put in their normal position. By this method, also, except in rare cases, the extensive incisions proposed by different operators are obviated; such as crucial or rectangular incisions with cutting forceps; the horseshoe incisions through which the deflected portion is pushed, which cannot be of special service except in limited indented deviations of the triangular cartilage; or the separation and setting over of the base of the sæptum into the free nostril far enough to leave both nasal passages of equal calibre, which simply compensates for the bend in the sæptum, without straightening it after all.

Sixthly. In those cases in which incision through the cartilage is required to provide for the redundancy, the superiority of the oblique incision, which promotes coaptation of the cut surfaces, over the right-angled incision, which does not, is at once apparent (Fig. 22).

Finally. The superiority of the fenestrated forceps over the flat-bladed forceps or the fingers, as proposed by some operators, for breaking up of the base of the fragments at their bony attachments, is apparent. It also obviates bringing strain on the sæptum and disturbing its upper attachments, thus endangering brain complications, and by completely removing the elasticity of the attachments of the deflected parts, it facilitates the more ready adjustment of the sæptum to its normal position and diminishes to a minimum the length of time a support to the sæptum is required.

THE PATHOLOGY OF INTRA-UTERINE DEATH.

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(Continued from page 587.)

Fatty Degeneration of the Placenta.—As a primary affection, true fatty degeneration of the placenta must be considered a rare disease, and as analogous to fatty changes taking place in other organs of the body. The occurrence of this condition presupposes an impaired vitality of cell protoplasm. The vital activity of these cells becomes depressed, gradual or rapid destruction of their protoplasm ensues, and eventually the oxidizing power is crippled or entirely destroyed. The first essential for fatty degeneration to become possible is found in the altered quantity and quality of the blood brought to the cells of the placenta. This gradually changes the character and physical condition of these cells. This being so, it is natural to suppose that fatty degeneration of the placenta results from various forms of anæmias, blood dyscrasias, and defects of the umbilical cord. The degenerative process is most frequently found in the villi and their immediate neighborhood. It is extremely probable that during the formation of the chorion a greater number of villi are developed than is afterward found to be required. The useless villi atrophy by a process of fibro-fatty degeneration, in consonance with a general law of Nature. It is possible for this process to become more active than the necessities of the case demand, and to extend to surrounding villi. Compression, and even total obliteration, of a large area of active villi

may follow. In this manner the function of the placenta as a supplier of nutrition is impaired or entirely abrogated, and the fœtus dies by a slow process of starvation. When the disease is not extensive, the child may be born alive, but of a low order of vitality and lacking in the attributes of a healthy, normal child. Considerable confusion has arisen in the minds of medical men in regard to the frequency of this disease. They have confused fatty degeneration as a primary affection with fatty metamorphosis following on the death of the fœtus, as the result of some other disease. If a distinct line were drawn between these two processes, it would probably be seen that true fatty degeneration of the placenta was not nearly so frequent a disease as has been stated by some writers. It sometimes happens that when a fœtus perishes it is not immediately expelled from the uterus. In such a case an effort is immediately initiated to cause its absorption. The first stage in this process is a degeneration into fat, which is then amenable to absorption. It is quite probable that the detachment of the membranes from the uterine wall at the end of pregnancy is affected by fatty degeneration. This can readily be seen on making a careful examination of the placenta immediately after normal labor. This is more apparent in the membranes and round the edges of the placenta. The condition is probably not a true fatty degeneration in the sense that we apply the term to the process generally. It is Nature's method of liberating the placenta and membranes from their attachments. It would seem that this separation is brought about gradually, for the nutrition and respiratory functions have to be maintained until the complete termination of pregnancy.

Œdema.—The placenta is sometimes affected by dropsical enlargement. When at all extensive, the condition can readily be detected. Usually the placenta is considerably larger, more friable, and of a paler color than normal. The effect upon the child varies according to the extent of the disease. When the disease is at all extensive the child perishes long before the termination of pregnancy. Should it survive, the body will be poorly nourished, and there may be evidences of dropsical effusions into the cellular tissue. Just how this peculiar condition is brought about is somewhat difficult to determine. Barnes, who devoted considerable time and attention to its pathology, found, associated with it, hydræmia, anasarca, Bright's disease, and valvular affections on the part of the mother, and dropsy on the part of the child. Other authorities suggest that it is due to some obstruction to the circulation through the umbilical cord. It is usually in the villi that the infiltration first appears. They become dilated and cystic, but this condition should not be confounded with cystic degeneration of the villi already described.

Calcareous Degeneration.—Calcification of portions of the placenta or membranes is sometimes found. The subject is an extremely interesting one from the fact that it may seriously interfere with the life of the fœtus. The condition is a purely passive one, for the cells take no active part in the process. The parts are gradually petrified by deposits of the earthy salts continually circulating in the blood. These salts cannot affect healthy tissue injuriously, but once diminution or extinction of vital activity takes place, salts become deposited in its substance. In the circulation these earthy salts are in solution, and consist chiefly of phosphates and carbonates of calcium and magnesium. The solvent is probably carbon dioxide. The condition is a very frequent one as a senile change. Calcareous degeneration may become quite extensive. When speaking of ectopic pregnancy, it was then stated that the whole fœtus sometimes became completely calcified. It is then known as a lithopædion. The deposits are more frequently found in the decidual membrane than in the placental substance. Stellated and irregular patches of calcareous deposits can be felt or seen on the decidual surface. Sometimes they are hard, round, and gritty; more frequently they are flat and amorphous. They can be scaled from the decidual surface quite readily. They are not limited to the decidual membrane, but appear to follow into the intercotyledonary spaces and into the villi. Occasionally the whole placenta appears to become affected. Decker and Millet, as quoted by Ercolani, found a placenta studded with chalky deposits to the number of more than two hundred. The fact that the disease so frequently begins in the decidual surface would indicate that this membrane was not in a healthy condition when impregnation took place. Chronic endometritis previous to pregnancy would lower the vitality of the cells sufficiently to permit the deposit of earthy salts. The placenta becomes intimately adherent to the uterine wall, and frequently is quite difficult to remove. The disease is more frequent toward the end of pregnancy, and, for this reason, many of the older writers maintained that it was an indication of over-ripeness or prematurity of the afterbirth. By examination, the condition can be more readily recognized by touch than by sight. When the particles are small they feel like fine sand between the fingers. All degrees between this and hard, stony masses can be found. When the disease is in any way extensive, the nutrition and respiration of the fœtus are seriously interfered with, and the child may die by a slow process of starvation or asphyxiation, or both. Should it survive, it would be ill-nourished and puny, and liable to live but a short time. The disease is not limited to any particular class of women. For a time it was thought to be associated with scrofula, tuberculosis, anæmia, poor living, and allied diseases, but these are probably not the exciting causes or starting points of this disease. It is frequently found in the placentæ of women who are unusually healthy and robust.

Myxoma Fibrosum.—This disease was first described by Virchow, and consists of a fibroid hypertrophy of the villi and their stems. These enlargements are not uniform, but bulge out into distinct tumors in many parts

of the placental structure. The disease is somewhat rare, but is of sufficient importance to interfere seriously with the function of the placenta, when present.

The tumors vary in size from that of a pea to that of a hazelnut. They are attached to the main trunk by stems of varying length. When an incision is made through into the centre, the hard nodular mass bulges out of the capsule. They originate from the central part of a villus. When speaking of diseases of the decidua, it was there stated that the central, or parenchymatous, part of each villus was composed of mucus. This disease is to be regarded as a transformation of this mucus into fibroid tissue. It is much more frequently found toward the later months of pregnancy, and in this respect differs from cystic chorion. Some of the cases of sarcoma of the placenta are probably in reality instances of the central part of a villus degenerating into fibroid substances. When the disease is limited a viable child may be born, although emaciated and puny; if, on the other hand, an extensive area is involved, the child, of necessity, perishes.

Cystic Disease.—Several authors have described certain neoplasms found in the placenta and between the various membranes as cystic in character. They are obviously not true cysts, as we understand the condition. Frequently they are the remains of broken-down blood extravasations, found embedded in the substance of the placenta; or, what is equally common, between the chorion and amnion. When in the latter situation, they may attain a considerable size. Sometimes they are found to be composed of coagulated fibrin, evidently the result of a previous inflammation. Ercolani describes a case in which the contents were composed of pultaceous matter, evidently fat granules, and disintregated fibrin. The wall was constituted of a large number of small, calcareous concretions and fibrous laminæ. These are quite rare, and but seldom interfere with the integrity or function of the placenta.

Syphilitic Placentæ.—All authorities agree that syphilis is one of the most potent influences in the death and destruction of the fœtus. It is important, therefore, to appreciate what effect this disease may produce upon the substance of the placenta. In looking through the literature of this subject, it is found that considerable diversity of opinion exists upon many points of this important matter. There are many standards given as to what constitutes a syphilitic placenta. The majority of them do not agree. It is an extremely difficult task, if not an impossible one, to state exactly what constitutes a syphilitic placenta. No two cases of syphilis affect their victims in a similar manner. There are all gradations in the virulence of the initial lesion, as there are all degrees in the resisting forces of the constitution. What makes the question more complicated, when applied to the placenta, arises from the fact that the placenta is composed of two distinct parts, one originating from the mother and the other from the fœtus. When speaking of general constitutional conditions affecting the well-being of the fœtus, it was then stated that the influence of syphilis upon the fœtus depended largely upon the virulence of the type and whether the condition was transmitted from the mother or father. The effect of syphilis upon the placenta will also vary according to the severity of the disease, but more especially according to whether the male or female parent is responsible. These are general rules, but it must not be forgotten that occasionally idiosyncrasies occur in this disease as in others. Some authorities regard enlargement and thickening of the walls of the arteries in the fœtal portion of the placenta as characteristic of syphilis. There is no doubt that this condition is very frequently present in syphilis, but other diseases are sometimes associated with enlarged and thickened arteries. Virchow maintains that, in the elucidation of this subject, it must not be forgotten that the placenta and membranes consist of a maternal and a fœtal portion. According to him, syphilis during pregnancy produces two varieties of endometritis. The one exerting the greatest influence affects that part of the decidual membrane that enters into the formation of the placenta. From this point the inflammatory action frequently extends to the villi, and causes them first to undergo a fibroid hypertrophy and afterward an atrophy. The second form of endometritis affects principally the decidua vera. This membrane becomes soft, thick, and swollen from vascular proliferation, but it would seem that it does not subsequently undergo fatty or other degeneration. Some doubt has been thrown on the accuracy of this theory of Virchow's by Strausmann and others, who found the same conditions present in women who had not the least trace of a venereal taint. Fränkel made a careful examination upon more than one hundred placentæ in the pursuit of a typical syphilitic placenta. His conclusions are extremely interesting. The placentæ from which he carried out his investigations were those belonging to syphilitic children, and he affirms that a syphilitic placenta has definite characteristics by which it can be recognized. The evidence varies according to whether the virus of syphilis was supplied to the placenta by the father or the mother. When the syphilis is derived from the father, the effects are chiefly centred in the fœtal part of the placenta. They are not, however, limited to this region, but frequently extend to the decidua. The villi become much enlarged, the epithelial covering undergoes great proliferation, and their shape becomes greatly distorted. The blood-vessels are much engorged, tortuous, and the coats considerably hypertrophied. The placentæ are usually considerably larger than normal. As pregnancy advances, the condition of hypertrophy gives way to atrophy. The blood-vessels are in many places entirely obliterated, the epithelial covering fully disintegrated, and then fatty degeneration sets in.

When the syphilis is derived from the mother, it is the maternal portion of the placenta that is primarily

affected. By contiguity of surface, the disease soon involves the villi or fœtal portion. In these cases the decidual tissue becomes enormously enlarged, and eventually compresses and crushes the villi so as to interrupt their function. The consequence is that the placenta soon ceases to be a medium of nutrition and respiration, and the child perishes. When both father and mother are syphilitic before pregnancy, the maternal and fœtal surfaces of the placenta are equally affected, and the change produced will, of necessity, be a mixed one. There is a general tendency to small hæmorrhagic patches in the more affected areas, and the color frequently varies from a light gray to dark brown or black. Priestley's investigations upon this subject coincide with these views so closely that I will here reproduce them in his own words: "I have on different occasions had the opportunity of examining placentæ in the early months of gestation with certain peculiarities of morbid change which I considered were undoubtedly due to syphilis. For example, I examined the placentæ in two separate pregnancies of the same individual. She had contracted syphilis immediately after her marriage, and at the same time became pregnant. During the early part of her pregnancy the vulva became the seat of specific sores, mucous tubercles, and warts. Later, her body was covered with patches of syphilitic psoriasis. She miscarried in both the first and second pregnancies in the fifth month. Both the placentæ exhibited changes very closely resembling each other. On the uterine side of the placenta the decidua was much thickened, and there was great increase of all the cellular and fibroid structures which normally constitute that membrane. Prolongations of this dense tissue were sent down into the substance of the placenta and seemed to terminate about half way through its thickness. The effect of this dense layer was apparently to compress and contract the sinuses or lacunæ, to do away with the spongy character of the organ, and so to prevent the growth of the villi into the sinuses. The villi next to this layer were stunted and atrophied. Those near the fœtal surface were hypertrophied and were beginning to undergo fibroid or fatty degeneration. In all the microscopic sections hypertrophy of the arterial coats in the fœtal blood-vessels was noted, and those nearest the maternal surface were absolutely obliterated."

It must be remembered that all women afflicted with syphilis do not present lesions of the disease in the placenta, so that, with all the information at our command, we are not yet able to demonstrate with precision at all times what is, and what is not, a syphilitic placenta. There are, however, several conditions which, when present, are almost pathognomonic of the disease. They may be enumerated here as consisting of great hypertrophy of the placental villi, fibrous and beginning fatty degeneration of these villi, and thick, fibrous proliferation of the decidual layer of the placenta. When these conditions are found existing conjointly, the suspicion of syphilitic placenta is as near to a certainty as is possible. In the elucidation of this condition, great aid toward diagnosis can be attained by making a rigid examination of the newly born child. It may be extremely emaciated and puny, and may present evidences of snuffles, but these are not constant, and are, even when present, unreliable. There is, however, a peculiar condition associated with the joints that is certainly characteristic. It may be said to be unfailing evidence in syphilitic fœtuses. It consists of a pathological band of abnormal tissue situated between the shafts of the bones and the cartilages of their epiphyses. This appears to be in a constant state of irritation, due to a low state of chronic inflammatory action. There is no other condition or disease akin to this, and it may, therefore, be considered peculiar to syphilitic children. Taken in association with the evidences already stated as being found in the placenta, a proper diagnosis of syphilitic placentæ can usually be determined.

In parting with the various diseases of the placenta herein enumerated, it may be stated in a broad, general way that the detrimental effect to the child will depend upon the amount of damage that is inflicted upon its tissues. Disease may affect portions of the placenta, but sufficient may yet remain intact to carry on its function. All gradations of this may occur. When the function is but partly carried on to the termination of pregnancy, the child will present all the evidences of progressive starvation. In cases in which the process is acute, and a large surface of the placenta is seriously involved in some morbid condition, the life of the child is soon terminated. At first the movements of the fœtus are restless, and sometimes tumultuous, and then it gradually subsides into quiescence and death. By the aid of the stethoscope, the heart beats will be found to have ceased, and then the mother may experience a peculiar heavy feeling in the womb.

Diseases Attributable to the Cord.—The cord consists of two umbilical arteries and a vein. They are held in their relative positions and prevented from kinking by a peculiar gelatinous material, known as Wharton's jelly. The average length of the cord is from eighteen to twenty inches, but it is liable to variations. Occasionally its length is excessive and may measure fifty or sixty inches, and a case is reported in which it attained nine feet. The cord itself is usually attached to the centre of the placenta, although, on rare occasions, it may be inserted in the margin. It is then known as *battledore placenta.* Other anomalies are sometimes found. There may be two cords instead of one, or the cord may split before reaching the placenta. When the cord is of unusual length, it may become twisted about the limbs or neck of the child, so as to interfere with its free circulation. It is not an uncommon occurrence to see the cord twisted around the neck several times. When the jelly of Wharton is normal in amount and evenly distributed little disturbance will follow. Occasionally, however, the cord is so tightly drawn as to impede the circulation and

interfere with the respiration and the nourishment of the fœtus. Knots in the cord are sometimes found. They are caused by the fœtus passing through open loops of the cord. If at all tight, they may obstruct the circulation and cause the death of the child.

(To be continued.)

THE PREPONDERANCE OF MALE STAMMERERS OVER FEMALES.

By DAVID GREENE,

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Kussmaul truly remarks about stammering that "the literature of this impediment of speech has reached enormous dimensions." Yet it may be safely asserted that the subject is far from being exhausted. The speech specialist may be thoroughly familiar with all the conclusions that have been recorded by others, still, if he keeps his ears and eyes wide open during his work, he will almost continually make new and interesting discoveries; for the erroneous vocal actions of stammering are so eccentric as to present new features in almost every case. Perhaps some of the readers of the *Journal* will be interested in an account of some of the experience which I have had of late years along these lines.

Table I shows the results of an examination of 256 adult stammerers, 229 of whom were males and 27 females:

Table I.

	Males.	*Females.*
Number of cases of stammering caused by faulty inspiration	139	3
By faulty expiration:		
(*a*) Mismanagement of the voice	25	20
(*b*) Defective articulation	8	—
(*c*) Mismanagement of the voice and defective articulation	57	4
Total	229	27

In this table the classification of the various forms of stammering has been made to depend upon the particular region of the vocal tract in which the faulty action causing this speech defect takes place. This seems to be the most rational classification that can be devised.

Of the total number of cases examined, 229, or 89.45 per cent., were males, and 27, or 10.54 per cent., were females. These results very nearly agree with those found by Colombat, Gutzman, Coen, and other European specialists, all of whom state that "in round numbers there are, among 100 stammerers, 90 men and 10 women."

It has long been a mooted problem why there should be so many more male stammerers than females. Various theories have been advanced to explain this disparity in numbers. Some of these theories are complimentary to the fair sex, but others are not. Some investigators have suggested that the different mode of breathing of females may be the cause of their comparative immunity from this blemish of utterance, but no definite conclusion on this point seems to have been arrived at

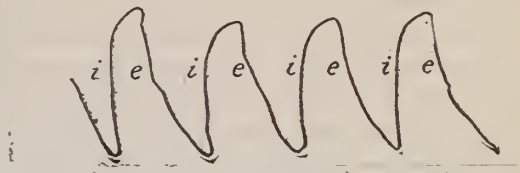

Fig. 1.—Ordinary, quiet breathing; *i*, inspiration; *e*, expiration.

by anybody. In my humble opinion, Table I throws considerable light on this subject, for it shows that faulty inspiration was the cause of stammering in 139 males, or 60.96 per cent., and only in 3 females, or 11.11

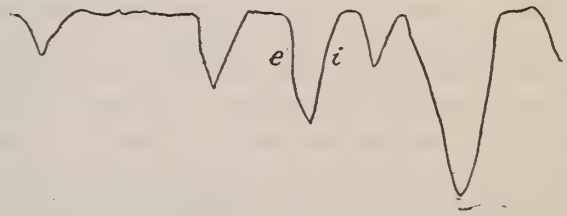

Fig. 2.—Irregular breathing caused by mental agitation while being asked a question.

per cent., of the number of cases examined. The worst case of them all was that of a young man twenty-three years old, of fine athletic build. When attempting to speak, he would first become somewhat agitated and

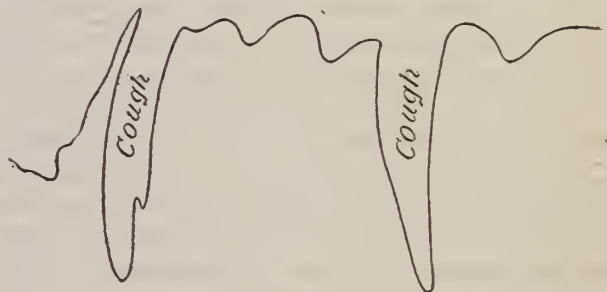

Fig. 3.

move his head and the upper part of his body from side to side, then he would give from six to ten short, hacking coughs, then he would pause for four or five seconds, and when at last he commenced to speak, the words came

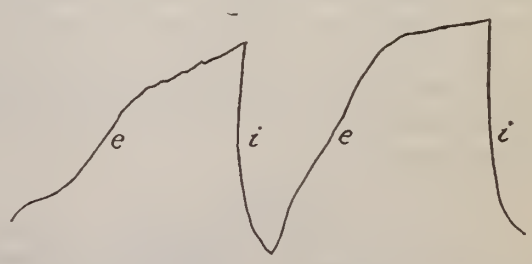

Fig. 4.—Respiration while speaking.

out in a perfectly normal way. The appended tracings (Figs. 1 to 4) show the successive actions of this young man's diaphragm during his attempts at enunciation, as recorded by means of Marey's pneumograph.

By placing your hands on the proper region of the body of a breath stammerer of this class during one of his struggles, you can plainly feel the unnatural spasmodic contractions of the diaphragm and notice an almost entire absence of any rib movement. For the time being, the two mechanisms are out of gear, as it were. When, by great effort, they are brought into gear again, the lower ribs expand, the breathing becomes costo-abdominal, and words are enunciated in a perfectly normal manner. This tendency to misdirected effort in the diaphragm is the most prolific source of stammering among men, but is rarely found among women, as may be seen from my table. It is quite natural that this should be so, for, as is well known, in the male subject ordinary, quiet respiration for vital purposes is effected almost exclusively by the activity of the diaphragm; but, in speaking, a more considerable emptying of the quantity of air in the lungs must take place, and this can only be effected through the combined processes of diaphragmatic and costal breathing. In females, costal breathing is the habitual mode of respiration, hence their lungs are generally well supplied with the quantity of air which is necessary for speaking purposes, and cases of stammering caused by deficient inspiration are very rare among them. This fact sufficiently accounts for the great preponderance of male stammerers over females.

The table of statistics which I have given shows another fact of considerable interest. The number of males in whom stammering was caused, wholly or partly, by mismanagement of the voice is 82, or 35.8 per cent., and the corresponding number of females is 24, or 88.88 per cent., of the total number of cases. Instead of setting the vocal cords into vibratory motions by means of the expiratory current, the stammerers of this class make a futile effort to produce these vibrations by means of the muscles of the larynx, and every time that an attempt is made to pronounce a word beginning with a vowel or a vocalized consonant, a noise is produced which very much resembles the bleating of a sheep. It is perfectly natural that this tendency to throw too much energy into the muscles of the larynx, as a substitute for expiratory force, should be more common among females than among males. Waldenburg, Eichhorst, Biedert, and other German scientists who have examined thousands of cases by means of the pneumatometer give the figures as in Table II, showing that the average respiratory force of females is considerably lower than that of males:

TABLE II.

I.—FORCED RESPIRATION.

	Inspiration.	*Expiration.*
Men	100	120
Women	60	80

II.—ORDINARY, QUIET RESPIRATION.

	Inspiration.	*Expiration.*
Men	60	80
Women	40	50

It is not within the scope of this article to discuss the methods of correcting stammering in general, or breath stammering in particular. However, a few words on this point may not be out of place. The struggle for breath often causes the stammerer to become red and blue in the face, to contort his limbs, etc. Yet this apparently severe type of stammering yields more readily to proper training than voice stammering, which the uninitiated are apt to consider a mild form of this disorder of speech. The student can see and feel the movements of his ribs and easily learn to control them. Gymnastic drill for the development of the purely costal type of breathing, such, for instance, as is described by Campbell in his recent work on *Respiratory Exercises in the Treatment of Disease,* will often cure the severest form of stammering from faulty inspiration in a short time. But the organ of voice is not so easily brought under control. Hence the stammering of females, which in most cases manifests itself in spasms of the vocal cords, usually proves very obstinate.

1122 BROADWAY.

THE MANAGEMENT OF GONORRHŒA.*

BY BOLESLAW LAPOWSKI, M. D.,

NEW YORK.

ASSUMING that the patient is seen by the physician within twenty-four hours of his noticing the discharge of his first gonorrhœa, let us follow up his treatment with some explanatory bacteriological and anatomical additions. The patient appears within twenty-four hours of noticing his discharge, which bacteriologically and anatomically means that the gonococcus, which invaded the mucous membrane three or four days before, during the act of cohabitation, has passed over the tightly arranged squamous epithelium of the fossa navicularis, penetrated the double layer of the columnar epithelium down to the submucous layer, invaded *en masse* the lumen and epithelium of Morgagni's pockets, some of which reach twenty-seven millimetres in length, entered the lumen of Littre's glands, which are concealed in the tissue of the corpora cavernosa, and, disturbing the normal function of the tissue, produced an inflammatory discharge, for which the patient comes to the physician. He copes with this condition by first having the patient pass water, and then irrigating the urethra with potassium permanganate—two mechanical procedures by which he removes from the surface of the mucous membrane and from between the folds all that he can wash off. He does not by irrigations with potassium permanganate render the soil of the urethra inappropriate for the growth of the gonococcus, as the serous secretion of the mucous membrane which follows the irrigation is one of the best media for the growth of the gonococcus. Then he applies protargol to kill the gonococci remaining upon the sur-

*Read in a discussion in the New York Academy of Medicine, March 21, 1901.

face, in the glands, and in the deeper tissue. While he may destroy the gonococci that are reached by the protargol upon the surface of the superficial layer of epithelium, the gonococci in the deeper tissues are not reached, and consequently not destroyed, as protargol does not penetrate so deeply as to the tissue in which the gonococci are lodged.

The idea that protargol reaches the deep tissues is neither based upon reliable laboratory experimentation nor supported by clinical facts. The best proof of its failure to reach the gonococci is that the gonococci supposed to be killed reappear if the application of protargol is discontinued for several days. They even reappear after from two to four months of the use of protargol. The deep gonococci do not reach the surface in numbers, as the emigration of pus cells—the carriers, as they have been called, of the gonococci from the deep tissues to the surface—is checked by the treatment. But when, in spite of these objections, one professes to cure the gonorrhœa, to reach and kill the gonococcus by this method, we must be permitted to ask for satisfactory proofs. But we shall come later to this point.

Not only can an acute attack of gonorrhœa be cured, but changes in the tissues can be prevented from developing and the gonococci entirely removed from the given organ, provided (1) that the gonococcus is reached by our remedies and quickly annihilated before it has time to provoke tissue changes, and (2) that a *complete physical and partial physiological rest* is given to the organ affected.

Look at gonorrhœa of the conjunctiva. Neither in adults nor in children is there a chronic form of conjunctival gonorrhœa; the conjunctiva is restored to its normal condition, it heals up completely, because both requirements are here fulfilled. We fail to obtain the same results in acute gonorrhœa of the urethra because neither are its deep tissues accessible to us, nor can we give to the organ a partial physiological rest; each micturition, each emission, each erection produces a hyperæmia of the mucous membrane which brings out an exudation of pus cells, raises the epithelium, and opens a door for complications and the development of chronic gonorrhœa.

The most obstinate symptom in chronic gonorrhœa is the presence of the pus cells and threads in the urine. After moving the gonococcus from the deep tissues to the surface by means so admirably presented to us by Dr. Van der Poel, and after removing or destroying it on the surface by medicinal irrigations, some physicians pronounce the patient cured if after repeated examinations of the persistent threads and pus cells they do not find gonococci in them.

Other physicians maintain that the purulent discharge must be stopped or changed into a mucous discharge, for the presence of pus cells evokes always a suspicion of the presence of the gonococcus in some deep tissues, and that by more telling means, such as dilatation, or even forcible dilatation if necessary, the gonococcus can be brought into view. And in some cases they have succeeded in bringing the gonococcus to the surface by forcible dilatation when other methods had failed to accomplish it. But this procedure is laden with dangers for the local, and especially for remote, organs. The gonococcus has no motility. It is carried to the distant organs by the circulating blood, producing there severe, and often destructive, changes. I will read to you a list of tissues and organs in which the gonococcus has been found and its identity proved by means of the microscope and positive cultures, and in some cases by the microscope, by positive cultures, and by inoculation into human beings.

Not counting the genito-urinary organs of both sexes, it has been found in the circulating blood in seven cases (one of human inoculation); in the endocardium in seven cases (three of human inoculation, 100 clinical cases reported); in the pericardium in two cases (one of inoculation); in the pleura in two cases; in the knee in seven cases; in tendon synovia in seven cases (one of inoculation); in the perichondrium in one case; in bone marrow in one case (in the humerus); in the peritonæum in five cases; in Douglas's pouch in one case (abscess); in the spleen in one case (pure culture); in intramuscular abscesses in two cases (one after catheterism); in the buccal cavity in two cases; and in a nodule of erythema nodosum in one case.

Let me express here my appreciation of the admirable work done in the Johns Hopkins Hospital by Dr. Thayer, Dr. Blum (the first discoverer of the gonococcus in the blood), Dr. Young, and the late Dr. Lazear, whose observations and contributions have given a new trend to our conception of gonorrhœa. The parts enumerated were attacked during acute, chronic, and latent gonorrhœa, without any provocation in the genital organs, except in one case, in which infective cohabitation took place during menstruation. Moreover, I emphasize here that in many of the cases enumerated the disease was due to the presence of the gonococcus alone, as was shown by all these cases have happened within the last six years.
the obtaining of the gonococcus in pure cultures. And

But the dislodged gonococcus is not always carried away by the blood. It oftener finds its way into a neighboring open duct, and, owing to its disposition to persist and its ability to develop, will reappear in the threads at some future time. Thus the game of hide-and-seek between the physician and the "industrious little beast," as the gonococcus was called by the late Lawson Tait, goes on for years. In the vast majority of cases the physician, failing after repeated microscopical examinations to find the gonococcus in the purulent or mucous threads, pronounces the patient cured. Thus from a negative result he draws a positive conclusion.

Here we come to the main point of the discussion. What proofs does the physician give to support his opinion? It is far from being sufficient evidence when we, from negative microscopical examinations, even with

the use of Gram's method, draw the conclusion of the absence of the gonococcus, for this one out of many other reasons, that the gonococcus may be present in the threads, and Gram's method will not expose it in its classical form, and, owing to the changes of its form, it is usually taken for a diplococcus.

There is a stage in the life of the gonococcus when it is in a condition of involution, especially in chronic gonorrhœa. Such involution gonococci may linger in the tissues for years, and, owing to some favorable change in the tissues, suddenly develop a more active existence. Such involution gonococci are not decolorized by Gram's method, but grow on appropriate culture media into full-sized gonococci. For the benefit of those who express doubts as to the existence of such forms of gonococci, I will say that such a form, first described by Wassermann as found in artificial cultures, has been seen by Ghon and Schlagenhofer in a pocket of the mitral valve of the heart—a natural culture tube—in a woman who had died from endocarditis gonorrhoica. The bacteriological examination of the contents of the valvular pocket gave the gonococcus in pure culture.

Thus, only bacteriological examinations can be regarded as proof of the existence or absence of the gonococcus. I know too well that, even with bacteriological examinations, mistakes are possible, but with them we at least are doing all that it is possible to do in the present state of our knowledge. Especially must we demand a bacteriological examination when the patient seeks our advice as to marrying, which, in many cases, means permission to marry.

If, in advising the present sufferers from gonorrhœa, you will be guided by the foregoing remarks, and, in informing the future candidates for gonorrhœa, advocate the only radical cure for it, namely, not to contract a gonorrhœa, you will not only follow the modern conceptions of the treatment of gonorrhœa, but act in accord with that management of the disease which the future will witness.

Therapeutical Notes.

For Indolent Ulcers of the Cornea.—Dr. McIntosh (*Maritime Medical News,* March) recommends the following ointment:

℞ Yellow oxide of mercury..... 4 grains;
Atropine sulphate..... 2 "
Petrolatum..... 1 ounce.
M.

Potassium Permanganate in Lupus.—M. Hallopeau (*Gazette hebdomadaire de médecine et de chirurgie,* March 21st) recently reported to the French Society of Dermatology and Syphilography the results of his trial of Butte's method. He exhibited four patients showing very favorable results of the treatment, which seemed especially useful in the ulcerating forms; its efficacy appeared less in lupus non exedens.

Either a compress saturated with a one-in-fifty solution of potassium permanganate, or powdered permanganate itself, is applied daily for a quarter of an hour upon the lupoid spots.

Apocodeine for Constipation.—The *Progrès médical* for March 23d ascribes the following formula to Combemale:

℞ Apocodeine hydrochloride..... 7½ grains;
Sterilized water..... 12½ drachms.
M. Two cubic centimetres (about half a drachm) to be injected subcutaneously.

A Tonic in Urinary Troubles.—M. Bazy (*Journal des praticiens,* February 16th) gives the following formulæ:

℞ Extract of cinchona, from 1½ to 2¼ grains;
Fresh extract of kola nut.. ¾ of a grain.
M. For one pill. Six to be taken daily, two at each meal, for twenty days.

Or:

℞ Extract of cinchona, from 1½ to 2¼ grains;
Quinine chlorhydrosulphate. ¾ of a grain.
M. For one pill. Six to be taken daily.

Or:

℞ Extract of cinchona, from 1½ to 2¼ grains;
Powdered rhubarb..... ¾ of a grain.
M. For one pill. Six daily.

As auxiliaries, caffeine subcutaneously (from 7½ to 15 grains in two or three injections in a day); strychnine, $\frac{1}{64}$th of a grain, hypodermically, twice or three times in a day; or camphorated oil, ten-per-cent., 15 drops every three or four hours.

Caffeine is the most diuretic, but is somewhat exciting, and theobromine is preferable where the diuretic action alone is desired.

The Administration of Phosphoric Acid.—Bardet (*Nouveaux remèdes,* January 8th; *Journal des praticiens,* February 9th) recommends the following "lemonade" for persons who find it difficult to take the acid by itself:

℞ Phosphoric acid.....420 grains;
Tincture of orange.....300 "
Syrup..... 8 ounces;
Distilled water, enough to make.. 1 quart.
M.

Twenty-five drachms of this preparation contain 15 grains of the anhydrous acid. Half a claretglassful is to be taken from once to six times a day, or the liquid may be diluted with its own bulk of water and used as the habitual drink.

To avoid the sour taste and astringency of this preparation, Bardet combines the phosphoric acid with albumen according to the following formula:

℞ White of egg, } each..... 1 ounce;
Phosphoric acid, }
Distilled water, enough to make.. 12 ounces.

Boil over a water-bath until complete solution occurs; filter, and then add slowly, while constantly stirring, the following mixture:

℞ Tincture of orange..... 6 ounces;
Syrup..... 12 "

Complete the quart with distilled water.

A coffeespoonful contains a grain and a half of the anhydrous acid. From ten to fifteen such spoonfuls, added to the usual drink, may be taken in the course of a meal. A hundred parts of the official phosphoric acid, he adds, contain 36.4 of the anhydrous acid.

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DR. JACOBI'S JUBILEE.

FRIDAY night of last week was memorable in the history of the New York Academy of Medicine. Then was celebrated the fiftieth anniversary of Dr. Abraham Jacobi's graduation in medicine. The real anniversary fell on the day before, April 4th, but a regular meeting of the academy was to be held on that evening, and, although the academy, for whose proud standing and solid prosperity Dr. Jacobi has done so much, would have felt that it was doing itself an honor in postponing its accustomed work and giving up the evening to its beloved ex-president, he himself would not have it so, but insisted on putting off the celebration until the next night. This is what might have been assumed from his rare delicacy, equaled only by his comprehensive hospitality as shown in the wording of the invitation addressed to "the fellows of the New York Academy of Medicine and their and his friends." A goodly number of physicians it was that assembled to greet Dr. Jacobi, and right heartily did they show their gladness for the unabated persistence of his mental and bodily powers.

Dr. Jacobi entertained the company with a paper entitled German Text-books Half a Century Ago; History and Reminiscences. In it he dealt by no means exclusively with text-books; he rather gave a vivid picture of the leading events in medicine during the last fifty years. Mention was made of some matters that he himself regarded as too personal for publication. We all realize, as Dr. Jacobi did, that certain things may properly be said to one's friends, and yet one would prefer not to have them spread before outsiders. But Dr. Jacobi, in his modesty, failed to recognize that in the American medical profession there were no outsiders so far as he was concerned; and it has seemed to us that anything that has helped to shape the career of this remarkable man or in the least degree tinge his views of things medical is of more than ordinary interest to his professional brethren. Therefore—with Dr. Jacobi's reluctant consent, we admit, but greatly to our readers' delight, we feel sure—we publish in this issue of the *Journal* the entire address.

Few men, if any, have exerted upon the medical profession of the United States a more wholesome influence than Dr. Jacobi's, have done more than he has done to advance medicine or to cherish within the profession a feeling of brotherhood. Not only do we all admire his gifts and his attainments; we love the man himself. The jubilee, following so close upon the *Festschrift,* has but served to mark this feeling; neither the one nor the other was needed to promote or nourish it.

ETHER *VERSUS* CHLOROFORM.

THIS is indeed a hackneyed subject, but never should its discussion be dropped till the last man of those who, however unconsciously, set convenience above safety has cried *peccavi!* It is not at all strange that in Scotland the preference for chloroform should die hard, for it was in that country that the use of chloroform as an anæsthetic had its origin. It is on that account all the more gratifying to encounter so strong A Plea for the More General Use of Ether as an Anæsthetic in General Surgery as is contributed to the March number of the *Scottish Medical and Surgical Journal* by Thomas D. Luke, M. B., anæsthetist to the Deaconess Hospital and to the Dental Hospital, Edinburgh. "Let it be granted," says Mr. Luke, "that a major operation is about to be performed, and ask any member of the medical profession—north of the Tweed—be he hospital surgeon or country practitioner, what he would use to produce anæsthesia, and it is by no means putting it too strongly to say that ninety-five out of one hundred would reply—'chloroform!'" This, he goes on to say, is largely due, not to any known inferiority in ether as a producer of anæsthesia, but to the fact that in all the large Scottish schools the students see chloroform given as a matter of routine, while the use of ether is not taught, and its great advantages in many cases are not demonstrated. This state of things he laments quite properly and energetically, and he proves once more the overwhelming superiority of ether from the point of view of safety; indeed, he goes far toward showing that it is no less convenient than chloroform. Ether, he says, given as it should be, preceded by the administration of a small amount of nitrous

oxide, is not slow of operation; it is more rapid than chloroform, the patient being fit for operation in from three minutes to three and a half on an average, and, given in this manner, it is by no means unpleasant, as from personal experience he can testify.

The "pet bugbear" of bronchitis as the result of the administration of ether "is largely a relic of former days and imperfect methods," says Mr. Luke. "The cloth was laid across the patient's face and drenched with ether, almost suffocating him with the pungent vapor, and making him cough and gasp until he finally went 'under'; and then the saturating process was kept up, the patient breathing an Arctic atmosphere, rendered so in the vicinity of his mouth, etc., by the rapid evaporation of the anæsthetic; and that bronchitis was not more common is to be wondered at." If ether is skilfully given, he contends, bronchitis as an after-effect is almost unknown. On this point he quotes Mr. Teale, of Leeds, as saying: "During twenty years' experience of ether I have met only one case of bronchitis following its administration." We must add, nevertheless, that the use of ether, however skilfully managed, does occasionally give rise to a most distressing laryngeal hyperæsthesia that lasts for days; but this is an exceedingly rare occurrence.

We must all admit, as Mr. Luke does, that the vapor of ether is inflammable, but, except, as he says, when the actual cautery is being used near the patient's head or a light is brought too close to it, the danger of ignition is no real objection to the use of ether. "Ether is more difficult to administer," Mr. Luke concedes, "but," he pithily remarks, "at the same time it is well to remember that *it is more difficult to poison the patient with it.*" He ventures to assert, and in this he is quite right, that after a very few lessons a person of ordinary intelligence "is in a position to give ether with greater safety as regards the public than after a similar experience in the use of chloroform." Mr. Luke next combats the dictum that "the after-sickness of ether is more severe than that of chloroform." From his own experience he denies this statement most emphatically, declaring that severe nausea and vomiting are much less common after ether than after chloroform. The vomiting due to ether, he says, usually comes on almost immediately on the withdrawal of the anæsthetic, while the patient is being taken back to bed, and in the great majority of cases it passes off before consciousness is regained. On the other hand, he maintains, in about thirty-five per cent. of chloroform cases the patients are troubled with vomiting "not of a transient nature, but often of a severe and exhausting kind, persisting in some cases for two or three days, and often associated with great pallor and pulse failure—a condition we do not see after ether." "Snow," he adds, "even recorded a death from severe vomiting following on chloroform administration."

There is one of the alleged dangers of ether to which Mr. Luke does not allude, that of its irritating effect on the kidneys. The dangers of chloroform, say its advocates, are immediate, while those of ether are remote—in allusion to the contention that ether exerts a deleterious action on diseased kidneys. This, in our opinion, is little better than an assumption; we have seen nothing to satisfy us to the contrary. We look upon the exclusive use of chloroform in major operations as highly dangerous; at the same time we would tolerate its employment for the production of *anesthésie à la reine.*

A SINGULARLY TOLERANT UTERUS.

Man könne an der Geburt die Allmacht Gottes erkennen wrote a German obstetrician many years ago, and, in spite of the frequency with which trifling occurrences bring pregnancy to an untimely end, his pious observation is almost as applicable to gestation as to parturition. A striking example of extraordinary tolerance on the part of the gravid uterus is related by Dr. A. Olivier in the January number of the *Annales de la Policlinique de Paris.* A woman was married on the 21st of August, 1899. She expected to be unwell at some time between the 12th and the 15th of September. There was no appearance of the catamenial flow until the 16th of that month, however, and it lasted for only a few hours. It was soon followed by the early symptoms of pregnancy, and on the 28th of November Dr. Olivier was summoned to her bedside. He found her apparently threatened with an abortion. She had had some slight colicky pains the day before, and for three hours she had been losing blood. The uterus was as large as a medium-sized orange, the cervix softened, directed backward, and closed. A little blood was still escaping. Absolute rest in bed, laudanum, and viburnum were prescribed; in three days the flow had ceased, and the threatening abortion seemed to have been averted.

At this stage of the case the woman's mother asked her own physician to see the patient. That practitioner came to the conclusion that an incomplete abortion had taken place, and declared that curetting was absolutely necessary, and that without delay, if infection was to be

avoided. To this, however, Dr. Olivier, strong in his conviction that there had been no abortion, since no clot or any solid body had been expelled, refused his assent. The woman's husband was, nevertheless, so wrought up that he insisted on Dr. Olivier's seeing his wife in consultation with a hospital surgeon. The doctor consented, remarking, however, that he thought an obstetrician more "indicated." The consultation took place on the following day, and it was then learned that on the day before the patient had had some rather sharp pains in the right side, lasting for a few minutes, that she had expelled a thick, blackish liquid, and that her abdomen had become very much enlarged. A mass was found to occupy the right side of the abdomen, reaching to a little above the umbilicus, the cervix being situated very high and to the left. The patient was very pale, but so she had been since an early period in her pregnancy. She had a good pulse, and it was of normal frequency. The surgeon made a diagnosis of extra-uterine gestation with subperitoneal rupture of the sac, and announced that an immediate operation was required to prevent a fresh rupture that might be fatal. Dr. Olivier felt that the surgeon was wrong, but he deferred to his high authority, and an operation was appointed for the next day. When the abdomen was opened, it was found that the tumor was nothing else than the uterus, probably filled with clots. The surgeon closed the abdominal incision and urged the attending physician to curette the uterus. This Dr. Olivier, who must by this time have felt like praying to be delivered from consultants, utterly refused to do, and the sequel abundantly justified his reliance on common sense.

The patient speedily recovered from the operation, and the uterus diminished in size. Thereafter the pregnancy went on without disturbance, and on the 11th of May, in the dead of night, the patient was awakened by an inundation; the bag of waters had broken, pains set in promptly, and in four hours a well-developed and living child was born. Gentle expression soon brought the placenta away. It consisted of two masses connected by a slender isthmus. The fœtal envelopes had ruptured at a distance of about two inches from the edge of the placenta. On their outer surface, over a space about four inches square, there was a layer of old organized clots of the color of *café au lait,* the remains of the blood that had been poured out at the time of the hospital surgeon's diagnosis of a ruptured ectopic gestation sac. That the pregnancy should have gone on nearly to full term after abdominal section is not much to be wondered at, for many a similar occurrence is on record, but it is remarkable, as M. Olivier points out, that the uterus of a primipara less than three months gone in pregnancy should undergo the enormous distention caused by the hæmorrhage and yet not expel its contents prematurely. The case emphasizes the view that abortion is seldom inevitable, provided there has been no artificial interference.

WHERE THE CRIME OF THE CHRISTIAN SCIENTIST LIES.

THE disingenuous methods adopted by the supporters of Christian Science were well displayed in a stormy discussion which, according to press reports, took place at a recent meeting of the Society for Medical Jurisprudence. One of the speakers pleading for "toleration" is reported there to have said: "Why, the very things they do are done in every Protestant and Catholic church in the country. Go into any of them, and if one of their prominent members happens to be sick, you will hear them praying for his recovery without any regard to whether he has a doctor or not." But when has any objection ever been made to Christian Scientists, or any one else, not only praying for the recovery of the sick, but even bringing to bear the influence of the strongest possible suggestion toward it? The Christian Scientists do *not* pray "without any regard to whether he has a doctor or not," or, as we should prefer to express it, without regard to whether all known material or mechanical aids are used, or not. There could not be the remotest objection to their supplementing material and mechanical therapeutic efforts with any mental process they chose to employ. Every Christian, of whatever denomination, daily utters, or should utter, the simple petition, "Give us this day our daily bread," and that, or a similar tribute of reliance upon the Omnipotent One, is used by many who do not profess to be Christians; but none of them considers that that fact justifies him in sitting down idly and folding his hands, without making an effort to attain that for which he prays. Would any Christian Scientist exonerate the guardian of a child, should the child die of starvation because its guardian withheld all food, on the ground that matter was nothing and only Divine Mind fulfilled the processes of nutrition and caused the progress of the being in growth and health? Suppose a Christian Scientist's own child were playing in front of a fast-speeding car, and a man standing by did not even stretch out a hand to drag it away, not believing, forsooth, in material measures, but relying solely on the strength of Divine Mind. We should like to hear the Christian Scientist's opinion of that inhuman creature. No. It is not what the Christian Scientist does, it is what he refuses to do, that constitutes his crime against religion, society, the community, and the individual.

A CHRISTIAN SCIENCE MIRACLE.

It is related that Charles Lamb and Douglas Jerrold were once discussing the extent to which animals could be domesticated, when Lamb in support of his argument told the story of a tame oyster which used to follow him up and down stairs. To this Jerrold retorted that the oyster had one advantage at least over Lamb. "What is that?" asked Lamb. "It knows when to shut its mouth," tartly responded Jerrold. At the recent dedication of a new Christian Science meeting house it was officially stated that a granite corner-stone had been duly carved with an inscription wrongly given under a misapprehension, and that the day before it was to be laid the mistake was discovered too late to admit of alteration. The omnipotent witchery of Christian Science methods, the mental concentration and focussing of "truth" upon this "error of mortal mind" enshrined in granite, was brought to bear by the undaunted devotees, when, lo! upon uncovering the block it was found that the erroneous carving had disappeared and an unexceptionable inscription had taken its place. We are curious to know whether the engraver was guilty of a fortunate disregard of his instructions, or the error therein was discovered and corrected in time, but secretly for the sake of subsequent "effect," or the narrator——. But, no. Let us rest content with recommending the moral of the Lamb-Jerrold story to the notice of the votaries of Christian Science.

A NEW PHILADELPHIA WEEKLY.

We have received the first number, dated April 6th, of a new weekly journal entitled *American Medicine,* published in Philadelphia and edited by Dr. George M. Gould. In its appearance and arrangement of contents it closely resembles the *Philadelphia Medical Journal.* The first issue contains forty-eight double-columned pages of reading matter, each page of the same width as our own and a little shorter.

POISONING WITH STAR-ANISE.

The fruit of the star-anise, *Illicium anisatum,* although official in the United States as *illicium* and in Great Britain as *anisi stellati fructus,* is, we imagine, little used in either of the great English-speaking countries. On the continent of Europe, however, it seems to be oftener employed, and occasionally its poisonous effects have been observed, as in a case reported by Etienne, of Nancy (cited in the *Klinisch-therapeutische Wochenschrift* for March 17th). A woman forty years old, suffering with flatulence, infused about an ounce of star-anise in a glass of water, allowing the infusion to stand on the stove for twenty-four hours, so that by evaporation it was reduced to a few teaspoonfuls. She drank the whole of it, and in two hours she was attacked with vertigo, severe vomiting, and collapse. She was revived by the use of alcoholics and injections of ether and caffeine, and the next day she was in her usual health.

News Items.

Society Meetings for the Coming Week:

Monday, *April 15th:* New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

Tuesday, *April 16th:* New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

Wednesday, *April 17th:* Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

Thursday, *April 18th:* New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

Friday, *April 19th:* New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynæcological Society.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending April 6, 1901:

Diseases.	Week end'g Mar. 30		Week end'g Apr. 6	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	25	11	29	11
Scarlet Fever	709	38	725	44
Cerebro-spinal meningitis	0	0	0	3
Measles	313	8	289	6
Diphtheria and croup	268	47	266	48
Small-pox	41	10	42	8
Tuberculosis	286	195	269	148

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending April 4, 1901:

Billings, W. C., Assistant Surgeon. To proceed to San Francisco for special temporary duty.

Carmichael, D. A., Surgeon. Relieved from duty at Honolulu, H. I., and directed to proceed to San Francisco.

Currie, D. H., Assistant Surgeon. To proceed to San Francisco for special temporary duty.

Hastings, Hill, Assistant Surgeon. To proceed to Bakersfield, California, for special temporary duty.

Peckham, C. T., Surgeon. Granted twenty days' additional leave of absence on account of sickness.

Primrose, R. S., Acting Assistant Surgeon. Granted leave of absence for five days from March 30th.

White, M. J., Assistant Surgeon. To report to Surgeon J. H. White for duty.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for Two Weeks ending April 6, 1901:

Blackwell, E. M., Assistant Surgeon. Detached from the *Abarenda* and ordered home to await orders.

Bogert, E. S., Medical Director, retired. Ordered to the Boston Navy Yard.

Davis, E., Assistant Surgeon. Granted leave of absence for three months on account of sickness.

Marcour, R. C., Assistant Surgeon. Detached from the Havana Naval Station and ordered to the *Abarenda.*

Peck, A. E., Assistant Surgeon. Appointed Assistant Surgeon from March 24, 1901.

Pickrell, G., Surgeon. Granted leave of absence for three months on account of sickness.

Scofield, W. K., Medical Director. To be placed on the retired list, April 28, 1901.

STOKES, C. F., Surgeon. Detached from the *New Orleans* and ordered to the *Solace* upon her arrival at the Asiatic Station.

WINSLOW, G. F., Medical Director. Detached from the Boston Navy Yard and ordered home.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from March 30 to April 6, 1901:

BAILEY, GUY G., Captain and Assistant Surgeon, will report for transportation to Manila.

FISHER, HENRY C., Major and Surgeon, is relieved from duty in the Division of the Philippines, and will proceed to Jackson Barracks, Louisiana, to relieve AARON H. APPEL, Major and Surgeon, who will proceed to San Francisco for transportation to Manila.

IVES, FRANCIS J., Major and Surgeon, will proceed to Fort Sheridan, Illinois, to relieve GEORGE W. ADAIR, Major and Surgeon, who will comply with the requirements of so much of Par. 17, S. O. 38, February 14, 1901, H. Q. A., as relates to him.

MOSELEY, EDWARD B., Major and Surgeon, will report in person to the commanding general, Department of the Colorado, for duty as chief surgeon of that department, to relieve HENRY LIPPINCOTT, Lieutenant-Colonel and Deputy Surgeon-General, who will proceed to Governor's Island, New York, for duty as chief surgeon of that department.

WHEATE, JUSTUS M., Captain and Assistant Surgeon, will, upon the expiration of the leave granted him, proceed to San Francisco for transportation to Manila.

The Grave of Hippocrates is said to have been discovered during some recent excavations at Larissa, in Thessaly.

Erratum.—In last week's issue, in an abstract of an article entitled Creosote in Pneumonia: A Résumé (page 603), for "creosote" substitute creosote *carbonate.*

Dr. F. C. Curtis Reappointed New York State Medical Expert.—Dr. F. C. Curtis, of Albany, N. Y., has been reappointed medical expert of the New York State Health Department by Commissioner Lewis.

A Physician Killed by an Insane Man.—Dr. Johnson, a physician in the State Hospital for the Insane at Danville, Montour county, Pa., was stabbed to death on April 3d by an insane Italian patient.

Municipal Physicians Go on Strike in Germany.—According to a Berlin cable, at Leipsic one hundred and fifty-five municipal physicians have gone on strike for higher pay and more considerate treatment.

A Physician Helped to Capture Aguinaldo.—Dr. W. Parsons Read, of Philadelphia, formerly an assistant professor at the Jefferson Medical College, participated in the capture of Aguinaldo by General Funston.

A Physician Attacked by His Patient.—Dr. G. T. Applegate, of New Brunswick, N. J., was severely handled recently by Charles Johnson, a patient, whom he was treating for dementia resulting from insomnia. Before help arrived the doctor was choked almost into insensibility.

Changes of Address.—Dr. Thomas H. Allen, to The Glenmore, corner of Fifty-fifth Street and Seventh Avenue, New York; Dr. Arthur G. Bennett, to No. 26 Allen Street, Buffalo; Dr. Louis Haupt, to No. 232 East Nineteenth Street, New York; Dr. Alfred W. Herzog, to No. 54 East Thirtieth Street.

Medical Director Scofield Appointed a Rear Admiral.—Medical Director Walter K. Scofield, of Philadelphia, goes on the United States navy retired list on April 28th, retaining the title of medical director, but with the rank of rear admiral added. The retirement of Director Scofield comes after almost forty years of continuous service.

Lectures at the New York Botanical Garden.—The regular spring series of lectures at the New York Botanical Garden will be delivered in the lecture hall of the museum building of the garden on Saturday afternoons at 4:30 o'clock. The course began on April 6th, and closes on June 29th. Among the lecturers is Dr. H. H. Rusby, of the University medical faculty.

Dr. Gaylord to Lecture before the Johns Hopkins Medical Society.—Dr. H. R. Gaylord, of Buffalo, N. Y., will lecture on April 15th before the Johns Hopkins Medical Society, at Baltimore, Md. Dr. Gaylord claims to have discovered the cancer germ. He has had charge of the cancer laboratory in Buffalo since its inception, and has been experimenting on the cancer germ for three years.

A New York Physician's Gift to the Botanical Garden.—Dr. C. R. Allen, of New York city, has presented to the New York Botanical Garden a valuable collection of stoneworts. Dr. Allen is vice-president of the Torrey Botanical Club, and it took him many years of hard work and thousands of dollars to gather the specimens. It is probably the most complete collection in existence.

Dr. S. Edgar Mortimore, of No. 241 West One Hundred and Twenty-second Street, New York city, died at the Church Hospital, Orlando, Fla., on March 21st, of empyema. Dr. Mortimore was born in New York city in 1850, and was a practising physician in Harlem for thirty years. He was a past master of Ivanhoe Lodge, No. 610, F. and A. M., and member of several medical societies. He is survived by a widow, an infant son, and his brother, Dr. Fairfield Mortimore, of this city.

A Proposed Hospital for the Insane in New York City.—Among the bills introduced at Albany lately was one establishing a hospital in New York city for the reception of a limited number of alleged insane and insane persons where skilled observation is necessary in making required pathological and psychopathic research and examination. Admission is to be regulated by the commission, who shall appoint a superintendent having the qualifications of a State hospital superintendent.

The Examination for Medical Licenses.—A bill has been prepared for introduction in the legislature of New York State providing that the regents of the University of the State of New York may, in their discretion, divide the examinations required for a license to practise medicine, permitting a candidate to take the examinations in anatomy, physiology, hygiene, and chemistry at the end of two years' study, instead of requiring, as by the present law, the examinations in these subjects to be taken with the others at the end of the four years' course.

Proposed Legislation to Regulate the Practice of Hypnotism.—The New York Senate committee on public health has reported a substitute for the bill of Senator McCabe to regulate the practice and teaching of

hypnotism, mesmerism, suggestive therapeutics, and other kindred practices. The substitute relates only to hypnotism and mesmerism, and provides that any person who practises these who is not a duly licensed physician or graduate from an educational institution for the teaching of such practice, duly licensed by the regents of the State, shall be deemed guilty of a misdemeanor.

The Lack of Quarantine Facilities at Central and South American Ports.—The danger menacing travelers to Central and South American ports, through lack of quarantine facilities in those countries, has been brought under the notice of the Marine-Hospital Service at Washington by P. M. De Leon, United States consul-general to Ecuador. The consul-general incloses a letter from Archer Harman, manager of an Ecuador railroad enterprise, who tells how the steamer *Chile,* with yellow fever aboard, was turned from port after port for fully a month, while the ravages of the disease continued. There were several deaths.

A New York Temple of Science.—Plans have been announced by the council of the Scientific Alliance of New York for a Temple of Science to cost half a million dollars. For the last ten years the Scientific Alliance has been considering the subject of the erection of a building which should house the various scientific societies composing the alliance. These are the New York Academy of Sciences (the oldest scientific society in New York), the Torrey Botanical Club, the New York Microscopical Society, the Linnæan Society of New York, the New York Mineralogical Club, the New York Section of the American Chemical Society, and the New York Entomological Society.

A Portrait of Dr. Keen Presented to the Jefferson Medical College.—The students of the Jefferson Medical College, at Philadelphia, presented to the college, on April 4th, an oil painting of Professor W. W. Keen at the hospital amphitheatre. The presentation address was made by Professor J. Chalmers Da Costa. William Potter, president of the board of directors, accepted the gift. Dr. Keen has been professor of surgery at the Jefferson College for twenty-one years. He is to leave for a tour of the world, and is not expected to return for two years. The students, to show their respect, had his portrait painted by Professor Chase, instructor of painting at the Academy of the Fine Arts.

Doctors to Investigate New York City's Vice Conditions.—Seven members of the New York County Medical Society have been appointed a committee to investigate the evils of prostitution in the tenement-houses from a physician's point of view. The committee consists of Dr. P. A. Morrow, Dr. S. A. Knopf, Dr. H. D. Chapin, Dr. C. W. Allen, Dr. L. D. Buckley, Dr. Ludwig Weiss, and, ex-officio, Dr. George B. Fowler, president of the society. Dr. Morrow will act as chairman. After its work is under way, it will communicate with the Committee of Fifteen, but its investigation will be wholly along lines which concern the physician as a practitioner.

A Summer Medical Course at the University of Michigan.—One of the most important moves of recent years in the University of Michigan medical department, at Ann Arbor, Mich., is under discussion by the faculty. The plan is to petition the regents for a summer session of the medical school. The innovation will be a radical one. A special set of professors will be drawn up and presented to the board for approval, and if the move goes through they will take charge of the students' summer work. A number of needy students who find vacation so much time lost will be enabled to thus finish their courses with greater dispatch. A large amount of research work in the laboratories is contemplated.

The Use of Preservatives in Milk.—An attempt is being made at Albany to have the various cases brought to test the constitutionality of the provision of last year's law prohibiting the use of preservatives in milk suspended until the court of appeals decides the appeal in the suit against John S. Bieseker, of New York city. The Bieseker case is one of much interest to the New York County Medical Society, which last fall took up the question. The leading milk dealers of New York city were called into conference with the physicians. They all testified to the use of preservatives by the smaller dealers. Some of the preservatives were chemically analyzed and pronounced injurious. If the court of appeals sustains the decision of the appellate division in the Bieseker case, there probably cannot be new legislation to guard against the preservative evil until next year.

The Inebriates' Home of New York City.—A bill was introduced into the New York Senate on April 5th incorporating the Inebriates' Home of New York city. Dr. William T. Jenkins, A. Campbell White, George R. Bidwell, Delancy Carter, Isaac H. Love, and Frank J. Cuthbert are named as trustees. The home is to be established under the membership corporations law. It is to have the power to receive and retain inebriates under rules provided by the State Board of Charities. Committing magistrates are authorized to commit habitual drunkards to the home for terms varying from six months to a year, according to previous condition and reputation. New York city is to provide for the maintenance of the home. The avowed purpose of the proposed institution is to treat the indigent poor for alcoholism, instead of sending them to prison.

Examinations for Acting Assistant Surgeons in the Marine-Hospital Service.—The United States Civil Service Commission announces that on May 7, 1901, an examination will be held in any city in the United States where postal free delivery has been established for the position of acting assistant surgeon in the Marine-Hospital Service. The examination will consist of the subjects mentioned below, which will be weighted as follows:

	Subjects.	*Weights.*
1.	Letter writing	5
2.	Anatomy and physiology	15
3.	Surgery and surgical pathology	20
4.	Chemistry, materia medica, and therapeutics	10
5.	Bacteriology and hygiene	10
6.	Theory and practice of medicine and general pathology	25
7.	Obstetrics and gynæcology	15
	Total	100

The age limit is twenty years or over. From the eligibles resulting from this examination it is expected that certification will be made to the position of acting assistant surgeon in the Marine-Hospital Service, at Portland, Maine, at a salary of $600 per annum, and to other similar vacancies as they shall occur. This examination is open to all citizens of the United States who comply with the requirements. All such persons are invited to

apply, and applicants will be examined, graded, and certified with entire impartiality and wholly without regard to any consideration save their ability as shown by the grade attained in the examination. Preference may be given to eligibles who are residents of the district in which the vacancy exists. Persons who desire to compete should at once apply to the United States Civil Service Commission, Washington, D. C., for application forms 304 and 375, which should be properly executed and promptly forwarded to the commission.

The Rudolf Virchow Fund.—On October 13, 1901, Dr. Rudolf Virchow will be eighty years old. When he completed his seventieth year a fund was started in his honor to enable the great master to facilitate scientific research by establishing scholarships, and by encouraging special medical and biological studies. Contributions to that Rudolf Virchow fund were furnished by those in all countries interested in progressive medicine, as a homage to the man whose name is always certain to arouse admiration and enthusiasm. In Berlin a large committee, comprising, amongst others, Dr. A. Bastian, Dr. v. Coler, Dr. A. Entenburg, Dr. B. Fraenkel, Dr. O. Israel, Dr. Fr. Koenig, Dr. C. Posner, and Dr. W. Waldeyer, has been formed and has issued a call for contributions, which are to be added to the original Rudolf Virchow fund, so as to increase its efficiency. The committee expresses the opinion that in no better way, and in none more agreeable to the great leader of modern medicine, can his eightieth birthday be celebrated, and asks for the sympathy and cooperation of all engaged in the study and practice of scientific medicine all over the globe.

A subcommittee for the purpose of making the medical profession in America acquainted with the intentions of the Berlin committee has been formed. This committee is composed of Dr. Charles A. L. Reed, president of the American Medical Association; Dr. Henry P. Bowditch, president of the Congress of American Physicians and Surgeons; Dr. William K. Welch, Johns Hopkins University; Dr. Robert F. Weir, president of the New York Academy of Medicine; and Dr. A. Jacobi, 110 West Thirty-fourth Street, New York, secretary. The members of this committee urge their colleagues to participate in honoring the very man who has done more, these fifty years, than any other to make medicine a science and international. Subscriptions should be sent to the secretary, Dr. A. Jacobi, who will receipt therefor.

The Minnesota Marriage Bill requiring a physical and mental examination of all candidates for matrimony, to which we referred in our issue for March 30th, has now passed both houses of the legislature.

The Anti-alcohol Congress which was held recently at Vienna has, according to the press reports, proven quite a turbulent body, the members being divided on the question of total abstinence as opposed to the moderate use of alcoholic beverages.

The "Smoker" of the New York Hospital Alumni Association.—The next regular smoker of the association of the alumni of the New York Hospital will be held in the new private pavilion of the hospital on Tuesday, April 23d, at 9 P. M.

The Brooklyn Society for Neurology.—The regular meeting of the Brooklyn Society for Neurology was held on March 28th in the building of the Medical Society of the County of Kings. The programme was an especially interesting one, and included a paper on Tetanus, by Dr. T. C. Craig, and another on Paralytic Dementia and Cerebral Syphilis, by Dr. W. Alfred McCorn.

The Rappahannock Valley Medical Association.—At a meeting of the Rappahannock Valley Medical Association held at Fredericksburg, Va., on March 28th, Dr. S. W. Carmichael was elected president for the ensuing year, and Dr. J. N. Barney secretary and treasurer. A paper on Epidemic Influenza or Grippe was read by Dr. Carmichael and discussed by many of the members present.

Two Philadelphia Hospital Associations to Consolidate.—A petition was filed in a Philadelphia court on March 31st asking for the consolidation of the Mount Sinai Hospital Association and the Franklin Free Dispensary, the new association to be known as the Mount Sinai Hospital Association.

The W. C. Hollopeter Pædiatric Society of the Medicochirurgical College held its annual banquet recently in Philadelphia. Professor Hollopeter was toastmaster, and toasts were responded to, among others, by Professor Seneca Egbert, Dr. H. S. Kinne, and Dr. J. L. Manasses. Among the guests were Professor John V. Shoemaker, Professor James M. Anders, Dr. W. L. Pyle, Dr. W. H. Thomas, and Dr. G. W. Pfromm.

The Organization of a New Medical Society Proposed at Louisville, Ky.—A meeting of prominent physicians was held at Louisville, Ky., on March 20th. The object of the meeting was to consider the organization of a medical society for the purpose of scientific research. About fifteen physicians were present, but nothing definite was decided upon. Another meeting will be held shortly.

The Philadelphia Academy of Surgery.—The annual reception and monthly meeting of the Philadelphia Academy of Surgery was held on April 1st, Dr. De Forrest Willard in the chair. There were seventy-five members present. Dr. John A. Wyeth, of New York, was present by invitation of the academy, and read a paper on Amputation at the Hip Joint for Sarcoma. A discussion on the subject followed between Dr. Coley, of New York; Dr. Bloodgood, of Baltimore; and Dr. Keen, Dr. Deever, and Dr. Flexner.

The County Medical Association Meeting.—At the stated meeting of the County Medical Association held on April 8th at the Academy of Medicine, New York, a paper was read on Food as a Factor in the Causation of Disease, by Dr. Elmer Lee. After the discussion on the subject which followed the reading of the paper, Dr. Lee said: "No man can be sick unless poison enters his system. Nor can one be sick who eats satisfactorily and adequately. I think it is impossible for any one to become afflicted with influenza who is in a state of proper nutrition, or to be stricken with cholera or typhoid fever. Sickness is universal, and there must be a universal cause, in my opinion. That cause is bad eating."

The Annual Report of the J. Hood Wright Memorial Hospital.—The annual report of the J. Hood Wright Memorial Hospital for 1900 says that the number of patients treated in the hospital was the largest of all the

years in its history—1,276 patients in the hospital and 1,278 in the emergency ward. The receipts from all sources were $32,381.38, and the expenses $27,588.92. The report says that an understanding with the Department of Charities has been reached, and the hospital is now receiving the official compensation for the treatment of emergency cases. The damage suits the hospital has had to defend are said to have been due to patients leaving the hospital against the advice of the physicians.

Hospital Staff Appointments.—Dr. Florence Hall Watson has been elected assistant superintendent of the Delaware State Hospital at Farnhurst, Del., to succeed Dr. John H. Hammond, who has resigned.——The medical and surgical staff of the county hospital at Denver, Col., for the ensuing year will be the same as last, except that Dr. F. E. Waxham succeeds Dr. Seebass, Dr. C. B. Lyman displaces Dr. Clayton Parkhill, Dr. T. M. Burns succeeds Dr. Bertha Conley, and Dr. Sherman Brown is named instead of Dr. H. E. Warren. Dr. C. K. Fleming retires.

Hospital Buildings and Endowments.—The work of erecting a hospital at Batavia, N. Y., will shortly be begun, as the necessary sum has been subscribed, and the site has been purchased.——An additional story will be added to the two-story brick and stone pavilions for convalescent patients of the Isabella Heimath, at One Hundred and Ninetieth Street and Amsterdam Avenue, New York city. The architects have figured the cost of the work at $30,000.——An anonymous gift of $1,000 has been made to the Foundling and Sick Baby Hospital at Montreal.——A bill has passed the Assembly at Albany to provide for the construction of a building for hospital purposes in the Borough of the Bronx, in Greater New York, at a cost not to exceed $300,000.——A house for nurses is to be built on property adjoining the Hahnemann Hospital at Philadelphia, donated to the hospital by Mr. and Mrs. George C. Thomas, of that city. The trustees also purpose building a maternity hospital.——Ann E. Taggard, a widow, of East Boston, has bequeathed the greater portion of an estate valued at $75,000 to the founding of an emergency hospital there.——The will of the late Sophia C. Hale, of Newburyport, Mass., bequeathes $10,000 to the Anna Jacques Hospital of that city.——The ways and means committee of the New York State Senate has reported favorably, as amended, the bill of Senator Davis appropriating $100,000 for the construction of a hospital in the Adirondacks for the treatment of consumptives. The amendment strikes out the item of $20,000 for equipment and furnishing purposes.——The National Sanitarium Association has secured a building site for the Toronto (Ont.) free hospital for advanced consumptive cases. As soon as building plans are completed tenders for the buildings will be called for, the contracts let, and the construction work started with the least possible delay.

Births, Marriages, and Deaths.

Born.

Opdyke.—In New York, on Saturday, March 9th, to Dr. and Mrs. Ralph Opdyke, a son.

Married.

Gardner—Rowl.—In Bowling Green, Ohio, on Friday, March 29th, Dr. Andrew J. Gardner, of Grand Rapids, Michigan, and Miss Lonetta M. Rowl.

Pfingst—Schimpeler.—In Louisville, Kentucky, on Wednesday, March 27th, Dr. Adolph O. Pfingst and Mrs. Lola S. Schimpeler.

St. George—Weber.—In New York, on Tuesday, April 2d, Dr. Norman St. George, of Boston, and Miss Mattie G. Weber.

Sylvius—Van Marter.—In Ogden, Michigan, on Tuesday, April 9th, Dr. Elmer O. Sylvius, of Ashtabula, Ohio, and Miss Minnie I. Van Marter.

Taylor—Huson.—In South Orange, N. J., on Tuesday, April 9th, Dr. Edward Thomson Taylor and Miss Gertrude Crane Huson.

Thrasher—Schmuck.—In Cincinnati, on Wednesday, April 3d, Dr. Wade Thrasher and Miss Olive G. Schmuck.

Died.

Calvin.—In Salem, Ohio, on Friday, March 29th, Dr. James H. Calvin, in the fifty-second year of his age.

Carpenter.—In Washington, on Tuesday, April 2d, Dr. James A. S. Carpenter, in the seventy-fourth year of his age.

Grove.—In Philadelphia, on Saturday, April 6th, Dr. John H. Grove, United States Army, in the seventy-sixth year of his age.

Guernsey.—In New York, on Tuesday, April 9th, Dr. William N. Guernsey, in the fifty-second year of his age.

Hacker.—In Charleston, S. C., on Sunday, March 31st, Dr. F. Herbert Hacker, in the thirty-fourth year of his age.

Hall.—In Manila, on Tuesday, April 2d, Dr. William R. Hall, United States Army.

Hayward.—In Boston, on Saturday, March 30th, Dr. George Hayward, in the eighty-second year of his age.

Hill.—In Danville, Illinois, on Friday, April 5th, Dr. Thomas A. Hill, of New York, in the eighty-fourth year of his age.

Hord.—In Washington, on Monday, April 1st, Dr. William T. Hord, United States Navy, in the seventieth year of his age.

Hunter.—In West Chester, Pennsylvania, on Thursday, March 28th, Dr. John Powell Hunter, in the twenty-eighth year of his age.

Hurdman.—In Brandon, Canada, on Sunday, March 31st, Dr. B. S. Hurdman, in the forty-first year of his age.

Johnston.—In Danville, Pennsylvania, on Wednesday, April 5th, Dr. R. Erskine Johnston.

Larsh.—In Baltimore, on Wednesday, April 3d, Dr. James C. Larsh, in the eightieth year of his age.

Spearman.—In Philadelphia, on Monday, April 1st, Dr. Alfred Spruance Spearman, of Milwaukee, in the seventieth year of his age.

Summers.—In Charleston, West Virginia, on Tuesday, April 2d, Dr. Albert Edgar Summers, in the seventy-seventh year of his age.

Obituaries.

WILLIAM JAY YOUMANS, M. D.

In the death of Dr. Youmans, which occurred at his home, in Mount Vernon, N. Y., on Wednesday, April 10th, the medical profession has lost a member who, while not a practitioner, had cast lustre on the guild by his career in literature and general science. More than that, he had endeared himself to a large number of appreciative men and women by his geniality and his readiness on all occasions to engage in the solution of problems submitted to him. For many years the *Popular Science Monthly,* of which until a few months ago he was the editor, was conducted under the same roof with the *New York Medical Journal,* and consequently we had the best of opportunities of knowing him intimately and of profiting by his advice and that of the gentlemen of his staff on many occasions. There was the height of good feeling and there was an atmosphere of confidence pervading the offices of the two journals, and the men who worked in them grew fond of each other. On us, therefore, falls heavily the news of Dr. Youmans's death at the comparatively early age of sixty-two, in the zenith of his mental powers and while yet his bodily vigor was not perceptibly impaired.

Pith of Current Literature.

Boston Medical and Surgical Journal, April 4, 1901.

Diseases of the Myocardium. By Dr. Henry Jackson.—The author deplores the fact that disease of the myocardium does not receive in our text-books the important consideration it deserves. He recommends that two prominent facts should always be kept in view in the consideration of a case of heart disease. These are: (1) That heart disease does not mean valvular disease, and, (2) that murmurs evidently pathognomonic of regurgitation do not prove the existence of organic disease of the valve curtains. A text-book consideration of the subject indicated in the title follows. In the author's opinion, the most important condition indicative of cardiac weakness is met with when there is a discrepancy between the number of beats of the heart and the pulsation transmitted to the radial artery. This phenomenon is met with in typhoid fever, in diphtheria, and in many cases of advanced heart disease with great dilatation of the cavities. The most important cause of enlargement of the heart, and a cause explanatory of a large proportion of cases classified clinically as "cardiac," "weak heart," "cardiorenal" or "fatty heart," is arteriosclerosis.

The Condition of the Myocardium as Affecting Cardiac Murmurs. By Dr. H. D. Arnold.—Whenever a murmur exists it is of great importance to investigate the condition of the myocardium, as, by so doing, we may find the cause of the murmur to lie in an entirely remediable condition of the cardiac muscle, and spare ourselves the mortification, and our patient the life of worry and dread, that would follow upon a diagnosis of incurable valvular disease. In any event, the cardiac murmurs furnish no more important data upon which to base prognosis, than does the condition of the myocardium.

A Further Note on the Treatment of Epidermoid Cancer. By Dr. Francis H. Williams.—This article refers to treatment by exposure to the radiation from an excited Crookes's tube. The author reports cases. In the beginning, the exposure to the rays usually lasted five minutes, and was given nearly every day for some weeks, but further experience has suggested that so long a period of treatment is unnecessary, a few exposures being sufficient in some cases. As the extremely encouraging results reported have been accomplished in superficial growths, penetrating to a depth of two centimetres at least, the author believes that there is reason to hope that something may be done for patients in whom the disease is more deeply seated.

Report of Cases from the Second Surgical Service of the Children's Hospital, Boston. I. Multiple Plexiform Fibromata; II. Paraplegia Existing from Birth. Laminectomy at the Age of Five and One Half Months; III. A Case of Ununited Fracture of the Femur of a Child in which the Non-union was Due to the Formation of a Cyst at the Ends of the Fragments. By Dr. H. L. Burrell, Dr. R. W. Lovett, and Dr. J. E. Goldthwait.

Journal of the American Medical Association, April 6, 1901.

Chloralose. By Dr. James Tyson.—From his experience, the author asserts that chloralose is a prompt and safe hypnotic, more prompt in its action than any drug except morphine, and efficient in much smaller doses than chloral. Its effects occasionally include involuntary actions, which, while surprising, and even fantastic, in some of their exhibitions, are, nevertheless, harmless. The maximum dose is five grains in a capsule, which may have to be repeated in not less than an hour.

Post-operative Nervous Phenomena or Artificial Menopause. By Dr. Joseph Price.—The author urges prolonged rest treatment after serious operations. He is satisfied that thrice better results can be obtained by turning the patient over, three or four days after the operation, to a good clinician—one who is interested in diet and systematic rest treatment.

Syphilis as a Non-venereal Disease, with a Plea for the Legal Control of Syphilis. By Dr. L. Duncan Bulkley.—The author believes that the time has come when the dangers of syphilis, and especially the dangers to innocent persons, should be fully and fairly recognized and met. It should be made as criminal to transmit syphilis wittingly as it is to communicate small-pox, scarlatina, or diphtheria, and if only syphilis can be included on the list of contagious diseases which the health boards can control, proper legislation will follow slowly, as the profession and public become more enlightened as to the real nature of syphilis and the real danger of the public from it.

Recent Clinical Observations on Tinea Versicolor. By Dr. Charles Warrenne Allen.

Experience with an Epidemic of Rabies in Buffalo. By Dr. Ernest Wende.—The author describes a number of cases in which the classical symptoms were present. He believes that the question of municipal control for the restriction of the spread of rabies is most important. The presence of a large dog population in a community serves no good purpose; its diminution and restriction is indicated, and should be accomplished. Every city, in dealing with dogs, should be provided with efficient rules, regulations, and ordinances, and should demand their rigid enforcement.

Pure-food Legislation versus Poor Food-legislation. By Dr. Murray Galt Motter.—In the author's opinion, the history of food-legislation shows pretty clearly that the consumer may safely be left to his own instinct and experience to determine what is, or is not, wholesome. What he seeks is simply the truth, and the public weal is best conserved by absolute honesty.

Some Observations in Renal Surgery. By Dr. W. H. Allport.

The Relation of Indicanuria and Oxaluria to Gastro-intestinal Fermentation. By Dr. J. A. Wessener.—The author's conclusions to an interesting paper are that: (1) Traces of oxalates are found normally in the urine, having been taken in with the food; (2) oxalate crystals usually denote gastro-intestinal fermentation; (3) abundance of oxalate crystals does not indicate a high acid percentage, because, in addition, there may be oxalate of lime in the solution; (4) indican is often, but not necessarily, associated with oxalate crystals; (5) hyperacidity on a meat diet contributes to putrefaction, whether due to excess of hydrochloric acids or to acids of fermentation; (6) the symptoms of oxalic acid diathesis associated with indicanuria are not due to the oxalic acid, nor to the indol, but to other products formed in the process of fermentation; and, therefore, the oxaluria and indicanuria are valuable as indicative of a putrefaction, to which the symptoms are to be referred.

Some Additional Observations on the Effects of Injury to the Peripheral Nerves. By Dr. D. S. Fairchild.

An Operation for Cystocele. By Dr. George H Noble.

Individual Prophylaxis. By Dr. W. A. Evans.

Statement Made before the Committee on Public Health of the New York Assembly, at the Public Hearing on Assembly Bill 759, Regulating and Legalizing the Practice of Osteopathy in the State of New York, and Fixing Penalties for the Violation Thereof. By Jacob Bolin.

Medical News, April 6, 1901.

Advertising in the Profession. By Dr. Frank Lydston.—According to the author, the problem of advertising is one from which we cannot escape, and it is his belief that the injunction "Thou shalt not advertise" was written in a Pharisaical spirit, and that it has been the cloak of more inconsistency and hypocrisy than anything ever written for the guidance of medical men. The most important forms of professional advertising are college advertising, medical writing, social advertising, church advertising, secret society advertising, and "that indefinable something known as newspaper prominence, which is called advertising by the fellow who can't get it, and is considered a laudable enterprise by the fellow who does." In general, the author holds that it is the duty of every man in the profession, not only to himself, but to the profession, to bring himself before the public, as a citizen and a representative of the profession, where it can be done respectably, at every possible opportunity.

Resection of the Cervical Sympathetic. By Dr. Howard J. Williams.—This operation is still too new—only four years old—to demonstrate what ultimate deterioration may result. In the author's case, however, the results have been encouraging, and, in former cases, have remained permanent; and, unless some remote baneful effects should be reported to detract from the value of the operation, sympathectomy will eventually receive a permanently recognized position as a surgical procedure in glaucoma, exophthalmic goître, and other allied neuropathic diseases.

The Question of Drainage in Appendicitis. By Dr. A. M. Pond.—The peritonæum is capable of disposing of very large quantities of pus under favorable conditions; chief among these conditions is equal distribution over the peritoneal area. In order to do this it becomes necessary to use some agent which shall put pus and pus-forming elements into solution. For this purpose, hot saline solution is very effective and fulfils all the requirements; it can be made sterile and introduced sterile into the peritoneal cavity; it possesses the power of putting pus and pus-forming elements into solution, and being hot, temperature 105° to 108° F., is a most active stimulant to the peritonæum, and its use is unattended by unpleasant sequelæ. Increased hepatic activity and posture are other important elements. Cases in which these ideas were put in practice are reported.

New Methods in Charity, with Better Results and at Less Cost. By Dr. William P. Spratling.—The author's points may be summed up as follows: 1. Prevent insanity, epilepsy, imbecility, idiocy, and feeble-mindedness, as far as possible, by making it impossible for persons so afflicted to marry. 2. Build less expensive structures in which defective and dependent State charges shall live. 3. Maintain at less cost the cases that are chronic and incurable, and maintain at greater cost, to stimulate recovery, those that probably can be cured. 4. Give those that ought to have it an education that they can use.

Medical Record, April 6, 1901.

The Relation of the Public to the Medical Profession. By Dr. D. B. St. John Roosa.—In the author's judgment, the individual, the public at large, and the State governments ought to take a positive interest in medical science. No investment can be more judicious than the most generous treatment of the medical profession. Its wants should be provided for, its demands heeded, and legislation pertaining to the public health should be directed by it alone. When human ingenuity, skill, foresight, and care are so efficiently used that no accidents occur, and infectious or contagious diseases do not prevail, it will be due entirely to the scientific and humane labors of the medical profession.

The Importance of Aseptic Vaccination, with Remarks on Vaccination in General. By Dr. Wilhelm Karl Kubin.—The author suggests that a national law for compulsory vaccination such as exists in Germany, and similar to those adopted in many other countries, should be passed. He also recommends that a knowledge of the importance of vaccination should be taught in the schools, so that when children become adults it will not be so difficult to teach them the importance of revaccination. He also emphasizes the necessity of giving special instruction in vaccination in all medical colleges.

The Field for Ethyl Chloride Narcosis. By Dr. Martin W. Ware.—The author proposes the use of ethyl chloride in minor surgery, for the reason that it is as safe statistically as any of the other anæsthetics, while it induces a very rapid narcosis, and an equally quick awakening, and is void of any after-effects. Indications for its use arise in all minor work in which the exact limits of operative procedures can be predetermined. It is also indicated as a preliminary to narcosis with other agents.

On the Diagnosis and Prognosis of Diabetes Mellitus. By Dr. Henry S. Stark.—The author points out that neither acute nor chronic glycosuria, *per se,* is sufficient to warrant a diagnosis. Polydipsia or polyuria, either or both, accompanied by a general deterioration in health, should accompany the glycosuria. This latter—persistent, transitory, or recurrent—should be determined by several interval analyses of a twenty-four-hours' specimen of urine. He believes Rudisch's test is accurate enough for all purposes required by the physician (one tenth of one per cent.).

From a prognostic standpoint, there are three types. To the mild type belong those cases in which the glucose disappears upon the gradual exclusion of carbohydrates. To the medium type belong those cases in which the glucose disappears only after the complete exclusion of carbohydrates. To the severe type belong those cases in which the glucose does not disappear despite the complete exclusion of carbohydrates, and even of proteids.

Philadelphia Medical Journal, April 6, 1901.

The Prophylaxis of Venereal Diseases. Medical Aspects of the Social Evil in New York. By Dr. Prince A. Morrow.—The author favors a campaign of education extended to the high schools and colleges for young men. The public should be educated to a recognition of the fact that the prostitute is largely the product of her environment. Society should deal with her as an unfortunate, rather than as a criminal.

On Certain Disorders of Sleep. By Dr. Charles A. Dana.—The author asserts that the greater part of these disorders arise from somewhat similar causes, viz., neurasthenia, lithæmia, arterial sclerosis, and cardiac weakness, and a few can be attributed to digestive disturb-

ances, or, perhaps, to abortive forms of epilepsy. The treatment of these symptoms is the treatment of the underlying condition. The bromides and hypnotics give relief, but these drugs are not often curative. The ordinary hypnotics are especially dangerous. More can be accomplished by heart and general tonics, by dealing with the lithæmia and arterial sclerosis, and thus promoting the patient's general health. Exercise, air, and peace of mind are the best hypnotics, and especially the removal of the fear of not sleeping. The safest medicinal agent is single small doses of bromide, persistently kept up.

General Metabolism in Diabetes Mellitus. By Dr. David L. Edsall.

A Preliminary Communication of a Study of the Brains of Two Distinguished Physicians, Father and Son. By Edward Anthony Spitzka.

Santiago as a Yellow Fever Centre. By Dr. L. C. Carr.

A Correlation of some Facts in the Propagation of Yellow Fever, with the Theory of its Conveyance by the Culex Fasciatus. By Dr. H. R. Carter.

Suprarenal Capsule—Its Use in Rhinological Operations. By Dr. Charles C. Royce.

Lancet, March 30, 1901.

The Topographical Anatomy of the Abdominal Viscera in Man. By Dr. C. Addison.—In the second of the Hunterian lectures upon this topic, the author discusses his subject under the following heads: Lateral displacements of the pylorus; movements of the stomach; the influence of the stomach upon the shape and position of the parts behind it; the duodenum; the small intestines; the peritonæum; and the lower end of the ileum.

Some Recent Developments in the Administration of Anæsthetics. By Dr. F. W. Hewitt.—In this article the author describes a modified Clover ether inhaler of his own. It has a very large bore and the face-piece is screwed into the ether reservoir, so that it cannot become unexpectedly detached. He also describes a modified Junker's inhaler and a "chloroform prop." This last is a metal wedge to be inserted between the teeth in place of a mouth gag. A bent metal tube for the transmission of chloroform vapor from a Junker's inhaler is affixed to the prop, the vapor thus escaping within the mouth and maintaining anæsthesia during throat and nose operations.

Cases of Injury to the Epiphyseal Line. By Dr. R. Bucknall.—The author reports six cases of injury to the epiphyseal line, in five of which cures were obtained by reduction and splinting. The sixth case was of long standing and the patient refused operation.

Note on the Treatment of Collapse of the Ala Nasi. By W. J. Walsham, F. R. C. S.

The Treatment of Sciatica, Arthritis Deformans, and Scleroderma by Superheated Dry Air (the Tallerman System). By Dr. Fr. Neumann.—In this article, which is a report from the Landesbad at Baden-Baden, the author warmly eulogizes the Tallerman system of hot-air treatment, and cites a large number of cases of arthritis deformans, chronic articular rheumatism, etc., which were greatly benefited by it.

Notes on a Case of Temporo-sphenoidal Abscess Following Middle-ear Suppuration; Operation; Recovery. By Dr. P. Jakins.

"Selenium Compounds as Factors in the Recent Beer-poisoning Epidemic." By Dr. F. W. Tunnicliffe and O. Rosenheim, F. C. S.

British Medical Journal, March 30, 1901.

Some Clinical Aspects of Chronic Bright's Disease. By Dr. A. G. Barrs.—The distinctions drawn by the pathologist between the different forms of chronic Bright's disease have little clinical value. The important point to determine is whether the condition is acute or chronic. The direct causative relation of acute to chronic nephritis is extremely doubtful. The author holds that acute nephritis has much the same definite march as acute pneumonia and ends in complete recovery or death. Alcohol and syphilis have little to do with acute nephritis, and even gout leads much more commonly to albuminuria than to glycosuria. The possibility of a bacterial origin for some of the chronic inflammatory destructions of the kidney cannot be denied. A diagnosis of chronic Bright's disease in the absence of albuminuria cannot safely be made; our ideas of such a condition are based largely upon post-mortem-room experience. While the presence or absence of albumin is the all-important point in the diagnosis, the quantitative estimation of albumin is of no importance whatever. Nor is the estimation of urea in cases where chronic nephritis is suspected, and albumin is absent, of any great value. Even a persistently low specific gravity of the urine is not a reliable indication. Cardiovascular changes are not so uniformly inevitable as is generally believed. Arteriosclerosis is a far more common cause of cardiac hypertrophy than chronic nephritis; the same is true as to cerebral hæmorrhage. Dieting has been greatly overdone in the treatment of chronic Bright's disease, and the distinctions drawn between the different meats are ridiculous. If the bowels are acting freely, the patient may live on such ordinary mixed diet, including meat, as he has an appetite for and can digest. The author has no great belief in the general treatment of Bright's disease by drugs, beyond the systematic use of purgatives to keep the bowels acting freely. As a rule, morphine or opium should not be given in renal disease; but in wakeful, painful, non-soporific uræmia with marked dyspnœa, morphine is of the greatest advantage and may be used with perfect safety.

On Generalized Infection in Gonorrhœa. By A. H. Ward, F. R. C. S.—The gonococcus, in its process of growth in the human body, produces an irritating toxine. This toxine is the direct cause of all the symptoms of the disease. In all cases it is absorbed into the system, where its presence causes systemic degenerations of varying degrees of severity. Gonorrhœa is thus a general toxæmic affection; but the microbes which form the toxine are generally localized on or around a mucous tract. The microbic invasion may extend to the organs communicating with the infected tract, or it may penetrate into the tissues, either by direct extension, as in the invasion of the peritonæum through the uterus and Falloppian tubes, or by a process of growth through the mucous membrane affected. Thence the infection may invade the cellular tissues, the lymphatics and glands, and the vascular system. This invasion is rendered possible by the action of the absorbed toxine upon the leucocytes, which is of a paralyzing nature, and prevents the encapsulation of the microbes by these cells. Having reached the circulation, the gonococci may invade the heart and endocardium, or may be carried to the peripheral capillaries. In these they become stranded and

grow, producing more toxine, which sets up local inflammations. The microbes invade the joints and are found in the synovial sacs, and also in the pleura and pericardium. They are probably present in the analogous inflammations of the tendons and periostea. The invasion of the organism is favored by all too energetic measures directed to the local infection, since they depress the local powers of resistance, and, by abrading or lacerating the mucous surface, may directly open the door to the invasion. General treatment must vary according to the general conditions, and will differ when these are referred to toxæmia alone, or to toxæmia complicated by metastases. Local treatment is always required and should always be free from instrumental, mechanical, or chemical violence.

A Case of Congenital Hepatic Cirrhosis with Obliterative Cholangeiitis (Congenital Obliteration of the Bile-ducts). By Dr. H. D. Rolleston and Dr. L. B. Hayne.—The authors report a case of this affection occurring in a male child, aged six months. The case is recorded, not only on account of its comparative rarity, but also in order to discuss the nature of the morbid process, which is done very completely. It seems reasonable to believe that the disease was primarily started by poisons derived from the mother, and conveyed to the liver of the fœtus, and that a mixed cirrhosis and cholangeiitis are thus set up.

The Treatment of Glycosuria and Diabetes Mellitus with Sodium Salicylate. By Dr. R. T. Williamson.—The author has used large doses of sodium salicylate (20 grains four times a day) in certain forms of diabetes mellitus, with the greatest benefit. In one case, in which there was a daily estimation of the amount of sugar excreted, the administration of sodium salicylate during several periods was in each instance followed by a marked decrease in the amount of sugar, until, finally, the urine became entirely sugar-free and remained so. Nineteen other cases are cited in which sodium salicylate was given. It is not a specific for diabetes; in the severe cases it does not usually produce any marked diminution of the sugar excretion, but the patients, as a rule, express themselves as feeling better while taking it. The drug should be carefully watched and should not be given if serious complications are present.

An Easy Operation for Congenital Ptosis. By Dr. F. Fergus.

Note on the Peculiar Nystagmus of Spasmus Nutans in Infants. By Dr. J. Thomson.—In most cases of head-shaking, or spasmus nutans, in young children there is nystagmus, which differs in some particulars from all other forms of nystagmus. Ordinary horizontal nystagmus is conjugate in character, the axes of the eyes remaining parallel. But the nystagmus of spasmus nutans is convergent, the eyes inclining alternately toward and away from each other. In the rotatory form the movements are those of circumduction rather than of pure rotation. The nystagmus is often unilateral, vertical, or rotatory in spasmus nutans; in the ordinary form it is almost invariably horizontal. These irregular, incoordinated movements are in agreement with and confirm the view that spasmus nutans is at bottom a coordination neurosis.

A Case of Tetanus Neonatorum Successfully Treated with Antitetanus Serum. By Dr. J. McCaw.

A Note on the Knee-jerk in Chorea. By Dr. W. Gordon.—The author calls attention to a peculiar modification of the knee-jerk very common in chorea. With the patient recumbent, if one raises the knee, allowing the heels to rest on the couch, making sure that all the muscles of the limbs are relaxed for the time being, and if one then tests the knee-jerk in the usual way, the foot is found to rise more or less smartly, but instead of falling back immediately, it remains suspended for a variable time—hung up, as it were—and then slowly sinks back to its initial position. The author has never found this peculiar knee-jerk except in chorea, where it is common, and cites a case where its presence confirmed an otherwise very doubtful diagnosis.

Notes of a Case of Congenital Hypertrophy with Stenosis of the Pylorus. By H. Blackadder, M. B.

Lyon médical, March 10, 1901.

Severe Forms of Nervous Aerophagia.—M. L. Bouveret narrates a number of cases of this form of nervous disease which he was the first to describe. He says it is not a clinical curiosity, but may be the precursor of very grave nervous phenomena, such as excessive vomiting and vasomotor crises of severe degree. It appears most frequently after eating, the pathological irritation easily following the physiological in the centre for deglutition. Discipline of the patient is effective, sometimes, in causing a diminution of the swallowing of air. After eating, he is instructed to remain quiet and to assume the horizontal position. If he cannot voluntarily cease the deglutition of air, a small gag may be placed between the teeth, the stretching of the jaws arresting the pathological movements. Bromide medication is useful, and this may be combined with the general treatment of hysteria and neurasthenia.

Diacetic Ether of Morphine (Heroine) for Pain. By M. Jean Artaud. (*Continued article.*)

Indurated Erythema and Tuberculosis.—M. Carle reports a case in which a nodular erythema in a scrofulous woman, forty-nine years of age, proved to be tuberculous on microscopic examination. He emphasizes the deep induration of the nodule and its indolent character, its characteristic situation on the antero-external portion of the leg, and its concomitance with the scrofulous lesions, and its probable identity in origin with them. While inoculation experiments have not been very conclusive, nodular erythemata most often appear in persons with a tuberculous ancestry, and the histological examination frequently shows the presence of giant-cells with epithelioid characteristics. Treatment is long and must be general and local.

Cervico-facial Actinomycosis.—M. André Antipas reports such a case.

March 17, 1901.

Phototherapeutic Apparatus without Condenser for the Application of Finsen's Method. By M. Lortet and M. Genoud.

Heroine for Pain.—M. Artaud says that from his observations and those of others, there seems to be no doubt of the sedative and analgetic action of heroine administered subcutaneously. In all the patients pain disappeared in fifteen minutes. For the most part, the injection was not accompanied by any phenomena of disagreeable character, but occasionally slight nervous disturbances were noted. The sedative action of the drug lasted as long as that of morphine, while at no time were any secretory disturbances observed as is usually the case with morphine.

Presse médicale, March 13, 16, and 20, 1901.

Latent Nephritis in Saturnism. By M. Debove.

Chronic Parenchymatous Nephritis in Tuberculosis.—M. L. Landouzy and M. Léon Bernard say that nephritis is not a disease entity; it is a function of disease, an anatomico-clinical reaction of the kidneys to the toxines of disease. The present study of the authors relates to but one of the renal reactions to tuberculous intoxication, the classical chronic parenchymatous nephritis. In some cases this is but a mask of the tuberculous process going on somewhere in the body, but which defies detection; in other cases it accompanies manifest tuberculous disease.

Semeiology of the Nervous System. By M. Jules Soury.

Gazette hebdomadaire de médecine et de chirurgie, March 14 and 17, 1901.

Radical Cure of Hernia. By M. E. Damas.

Bloodless Reduction of Congenital Dislocation of the Hip.—M. Hagopopf says that while he does not believe it possible to reduce the head of the femur into its acetabulum, it is possible—especially up to six years of age, to hold it in place by suitably constructed immobilizing apparatus. In this way, by watching the gait carefully, much can be accomplished during the active years of development.

Severe Forms of Nervous Aerophagia. By M. L. Bouveret. (See abstract from *Lyon médical,* March 10, 1901.)

March 21, 1901.

Hæmorrhage in Simple Acholuric Icterus.—M. Gilbert and M. Lereboullet have studied the hæmorrhages occurring in icterus with acholuria, and are convinced that the cholæmia is the basal cause of the bleeding, the presence of the bile in the blood, together with some accidental or physiological cause, leading to vascular rupture and bleeding.

Journal des praticiens, March 9, 1901.

Biological Mineralogy. By M. J. Gaube.

Tetranitrate of Erythrol (Tetranitrol).—M. Huchard recommends the use of this drug to combat heightened arterial tension and to strengthen the cardiac beat in myocarditis and other causes of weakened heart action.

Progrès médical, March 9, 1901.

Ovarian Opotherapy.—M. Lucien Picqué, in stating that the nervous symptoms following ovariotomy are almost identical with those of neurasthenia and some forms of hysteria, showing that the latter are due to ovarian insufficiency, urges the use of ovarian extract, saying that the good effects of this method of treatment last over many months, if a cure is not effected.

March 16, 1901.

Medico-legal View of Visual Strength.—M. Alphonse Péchin says that vision varies widely within normal limits. When one is called upon to give an opinion as to damages sustained when the claim of impaired vision is made due to accident, it is necessary to know or to ascertain the state of vision previous to the injury, in order that no injustice may be done to either side.

Wiener klinische Rundschau, March 17, 1901.

Contributions to Renal Surgery.—Dr. Joseph Preindlsberger, in a continued article, narrates several cases of surgery upon the kidney, one of them in a case of echinococcus disease.

Pyloric Spasm in Children. By Dr. A. Köppen. (*Continued.*)

Toxicity of Expired Air. By Dr. Emanuel Formanek. (*Concluded.*)

Centralblatt für innere Medicin, March 16, 1901.

Reflex Excitation of the Pulse—Dr. M. Heitler says that the pulse may be influenced reflexly by irritation of different parts of the body. If the liver is percussed, an increased rapidity and volume of the pulse may be noted, but it may be necessary to resort to the measure two or three times before the pulse is influenced. Next in point of ability to excite the pulse is the sternum, then the skin, the bones, and the muscles. Passive motions of the joints have less effect. In a case of deep coma with almost imperceptible pulse, the pulse improved after vibration of the liver, although percussion of the sternum had no effect. The skin may be thus employed by rubbing or stroking with the finger-nail. Its susceptibility is increased by placing hot or cold water over it after the rubbing.

Centralblatt für Gynäkologie, March 23, 1901.

Extra-uterine Pregnancy.—Professor Albert Sippel says that it can now be positively stated that, in tubal pregnancy, the ovum does not produce a decidual reaction in the tube, but an epithelial reaction, as has been shown by Peters. The epithelium of the tube responds first to the irritation of the impregnated ovule, it becomes hyperplastic, then atrophies, and the ovum sinks down into the epithelial lining of the tube. The epithelium of the tube, the author reminds us, is identical with that of the uterine cavity.

Temporary Ventrofixation.—Dr. H. Rose reports the case of a woman, twenty-five years of age, on whom he performed a laparotomy three days after the rupture of a tubal pregnancy. The uterus was retroverted, and, as the abdomen and Douglas's cul-de-sac were filled with blood, it was feared that the uterus might form permanent adhesions were it not elevated. So a temporary ventrofixation was performed, the uterus being united to the abdominal wall with catgut.

Riforma medica, February 20, 1901.

Allotropic Iodine and Immunization. By Dr. G. Levi.—Allotropic iodine, which has been obtained by the author from metallic iodine, differs in many respects from the latter as regards chemical properties. It has no odor, it is tasteless, non-irritating, and non-toxic, but is very strongly antiseptic. It does not give the characteristic reaction with starch, is not decolorized by ammonia, and does not attack metals. With alkaloids, it reacts in the same way as Gram's solution. It is rapidly absorbed by the tissues and penetrates them without leaving any traces. It is soluble in water, alcohol, ether, etc.

While immunization by means of bacterial antitoxines has reached a high level within recent years, but few attempts have been successful in the way of immunization (*i. e.,* of increasing the resistance of the body against disease) by means of chemical substances of known composition. Calmette has recently demonstrated that rabbits may be immunized against snake poison by means of injections of chemical substances like sodium chloride, calcium chloride, etc., and also that injections of these chemicals have proved curative in rabbits which

had been bitten by snakes from thirty to fifty minutes before the injection. Wiener showed, in a recent article, that the administration of arsenic and of creosote so modified the serum of rabbits, dogs, and other animals that the injection of serum taken from these animals during the treatment immunized other animals against various infections. It is known that iodine is one of the most important antagonists of bacterial activity, as is shown by the action of the thyreoid gland in the body. Hence, it is probable, *a priori,* that iodine is well suited for immunization of animals against infection. The author has attempted to demonstrate the truth of this supposition by a series of experiments. He injected a solution of allotropic iodine into a horse, and showed that, while cultures of the *Bacillus pyocyaneus* grew well on the serum of this animal before it had received the iodine, his serum proved to be absolutely germicidal after the treatment with the allotropic form of the drug. No traces of iodine were found in the blood of this animal, thus showing that the bactericidal action of the serum was not due to the iodine contained therein. The effect was due to a modification of the serum in such a way as to render it antitoxic.

February 21, 1901.

Experiments Concerning Hæmostasis in the Liver. By Dr. Luigi Baldassari.—Numerous methods of arresting hæmorrhage from the hepatic tissue have been tried in connection with certain surgical operations which are from time to time performed on the liver, but until now with little success. The author has conducted experiments with a class of substances which may be used for the purpose of tamponing the hepatic wound, and which may be left there to become absorbed. Thus, it has been suggested that fibrin, gelatin, or small pieces of sponge be used for this purpose. Fibrin requires very careful preparation in order to render it perfectly sterile, and it does not adhere firmly to the liver; gelatin is a good hæmostatic, but does not adhere firmly enough to the subjacent tissues and favors the development of bacteria; sponge offers a nucleus for the development of new tissue, and is not absorbable. The author has conducted a series of experiments with decalcified bone as a hæmostatic. This substance is easily disinfected or rendered sterile; it is sufficiently solid for fixation by sutures, either in the form of a wedge introduced between the edges of wound, or in the shape of a plate placed over a bleeding surface. It is porous, and thus offers support for the formation of new tissue and is slowly absorbed.

Gazzetta degli ospedali e delle cliniche, January 20, 1901.

A Discussion Concerning the Diagnosis of a Case of Cachexia with Abdominal Symptoms. A Clinical Lecture. By Dr. E. Maragliano.

The Action of Iodocol and its Therapeutic Value. By Dr. Giuseppe Cattani.—Iodocol is a combination of guaiacol and iodine, and as such it is said to modify the trophic processes by improving and stimulating organic metabolism, and at the same time to arrest inflammation. It is prepared by adding a solution of iodine and sodium iodide to a solution of sodium guaiacolate, in the proportion corresponding to the formula of moniodoguaiacol. A dark-red precipitate is obtained, which is washed and dried. The resulting dark-red powder is insoluble in water and imperfectly soluble in alcohol and ether. The insoluble portion contains 25.51 per cent. of iodine, or, in other words, one part of iodine to three of guaiacol. The soluble portion contains 45.46 per cent. of iodine. The ordinary dose is from 30 to 40 centigrammes (4½ to 6 grains). It may be combined with vegetable powders, such as gentian and quebracho. Gastric disturbances are very rarely observed, and no untoward symptoms of any kind on the part of the heart or the respiration are noted. The phenomena termed iodism follow the use of iodocol only very exceptionally, and then only in a very mild form. The remedy may be given for months without producing any symptoms of intolerance. Iodocol may be used with advantage in affections of the respiratory organs, as well as in tuberculosis of the intestines.

A Solitary Adenoma in a Cirrhotic Liver. By Dr. Giuseppe Jona.

The Prophylaxis of Rickets. By Dr. Giacomo Silva.—The author discusses the various theories that have been proposed as explanations of the pathogenesis of rickets, and concludes that the dietetic theory has more foundation in fact than any of the others, including the toxic, the infectious, the nervous, and the syphilitic theories. The only preventive measure is proper feeding by modified milk in default of mother's milk. An analysis of the cases of rickets that were treated in his hospital during the last five years showed that the total number of rhachitic children was 577, of whom 270 were boys and 307 were girls. Of these children, 246 had been fed on mother's milk until the fourth or fifth month; 63 had received cow's milk from birth, or during the first few months of life; 159 had been fed on breast milk by wet-nurses, and 109 had not received milk in any form. The majority of these children, therefore, received breast milk; but this fact must not be regarded as contradictory to the dietetic theory of rickets, for the milk of the mothers of the poorer classes is almost always deficient in quality and quantity, and the children generally receive at an early age other food besides breast milk. An investigation into each case showed that not one of the 577 children had received a rational diet. The problem of milk modification is especially difficult of solution among the poor, inasmuch as the more elaborate and expensive processes that have been recently recommended are not available in such cases.

Pithecoid Characteristics in a Demented Subject. By Dr. Riccardo Albericci.—The author had occasion to observe the actions of anthropoid apes, and became convinced that their behavior very often resembled that of certain demented persons. He describes a case of senile dementia in a woman aged sixty years. There was something distinctly simian in the expression of this person's face, and the woman's movements and general manner were very markedly ape-like. Her spine presented the diminished curvature of the primates, and the shape of her thorax approached that of the fœtus or the anthropomorphous simians. The predominance of the face over the cranium was so marked that it approached the limit of possibility, so far as a human being is concerned. The lower jaw was excessively heavy, and the prognathism was very marked.

Chirurgia, January, 1901.

The Experimental Method in Anatomy. By Dr. N. I. Napalkoff.—The author describes the value of experimental methods in the study of normal human anatomy. Dissection alone is not sufficient for the study of some structures, and experiments on living persons, as well as on dead bodies, are necessary for the study of the mechanism of joints, the effect of ligature of vessels, o

Cauterization by Means of Solar Rays and Hot Air. By Dr. N. N. Michailoff.—The use of red-hot iron, now supplanted almost entirely by the apparatus of Pacque-

lin, has the marked disadvantage that it is very difficult to regulate the amount of heat applied, and therefore the boundaries of cauterization. The result is that unsightly scars are often obtained. In the latter part of the 'seventies, Barnes, an American physician, proposed the use of direct solar rays for the purpose of cauterizing tissues. In 1894, Thayer strongly advocated the adoption of Barnes's method. The disadvantage of this method is, unfortunately, that it cannot be employed in cloudy weather. The only apparatus necessary is a strong biconvex lens.

Schwabe, of St. Petersburg, has recently constructed an apparatus for the application of hot air in cauterization. It is practically identical with Pacquelin's cauter except that the platinum end is spherical and terminates in a thin, open beak. A rubber tube is attached at the side of the platinum tip, and leads to the tube connecting the rubber bulb with the tip; in other words, this second rubber tube, which runs parallel to the tube of the original apparatus, does not go through the bottle of benzine as the latter does, but connects the tip directly with the air bulb. When the bulb is compressed a part of the air goes through the benzine and renders the tip incandescent, while the rest of the air passes along the second tube directly into the tip, where it is heated to a degree corresponding to the heat of the tip (probably about 300° C.), and escapes in a thin stream from the beak of the platinum tip. The author has used this apparatus in a number of cases, and has also employed direct solar rays for the purpose of cauterizing tissues. He has found that these methods are superior to the ordinary thermocautery and actual cautery, because they destroy the vitality of tissues by simply drying them up, without charring or breaking them down mechanically. Therefore, it is possible by these new methods to extend the cauterization to the surrounding healthy tissues when necessary (so as to destroy any traces of new growth, etc.), without producing destructive alterations in the healthy parts. While using the lens, it is best to wear smoked glasses, as the focused rays are too bright for the unprotected eye of the operator. The rays may be accurately focused first on a piece of cardboard which s placed over the tissue to be cauterized, and then removed. At first the spot becomes white, then light-gray, and finally it begins to char and steam. The light-gray tage is sufficient for tissues that are not very thick, as t indicates complete desiccation, and a few seconds are usually enough to secure this. The author has used this method in a great variety of cases, including lupus, naevi, warts, etc., and believes it to be ideal in every respect. The effect of Schwabe's apparatus is very similar o that of the lens.

The Diagnosis and Treatment of Gall-stones. By Dr. P. I. Diakonoff.—The author reports the history of ve patients who had been operated upon for gall-stones. n addition, he gives the statistics of thirty-one cases of all-stone that had been operated upon by Russian surgeons. Of the total number (thirty-six), five were men, hirty were women, and in one case the sex was not recorded. Ten patients were between the ages of twenty nd twenty-nine years, seven between thirty and thirtyne years, ten between forty and forty-nine years, four tween fifty and fifty-nine years, three between sixty and venty years, and in two cases the age was not recorded. holecystotomy was performed in seventeen cases, with ree deaths; cholecystectomy in nine cases, with three aths; in two cases choledocotomy was performed, and, two, the operation did not correspond to any of these types, but consisted in the removal of stones from the gall-bladder. In nearly all cases the cause of death could not be connected with operation itself. The reason why so few patients with gall-stones are operated on is that they reach the surgeon only through the medium of the physician, and, therefore, the number of cases of gall-stone operated upon ultimately depends upon the view of the matter taken by the general practitioner. The fact that gall-stones are found in the gall-bladder of patients in whom laparotomy has been performed for some other cause, and that the same condition is found in dead bodies of persons who have never suffered from any symptoms of gall-stones, show that cholelithiasis may exist without any clinical symptoms. The chief trouble as regards the prognosis of operations is that the cases reach the surgeon too late in most instances. In speaking of the indications for operative intervention, the author says that every case of gall-stones should be considered as one in which a surgical operation is necessary, because the development of gall-stones may be followed by grave consequences. The only absolute contraindication to operation is a high degree of cachexia, while the uncertainty in the diagnosis or an early stage of the disease, when medicinal treatment is of some value, may be considered as relative contraindications. The operation to be selected depends, of course, upon the situation of the stone and the extent of the secondary lesions. A recurrence of the trouble may be expected even after the most careful removal of all the stones.

Journal Akouscherstva i Gienskich Boliesney, December, 1900. (Journal of Obstetrics and Diseases of Women, St. Petersburg.)

The Suturing of the Laparotomy Wound and the Drainage of the Peritoneal Cavity after Laparotomy. By Dr. A. P. Goubareff.—It is wrong to judge the value of any particular method of suturing the abdominal wound by studying the statistics of hernias that have occurred after the use of the method in question. Regard must be paid to the question of aftertreatment; for, with proper aftertreatment, almost any method will succeed in securing a firm cicatrix and preventing hernia. Thus, Kraske has succeeded in obtaining a perfect result without any sutures whatever, simply by persistent and careful aftertreatment. Even an incision made transversely across the abdomen over the symphysis will heal without any danger of hernia if properly treated by bandages and elastic belts after the operation. On the other hand, triple tiers of sutures are without avail against hernia if the aftertreatment is neglected. The author has seen many cases in which a simple interrupted suture, like that used by Sir Spencer Wells, sufficed to secure the edges of the wound so well that a perfectly sound scar resulted. It is wrong to depend on the sutures, no matter how complicated and how strong, for the union of the edges. Without the healing process which Nature provides there can be no good scar. The office of the sutures is simply to bring the surfaces together to enable Nature to heal the wound, and not to secure the patient against possible interference with healing caused by vomiting, coughing, or straining. A sufficient approximation of the edges for the purposes of healing is, in fact, secured by a simple bandage, and there is no reason why sutures should be employed. If this point of view is taken, the question as to suturing the laparotomy wound becomes identical with the question as to the necessity of suturing a wound in any other part of the body.

In order to obtain a suture fulfilling all requirements, one may use a deep and a superficial continuous suture

and two or three interrupted sutures serving to prevent accumulation of secretions in the bottom of the wound. The first of these sutures should include the peritonæum and the tendons of the flat muscles of the abdomen. Two or three deep interrupted sutures will suffice to bring together the adipose layers of the abdominal wall if these are abundant, and, finally, a "subcutaneous" suture, as described by Kelly, may be used for the skin. Both continuous sutures should be of deer tendon. After the sutures have been placed, the wound should be wiped with peroxide of hydrogen, and a roll of sterile gauze laid upon it, the ends of the deep interrupted silkworm-gut sutures being tied over this gauze. Perfect quiet must be maintained and, if vomiting appears, a bandage or an elastic belt must be provided. As regards drainage, the author sums up the modern view of the subject with the words: "When in doubt don't drain." Drainage is required in cases in which the hæmorrhage is not completely arrested, when the peritonæum is supposed to be infected, and after the operation, when there are symptoms of internal hæmorrhage or of exudation of fluid in the peritonæum.

The Pathogenesis of Eclampsia as Shown by the Statistics of the Obstetric Clinic and Polyclinic in Kieff. By Dr. D. Abuladze.—During the last sixteen years there have been 45 cases of eclampsia among 2,926 women who had been admitted to this clinic; in other words, 1.5 per cent., or 1:65. The author gives a number of statistical tables, and concludes as follows: The infectious nature of eclampsia, in the sense accepted by Stroganoff, is more than doubtful. [Stroganoff considers eclampsia as an infectious condition and the albuminuria as a secondary phenomenon.] The author found albuminuria in 50 per cent. of his cases, and the cessation of albuminuria coincided with recovery from eclampsia. He does not affirm, however, that eclampsia is due to a renal affection.

The Operation of Suturing the Ureters into the Rectum. By Dr. S. A. Alexandroff.—The author believes that this operation should be more frequently employed than it is at present. When a ureter is wounded it is easier and less dangerous to sew it into the rectum than to resort to nephrectomy or to ligation of the ureter so as to exclude the kidney from the organism. In tuberculosis or malignant tumors of the bladder this operation is also indicated, and in large fistulæ of the bladder, susceptible of operation, it may take the place of episto-cleisis. In some cases it may serve in place of colpocleisis, which does not guarantee the patient against ascending renal infection, but may give rise to the formation of stones in the bladder, and at the same time limits the sexual activity of the patient. Of course, the operation of sewing the ureters into the rectum will always be the last resort in fistulæ of the bladder in view of the progress made in the technique of operations for vesico-vaginal fistulæ at the present time.

A Case of Vaginal Hysterectomy Immediately after Labor on Account of Carcinoma of the Vaginal Portion. By Dr. I. A. Strauch.—According to Sarwey, only one case of labor in a woman with carcinoma of the uterus could be found among 2,000 labor histories. The patient was a quintipara, aged thirty-five years, and the carcinoma developed during the last pregnancy on the soil of a lacerated cervix. The author's conclusions are as follows: The induction of premature labor or abortion is not permissible in pregnant uteri affected with carcinoma. Before the eighth month, immediate complete extirpation is indicated, without regard to the life of the child, in cancers of the uterus susceptible of operation. Before the fourth month one can easily remove the cancer without removing the fœtus. After the fourth month, the uterus must first be emptied. If the child is viable, a vaginal or abdominal Cæsarean section must be performed, and the uterus must be immediately removed. In carcinomas insusceptible of operation, one must only regard the life of the fœtus, as the mother is doomed. The end of pregnancy must therefore be awaited, and the child then extracted in a way best suited to its preservation. If the vaginal route is not practicable, abdominal Cæsarean section must be resorted to. Wherever possible, the vaginal method, both for extraction and for hysterectomy immediately following, should be perferred.

A Case of Cæsarean Section with Relative Indications. By Dr. V. Stolypinsky.—The patient had not borne a child to term before, and, on examination, presented a very marked general narrowing of the pelvis, and it was decided, upon consultation with Professor Fenomenoff, to perform Cæsarean section at the proper time. The head presented, and the cervix admitted two fingers when the operation was performed. Both Falloppian tubes were ligated and cut, in order to comply with the wishes of the patient, who desired to be freed from a possibility of future pregnancies. After the uterus had been opened the hæmorrhage from the uterine arteries was arrested by compression exercised by an assistant. No elastic compression of the lower segment was used.

Vratch, February 17, 1901 (March 1, 1901, New Style).

The Surgical Treatment of Ascites in Atrophic Cirrhosis of the Liver. By Dr. N. M. Benissovitch.—The author reports two cases in which he performed Talma's operation for ascites due to atrophic cirrhosis of the liver. Talma, of Utrecht, proposed, in 1889, an operation the purpose of which was to relieve the congestion of the portal system by directing the blood into other and new channels. He proposed that the great omentum should be sutured to the anterior abdominal wall in order to stimulate adhesions between the sutured surfaces, and thus to favor the formation of veins connecting the radicles of the portal system in the omentum and the veins of the anterior abdominal wall. In this manner the portal congestion would be relieved. Talma did not succeed in applying his idea in human beings, but Morrison, Eiselsberg, and others performed this operation with good results. In the author's first case the ascites returned after the operation, but very slowly, and the general condition improved considerably. In the second case, the patient lived very comfortably for a fortnight after the operation, but for some reason or other he was seized with an attack of cardiac weakness and died on the fifteenth day. There was no autopsy, and therefore it was impossible to state the cause of death, but the author thinks that the operation rather prolonged the patient's life. The theoretical foundation for this operation was first laid down by Claude Bernard, who showed that animals bore gradual occlusion of the portal vein perfectly well, provided a collateral circulation was secured. Tillmann and Kouznetzoff have also contributed experimental work on this subject.

Medical Attendance for the Operatives in some Factories of the Vladimir Province in the Years 1896-1898. By Dr. M. S. Kamneff.

Concerning Diseases of the Cerebellum. By Dr. P. I. Schatiloff. *(Continued.)*

Proceedings of Societies.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting of March 5, 1901.

The President, Dr. Joseph Collins, in the Chair.

Muscular Dystrophy.—The President presented for diagnosis and discussion a boy of ten years, who presented a complex of symptoms which could not easily be placed under any one designation. He was one of twelve children, seven of whom had had in infancy marasmus or gastro-intestinal disorders. The present ailment had begun about nine months ago, at which time the boy had begun to "hop." He complained of pain in the great toe of the left side, and also of pain in the præcordial region. He had then been taken to the Mount Sinai Hospital, and while he was there it had been noted that there was some stiffness or weakness in the lower limbs on walking. This impairment of motion has steadily increased, so that at the present time he was practically unable to walk more than a few steps. According to the history, there had been early in the disease great difficulty in beginning the act of micturition. At present there were no symptoms referable to the bowels or bladder. He had a peculiar waddling gait, and when he was standing there was a typical flat-foot. There was a peculiar knocking together of the thighs. The spasticity of the gait had been found, on closer examination, to be more apparent than real. There was a marked ankle clonus. There were no sensory disturbances. The boy got up from the recumbent posture as children did in the early stages of progressive muscular dystrophy. These symptoms, the speaker said, seemed to point distinctly to a lesion in the spinal cord in the crossed pyramidal tracts.

Dr. B. Sachs said that he had been much interested in this boy at the time he had been in the hospital. The combination of the waddling gait, so characteristic of the dystrophy, with an increase in the reflexes seemed to be especially unusual. When the boy was stripped, it seemed to him very evident that he had progressive muscular atrophy of the Landouzy type. In addition to this, he thought there was a subacute myelitis, possibly of traumatic origin. There could be no question that the calves were hypertrophied. This diagnosis had been arrived at only after careful observation for a period of several weeks. The frequent falls which children had would easily explain the occurrence of a subacute myelitis. The spasticity had been more marked nine weeks ago.

Dr. Græme M. Hammond said that from the cursory examination that he had made he felt inclined to agree with Dr. Sachs.

Dr. William M. Leszynsky said that it seemed to him to be a very atypical case. He had seen quite a number of patients in whom there had been complete spasticity, and yet the ankle clonus had been very marked.

Dr. Joseph Fraenkel said that the most prominent symptoms were those of disease of the lateral and posterior columns. At first sight the gait was that of ataxic paraplegia. On the supposition that the myelitis was the later disease, one would expect less evidence of the second. The evidences of pseudohypertrophy were certainly quite trifling, while the disease of the cord was very marked. He inclined to the diagnosis of subacute multiple sclerosis of a paraplegic type.

Dr. J. Arthur Booth said that there was certainly a greater deposit of soft tissue in the left than in the right calf. He accepted the views expressed by Dr. Sachs.

The President thought it was safe to assume that the boy had a dystrophy, but not that there was a subacute myelitis. No one could say whether the changes in the spinal cord which accompanied the dystrophies were of such nature that double ankle clonus and double knee-jerk might not develop. It was certainly a form of dystrophy which did not conform strictly to the description of any usually given. If there was an implication of the cord, it was confined entirely to the crossed pyramidal tracts. He would not be willing to admit that there were any changes in the spinal cord except secondary ones.

Progressive Muscular Dystrophies, with a Report of a Post-mortem Examination.—Dr. Sachs and Dr. Harlow Brooks presented this paper. The authors stated that it could not be denied that there was a sufficient distinction between the amyotrophies and the dystrophies. In former years much stress had been laid on the muscular structure. Hypertrophied fibres were found in abundance in dystrophies, whereas in the amyotrophies these fibres were not found. But later it had been shown that the hypertrophied fibres were found in other diseases than dystrophies. It was also a question whether the gray matter of the cord was affected in the primary dystrophies. The case to be reported was one of progressive muscular dystrophy of fifteen years' duration, yet the structural changes, as demonstrated by the latest methods of staining, were very slight. The patient had been admitted into the Montefiore Home eleven years ago, at the age of twelve years. Early in his life the parents had noticed peculiar movements of the head and eyes. He had been in good health up to about the age of ten years, when he had fallen and broken his leg. At the age of twelve years, after an attack of typhoid fever, it had been noted that the calves were decidedly hypertrophied. The head was enlarged and exhibited certain movements. There was a marked atrophy of all the muscles of the shoulder girdle, arm, and forearm. The deep spinal muscles were intensely atrophied. The thigh muscles were atrophied. The case became an extreme illustration of a progressive muscular disease of the pseudohypertrophic type. The lad's intelligence was fair. Dr. Brooks said that at the autopsy the organs were normal, with the exception of an acute pneumonia and a slight myocarditis. There were no gross lesions of the brain or spinal cord. No lesion of the smooth voluntary muscular tissue could be found anywhere in the body. The psoas muscle showed extensive fibrosis. The muscles of the back all showed extensive fibroid replacement, and in places there was replacement by yellow fat. The trapezii were very extensively invaded. The most extreme changes were in the muscles of the calves, where normal muscular tissue was lost. The autopsy had been done twenty-four hours after death, and at that time there had been no evidence of post-mortem decomposition. On microscopical examination, the muscles showed extensive replacement with areolar tissue of the adult type. In the calf, occasional remnants of voluntary muscle were found. Most of the fibres of the psoas muscles were either larger or smaller than normal. The coarse striæ could usually be made out. The changes in the other voluntary muscles were of the same character, though varying in extent. In the occipital muscles the amount of connective-tissue hyperplasia was less, but nuclear proliferation was prominent. Examination of various portions of the smooth muscles failed to show degeneration or hyperplasia of the connective tissue form-

ing their framework. The heart muscle showed much less connective-tissue increase than had been expected from the gross examination. The cardiac muscle was in a very natural condition, there being no atrophy, no abnormal pigmentation, and no abnormal nuclear activity. The blood-vessels in the various tissues showed uniformly an increase in the connective tissue. No evidences of new vessel formation were found. Numerous peripheral nerves were examined, but no appreciable degeneration of fibres was discovered. Only a few of the spinal ganglia had been properly prepared for examination, but these few showed a shrinkage of the ganglion cells similar to that produced by fixing agents. The irregular perilymphatic spaces were, however, found filled in with proliferating capsular cells, apparently indicating that this was not an artifact, but a distinct pathological process. Apparently the connective tissue of the ganglia had been increased. The connective tissue throughout the entire cord was found to be increased. The blood-vessels of the cord were universally congested, but this was apparently of a hypostatic nature, due to the position of the patient before death. Nothing in the nature of a systemic degeneration of the fibres was found at any level. In the cervical region the ganglion cells in the anterior horn showed a slight nuclear eccentricity. The dendrites universally retained their power to respond to the stain. Occasionally the achromatic elements stained to a slight degree. Eccentricity of the nucleus was found more commonly in the dorsal cord than elsewhere. Lesions in the cells of the posterior horns were more infrequent than in the anterior horns. The most common lesion was a finely granular subdivision of the plaques, usually not involving the entire cytoplasm. A few of the lumbar cells showed an unusual amount of brown pigment collected about the nucleus. The chief lesions were: 1. Extensive atrophy, which affected apparently all the voluntary skeletal muscles and was confined to these muscles. 2. The production of areolar connective tissue and fat. 3. Slight general circumvascular hyperplasia. 4. Moderate interstitial myocarditis. 5. Extensive degenerative changes in a few of the posterior-root ganglia. 6. Rare changes in the cytoplasm of the ganglion cells of the spinal cord. The complete absence of the changes in the smooth muscles showed that the disease process was strictly localized in the voluntary muscular system. The authors did not look upon the connective-tissue increase as an essential feature of the pathological process, but as an example of a universal function of this tissue in taking the place of any tissue which had been removed. The circumvascular connective-tissue hyperplasia was very slight, and could not be considered as typical of the disease or as produced by it. Possibly the moderate myocarditis was associated with the connective-tissue hyperplasia of the blood-vessels. It did not seem to be in any way connected with the factors producing atrophy of the voluntary muscles. The changes in the posterior-root ganglia seemed to be of great significance, though it was not clear that they bore any direct relation to the changes in the voluntary muscles. These degenerations seemed to be secondary in their nature, and dependent upon death or disease of certain portions of the neurone. A process similar to this occurred after amputation. There were, therefore, no evidences of tract disease. The cytoplasmic degeneration of the ganglion cells in the cord were rare, and might represent the early stage of post-mortem change. Dr. Sachs said that these findings did not indicate that the cause was to be found in the gray matter of the cord. The disease represented a primary affection of the muscular fibre. The occurrence of stigmata of degeneration in so many cases of this dystrophy would lead one to think that these should be broadly classified under family affections. The question arose as to whether these muscular dystrophies were essentially progressive, and the statement was made that in every case the possibility of great improvement by systematic exercise should always be kept in mind in the early stage. Two illustrative cases were briefly reported which had been followed for many years.

Dr. C. L. DANA said that, so far as the dystrophies were concerned which were not strictly of the so-called pseudohypertrophic type, but rather of the arm and leg types, it seemed to be a well-known fact that many of them ceased to progress and the patients lived for many years in comparative comfort. He had personal knowledge of two families in which there were six or seven persons, going through three degenerations, who were afflicted with the leg or arm type of dystrophy. Some had lived to old age with only an inability to use the upper arm or perhaps the thigh muscles. One of these persons had been seen at many clinics in this city when thirty-nine years of age. The atrophies had begun at the age of nineteen, and had reached their height at about the age of twenty-nine. His weight had been reduced to eighty-eight pounds. A fairly hopeful prognosis could be given in this class of cases, especially when the atrophies did not begin very early in life. In his experience with pseudomuscular hypertophy there had been only one case in which the disease had been really checked. This person was a lady of twenty-three, in whom the trouble had begun at the age of eighteen. She had presented all the typical symptoms of pseudohypertrophy of late development. He had put her upon systematic exercises, and as a result not only had the disease ceased to progress, but she had absolutely improved. In another case which had been faithfully treated by exercise and massage for four years there had been continued progress. Dr. Dana would like to have Dr. Brooks explain why there should be so much fibrosis in these cases. It might be that in the death of the muscle fibre an irritant poison was formed, and that this gave rise to the increased proliferation. There was a striking difference, clinically, between a typical spinal atrophy and an ordinary dystrophy, and he believed these diseases were very different in their origin also. The hereditary cases were of a type which was quite distinct from that of the acquired forms.

Dr. A. WIENER said that about six years ago he had presented to the society a patient who was very much crippled in his muscular movements. In that case he had been so convinced that many muscular fibres were still intact that he had carefully trained the patient in exercises for six months. He had been again presented to the society at the end of that time, and the improvement had certainly been very marked—indeed, the day previous he had been able to ride forty miles on his bicycle. On the other hand, in the dystrophies occurring early in life, he did not believe much could be gained by exercise.

Dr. LESZYNSKY exhibited photographs of two patients whom he had had under his care for a number of years with pseudohypertrophy of the lower extremities and progressive muscular atrophy of the upper extremities. Both had died of some intercurrent disease at the age of twenty-five. Before he had seen them, both had received massage and careful training in physical exercise.

Dr. HAMMOND said that he had recently made a post-mortem examination in a case of pseudohypertrophy with rather interesting findings. In the lumbar enlargement of the cord there had been found a distinct cavity extending for several inches. In the dorsal segment was a large gliomatous mass pressing upon the cord. This was apparently a lesion independent of the disease in question. He was in a position to agree entirely with Dr. Wiener as to the beneficial effect of exercise. He had tried systematic exercise in those affected early in life, and had not found the slightest benefit from carefully conducted exercises of this kind carried on for a considerable time.

Dr. B. ONUF said that the muscles which had to do the most work were the ones most affected; the muscles which must bear the weight of the body were the first ones to become affected. It was because of this fact that he had been led to try the effect of the opposite plan of treatment—*i. e.*, rest in bed. However, the result had been disappointing.

The PRESIDENT said that the post-mortem examination referred to by Dr. Hammond had been on a patient that had been under his own observation for over two years. This man was twenty-four years of age at the time of his death, and the disease had existed for fourteen years. Careful investigation into the family history had shown no similar case. Up to his eleventh year he had been free from all disease. For eleven years he had been unable to walk, and for eight years had been bedridden. Up to a short time before death he had retained the ability to move his fingers, though he could not move his arm, and his facial muscles continued to act well. It was a most typical case of progressive muscular dystrophy. Death had resulted from a tuberculous infection. The brain reported on by Dr. Sachs had been from a boy under his observation for six or seven years. Assiduous attention to calisthenic exercises had made him worse in proportion to the assiduity, and that, too, although he had had an excellent calisthenic teacher. This had been the speaker's experience in all other cases in which the disease had begun early in life. The changes described by Dr. Brooks as having taken place in the ganglion cells certainly opposed one's ideas of the relation of the neurone to disease. After five years' experience with the Nissl stain, he felt in a position to assert positively that nuclear eccentricity meant absolutely nothing.

Dr. SMITH ELY JELLIFFE said that he had heard nothing said by Dr. Brooks about the terminal end-plates of the motor nerves.

Dr. BROOKS replied that, after attempting to study end-plates, he had come to the conclusion that this could only be done with methylene-blue during life, and that he had been unable to do. He could not tell Dr. Dana why the connective tissue should grow up so much more in one place than in another. In the calves there had been an increase in volume, and in the pectoral muscles a decrease. It was not improbable that it was due to some inflammatory or toxæmic condition in these particular muscles, or possibly the muscle had been overexercised. He agreed with the president about the uncertainty of the Nissl stain, and said that the findings described by him as having been observed in the ganglion cells were negative.

Dr. SACHS admitted that the findings reported in the paper certainly did tend to shock one's confidence in the neurone theory as a whole.

Book Notices.

Hand Atlas of Human Anatomy. By WERNER SPALTEHOLZ, Extraordinary Professor of Anatomy in the University and Custodian of the Anatomical Museum at Leipsic, with the Advice of WILHELM HIS, Professor of Anatomy in the University of Leipsic. Translated from the Third German Edition by LEWELLYS F. BARKER, Professor of Anatomy in the University of Chicago. With a Preface by FRANKLIN P. MALL, Professor of Anatomy in the Johns Hopkins University at Baltimore. Volume I: Bones, Joints, Ligaments. Leipsic: S. Hirzel, 1900. London, Edinburgh, Oxford: Williams & Norgate. New York: G. E. Stechert.

GERMAN students in this country are familiar with Spalteholz's *Anatomy,* which is distinguished for its superb illustrations and its condensed but thorough text. Dr. Barker has done a good service in translating the work into English and thereby making it accessible to the English-reading public.

The first fasciculus of the work, dealing with the bones, joints, and ligaments, is now before us. The continental nomenclature—that is, the Latin phraseology—has been retained, and, while this will be greeted with cordial enthusiasm by those who desire a uniform use of terms in science, confusion has been avoided by placing the terms of the old nomenclature in brackets where it differs widely from the new. Special attention has been paid in the development of a dissection step by step, and to the topographical relations of the vessels and nerves.

A word as to the illustrations, which are far above any similar ones within our knowledge. Most of them are in half-tone, and many of them are colored for purposes of clearness. They represent actual dissections, and the excellent principle has been adopted of making the text secondary to them in order that the student may form his basic anatomical ideas from the dissection, and not from the printed text.

As a superb guide to the study of anatomy, we do not see how this work can be eclipsed; it is *facile princeps.*

Orthopædic Surgery. A Handbook. By CHARLES BELL KEETLEY, F. R. C. S., Surgeon to the West London Hospital, etc. Pp. xvii-539. London: Smith, Elder & Company, 1900. [Price, $5.50.]

THIS work, as the author frankly states in his preface, is written as a presentation of his own views and observations, based on more than twenty years of surgical practice, and largely influenced by Lannelongue, von Miculicz, Busch, and Bouvier. As is usual in foreign orthopædic treatises, joint diseases are not included, but there are interesting sections on chondrodystrophia, osteitis deformans, and acromegaly, subjects often omitted.

The author is interesting and suggestive in the operative sections, though sometimes an enthusiastic rather than a safe guide. His enthusiasm, however, does not seem to extend to the section on non-operative treatment, in which the inquiring students will often be disappointed at the paucity of the material and the vagueness of statement on these topics, which, after all, comprise nine tenths or more of orthopædic practice as seen in this country. Surgical literature is freely quoted, but there is no bibliography. The author's style is vivacious, but the arrangement is sometimes defective, a fault

which is partly atoned for by a full analytical index at the head of each chapter.

Les Maladies qu'on soigne à Berck. Adénites, tumeurs, blanches, coxalgie, scoliose, mal de Pott, luxation congenitale, etc. Masson et Cie.

THE diseases treated at Berck-sur-mer, a small town on the French side of the English Channel, are mainly the peripheral and joint tuberculous affections, rhachitic troubles, and other deformities of children. Berck is only one of a considerable number of coast towns in France, Italy, and other European countries where hospitals and sanatoria for the treatment of such affections exist, and many European surgeons report an excellent effect upon rhachitic and tuberculous affections from a prolonged sojourn on the sea coast. Dr. L. Cabot is well known in connection with the method of forcible reduction of the deformity in Pott's disease, which was brought forward with considerable *frio* by French surgeons about five years ago; he is also the author of about fifty papers and addresses on the surgery of childhood. It is interesting to learn that Dr. Cabot, who states that he has himself excised eighty hips, has entirely given up excisions of joints, curetting, and even the incision of cold abscesses, relying solely upon hygiene, diet, sea air, and repeated aspirations and injections of antituberculous fluids, such as a solution of iodoform in ether, camphorated naphthol, and chloride of zinc, 1 to 50. He reports marvelously rapid and certain results from this method.

His position in regard to the use of force for the reduction of the deformity of Pott's disease is much more conservative than in his first writings, in which he advocated extreme force under chloroform anæsthesia in nearly all cases. He now uses gentle or moderate force, with or without anæsthesia, in selected cases only, and virtually rejects laminectomy.

Dr. Cabot uses the bloodless method almost exclusively in congenital hip luxations, which is also the present practice of Lorenz, who was a short time ago the great exponent of the cutting operation.

Some of the views advanced by the author differ widely from accepted practice, such as his advocacy of long periods of recumbency and his entire rejection of gymnastic exercises in lateral curvature, but the brochure is interesting as emphasizing the value of the marine treatment and as throwing some light on the present status of the surgery of deformities in France.

Golden Rules of Skin Practice. By DAVID WALSH, M. D. Edin., Hon. Physician to the Western Skin Hospital, London, W., etc. Golden Rule Series. No. VIII. Pp. 5 to 102. Bristol: John Wright & Company. London: Simpkin, Marshall, Hamilton, Kent, & Company, Ltd., 1900. [Price, 1s.]

THIS little volume contains a number of useful hints in the diagnosis, care, and treatment of persons suffering from cutaneous ailments. The "don'ts" in the book are as numerous and as important as the positive directions. While we imagine that specialists will be familiar with most of the dicta, we believe that for the general practitioner the little book will prove useful.

Experimental Research into the Surgery of the Respiratory System. An Essay awarded the Nicholas Senn Prize by the American Medical Association for 1898. By GEORGE W. CRILE, A. M., M. D., Ph. D., Professor of Clinical Surgery, Medical Department, Western Reserve University, Cleveland, etc. Second Edition. Pp. 5 to 114. Philadelphia: J. B. Lippincott Company, 1900.

THE popularity of this little monograph on the experimental surgery of the respiratory system has been demonstrated by the early appearance of a second edition. We do not note any material change from the former volume. We again take the opportunity to congratulate the worker and writer in this interesting field of surgery.

Laboratory Directions for Beginners in Bacteriology. An Introduction to Practical Bacteriology for Students and Practitioners of Comparative and of Human Medicine. By VERANUS A. MOORE, B. S., M. D., Professor of Comparative Pathology and Bacteriology, New York State Veterinary College, etc. Second Edition, Enlarged and Revised. Pp. xvi-143. Boston: Ginn & Company, 1900.

THE second edition of Dr. Moore's little work is amplified and extended by embracing the newer facts in bacteriology. The directions for carrying out laboratory work and for following systematic lines of study are clearly and logically given, and as we read, for instance, the chapters on making culture media and on making cultures of the various organisms, we are struck by the excellence of the didactic method. For an elementary text-book on bacteriology, we know of none better than this.

Medical Electricity. A Practical Handbook for Students and Practitioners. By H. LEWIS JONES, M. A., M. D., Medical Officer in Charge of the Electrical Department in St. Bartholomew's Hospital, etc. Third Edition. With Illustrations. Pp. xv-532. London: H. K. Lewis. Philadelphia: P. Blakiston's Son & Company, 1900. [Price, $3.]

THE third edition of this work is an interesting volume. Much has been added to it, especially in the chapters dealing with the special uses of electricity in medicine and surgery. The Röntgen rays are fully discussed, and besides the general uses of these rays in the detection of foreign bodies and in studying osseous lesions, the author believes that they will be found of the greatest value in the diagnosis of diseases of the heart and lungs. There is probably no better manual on the subject than this well-known work.

A Text-book of Pharmacology and Therapeutics, or the Action of Drugs in Health and Disease. By ARTHUR R. CUSHNY, M. A., M. D. Aberd., Professor of Materia Medica and Therapeutics in the University of Michigan, etc. Second Edition, Revised and Enlarged. Illustrated with Forty-seven Engravings. Pp. v-7 to 732. Philadelphia and New York: Lea Brothers & Company, 1901.

OWING to the fact that but little more than a year has elapsed since the first appearance of this work, it is not to be expected that a second edition should show material change or alteration. With the exception of a few additions upon recently introduced preparations and an occasional minor revision, the book remains unaltered. Of the high quality of the book we have heretofore spoken, and that the first edition should have been so rapidly exhausted occasions us no surprise.

Diseases of the Throat, Nose, and Ear. A Clinical Manual for Students and Practitioners. By P. Mc-

Bride, M. D., F. R. C. P. Ed., Fellow of the Royal Society of Edinburgh, etc. Third Edition, Revised and partly Rewritten. With Colored Illustrations from Original Drawings. Pp. xvi-744. Edinburgh and London: Young J. Pentland. Philadelphia: P. Blakiston's Son & Company, 1900. [Price, $7.]

We have long considered McBride's treatise one of the best works on these special topics. He has, to a rare degree, the art of intelligent condensation, and has furnished us with a vast amount of information, well digested and so arranged as to be available with the least possible search. As stated above, the work has been partly rewritten and brought down to the present time. In fact, as we have looked through the volume, we have found mention of practically every matter of moment which the advances made in these special lines during the last few years have brought into prominence. The illustrations are notably good and give a very definite idea of the various lesions seen in actual practice. The author has very positive views on treatment, and, while he shows a thorough acquaintance with the voluminous literature of the last decade, does not leave his reader in any doubt as to his own convictions. The work is to be unhesitatingly commended.

Miscellany.

Solidified Air.—A report comes in a special to the *New York Times* that Professor A. L. Metz, of Tulane University, has succeeded in making a small block of solidified air which was as substantial (for the time being) as a block of ice. It was about an inch in diameter, and lasted about fifteen minutes in a fully exposed condition. He laid it on an anvil, and as he struck it the hammer bounded off as though it had been a piece of rubber. It was so intensely cold that no one could think of touching it with his fingers. Taking a large test tube, about eighteen inches long and over an inch in diameter, Professor Metz put liquid air into it, filling it to within six inches of the top. He then corked it, and through the cork inserted a bent glass tube which was connected with his vacuum apparatus, the full power of which was applied in order to induce the most rapid evaporation possible. The liquid aid boiled and bubbled as though it had been suddenly exposed to the most intense heat. When thus exposed to extremely rapid evaporation, its temperature dropped very rapidly. The cold produced was so intense that the atmosphere in the immediate neighborhood of the test tube began actually to liquefy and drop from the lower extremity of the tube. It was caught in a Dewar test tube and found to possess all the characteristics and properties of liquid air. In the meantime the volume of air remaining in the tube was found solidified in a lump a little more than an inch deep. In order to extract this it was found necessary to break the test tube, when the lump of solid air was fully exposed to the action of the atmosphere.

"Doctors by Enactment."—The New York *Tribune* for March 29th says that when it recently protested against "the mischievous proposal to admit men to the bar by act of legislature, without the requirements of legal study and examination," it quoted as inevitable the logical conclusion that on the same principle a man would be equally entitled to be admitted to practise medicine in the same way, viz., by political pull and without study. It now finds that what it cited as a *reductio ad absurdum,* "not supposing any one would ever have the temerity to pursue such a course," is actually being attempted, and comments upon this pitiable fact in the following appropriate terms:

"It is high time to call a halt upon this transformation of the State Capitol into a bogus diploma factory. Since laws regulating admission to the professions have been enacted, they should be enforced and maintained. If men want to practise law or medicine they should prepare themselves to do so by means of the legally prescribed courses of study, which are open to all fit persons on the easiest of terms. If they complete those studies and acquire the prescribed preparation they will get their degrees and licenses as a matter of course without special legislation. If they are not capable of pursuing the studies, and are not competent to gain the prescribed preparation, they have no business to seek entrance to the professions. The world is wide. There are other useful and honorable callings open to them without their seeking to intrude into professions for which, by their own confession, they are not adequately fitted."

A Pan-Hellenic Medical Congress is to be held in Athens from May 6th to 10th, and its success is considered as already assured by the wide adhesion that it has received among Hellenic physicians. All Greek physicians who may not have received the invitation and programme are requested to communicate with Dr. Michael Mangakis, Rue de l'Université, No. 85, Athens. Foreigners are permitted to take part in the proceedings if they have given in their adhesion to the congress and forwarded the subscription, which has been fixed at fifteen drachmas (three dollars). The following subjects are fixed in advance for discussion: 1. Phthisis and Sanatoria in Greece; Professor N. Maccas, of Athens, and M. B. Patrikios, of Athens. 2. On the Use of Alcoholic Beverages in Greece and its Effects; M. J. Foustanos, of Syra, and Professor G. Vaphas, of Athens. 3. Continued Fevers in Greece; M. J. Cardamatis, of Athens, and M. J. Théophanidès, of Agrimon. 4. Lepra; Professor M. Hadjimichalis, of Athens, and M. F. Mitaftsis, of Athens. 5. Echinococcus; Dr. Clado, of Paris, and M. S. Tsaconas, of Athens. 6. School Hygiene; M. C. Papagiannis, of Athens, and Professor G. Vaphas, of Athens. 7. Appendicitis; Dr. N. Alivizatos, of Athens; Professor J. Galvanis, of Athens; Dr. G. Phocas, of Lille, and M. A. Psaltoff, of Smyrna. 8. The Surgical Treatment of Tuberculosis; Dr. Clado, of Paris; Professor J. Galvinis, of Athens, and Professor Spiridion Manghinas, of Athens. 9. Asepsis and Antisepsis in Greece; Dr. Catérinopoulos, of Athens. 10. Dystocias from Pelvic Defects; Dr. T. Campanis, of Athens, and Dr. C. Digénis, of Athens. 11. Lesions of the Eyes in Infectious Diseases; Dr. N. Dellapoitas, of Athens, and Dr. T. Metaxas, of Athens. 12. Syphilis in Greece; Professor M. Hadjimichalis, of Athens.

Relations between the Nose and the Female Sexual Organs.—A. Schiff (*Wiener klinische Wochenschrift,* 1900, p. 58; *British Medical Journal,* February 16, 1901) discusses this subject. Fliess in 1897 published a book with this title, in which, after restating the fact that in menstruation there regularly occurs swelling and congestion of the nasal lining, he says that this change affects two special points, the front end of the lower turbinate and the tuberculum septi, which are not only swollen, but specially sensitive. These he calls the genital spots. These points have special relations to the

pain in those dysmenorrhœas which do not end with the onset of the flow, and the pain can be stopped by cocainizing these points, hypogastric pain by the turbinate, and sacral pain by the tuberculum. Starting from a skeptical standpoint to test these statements, Schiff ended by being convinced of their absolute accuracy. His cases were got from the clinics of Schroetter and Chrobak, and were carefully selected by excluding all in which the pain was erratic and did not regularly continue for whole days at each period, and he was very careful in avoiding any possibility of "suggestion." He painted the genital spots during the pain with twenty-per-cent. cocaine solution, and of forty-seven cases he could regularly produce cessation of the pain in thirty-four. Some cases he observed for months and had more than two hundred positive results with cocaine. So little cocaine was used that there was no question of a constitutional effect, and he got the same result with three to five per cent. solution if he first contracted the nose lining with suprarenal extract. The pain, hypogastric and sacral, could be painted out bit by bit by taking the genital spots in succession. In seventeen of the positive cases he, in the menstrual interval, cauterized the genital spots with trichloracetic acid or electrolysis, and twelve had no return of the dysmenorrhœa, three being under observation as long as from one and a half to two and a half years. In the other five, he thinks the cauterization was probably not complete. Of the thirteen negative cases, nine had been examined gynæcologically, four had fixed retroflexion, two adnexal disease, and one parametritis. Two with normal pelvic organs had marked hysteria. Of the thirty-four positive cases, twenty-four had been examined; nine had approximately normal organs and fifteen marked pelvic disease, mostly inflammatory. Many of the cases had been under gynæcological treatment. Perhaps the strongest confirmatory evidence of the constancy of the relation of the genital points of the nose to the pelvic pain was given by a series of experiments, beginning with the following observation made on the first patient treated from Chrobak's clinic. The woman had a large adnexal swelling on the left, and when in the presence of several of the staff he touched the left turbinate with the cocaine plug, she, without knowing what he was looking for, said, "That hurts me so down here," pointing to the left hypogastrium. This was repeated each time, but with the addition that it was not so sore, till the anæsthesia was complete. A second patient, on whom Chrobak had a week before done a ventrofixation for fixed retroflexion, had severe hypogastric dysmenorrhœal pain. When the right turbinate was touched she cried out, "I feel that down here. That hurts so much down here," pointing to the right hypogastrium. The left side gave like results, and when the tuberculum septi was touched she called out loud, "My back, my back!" She had otherwise no sacral pain. This experiment was repeated by Schiff and by several others, and gave constantly the same results. The details of two other like cases are given, and of sixteen women twelve regularly gave these results. In the intermenstrual period this phenomenon could not usually be elicited, but in a few cases with intermenstrual pain it could be got. The importance of this point, especially in the dysmenorrhœa of virgins, is considerable, and in particular the cocainization may be used as a test of the nature of the dysmenorrhœa. The application must, of course, be made exactly by exposing the genital spots by a speculum. Fliess had pointed out a corresponding relation between the anterior end of the left middle turbinate and certain gastralgias, and Schiff was able to confirm this by several observations.

The Borderland in Mental Disease.—Dr. G. W. Balfour (*Edinburgh Medical Journal,* February), in the Morison lecture for 1900, delivered at the Royal College of Physicians of Edinburgh, says:

"This cursory review of sporadic and of epidemic insanities is fraught with several lessons; first, it teaches us that insanity is a disease of which no one need be ashamed, as some of the finest minds in all ages have similarly suffered. It is not a disease of the mind or intellect, but only of that organ—the brain—by which our minds are able to communicate with our fellow-men. And we must always remember that this brain trouble is very often only functional, and not organic. This means that it is curable if early and properly treated. But we know from the history of functional ailments in other organs, that, if neglected at this stage, a curable affection is apt to become incurable, and even at the best the affected organ becomes so ill-nourished and enfeebled that much time and much care are required to restore it to its former healthy condition. As the brain is the organ of thought, when ill or enfeebled, whatever excites it injures it, and it is often necessary to remove such patients from their homes for the sake of securing perfect quiet and the absence of any irritating influences, and very often much harm results from undue delay in having recourse to this most beneficent and most needful form of treatment. It should never be forgotten that the harm that may result is not merely postponement of recovery, that is certain, but it may even amount to a permanent weakening of the brain.

"The second lesson to be learned is that, as the great object of all education is to enable us to control the emotions and passions, and to regulate the imagination by the cultivation of the faculties of judgment, comparison, and attention; and as whatever tends to emancipate the lower powers of our nature from the wholesome control of our judgment and our will is injurious to our intellectual well-being—we ought to shun all forms of mental excitement, under whatever names they present themselves, which tend to enfeeble our will, or to rouse the emotions and kindle the passions at the expense of those powers which have been given us for their regulation and control, assured that no form of even a minor mania has ever passed over the surface of society without leaving behind it many sad traces of its injurious action."

Osteomalacia.—M. Gayet and M. Bonnet conclude an article in the *Revue de chirurgie* for February as follows: 1. Osteomalacia is a trouble of nutrition of the bones consisting in a deficiency of lime salts and leading to softening of the skeleton. This trouble may be local or general. 2. Local osteomalacia is observed to follow traumatisms, osseous infections, and also certain nervous diseases. 3. The anatomical lesions are similar in the local and the general forms. They are not uniform, but present varieties which are not in any relation with the seeming ætiology, the clinical variety, or the degree of generalization of the disease. 4. The pathogenesis has no specific character. 5. There are predisposing causes evident, related to age, sex, climate, etc. 6. The determining causes remain obscure, but the totality of facts seems to assign the greatest place to troubles of the nervous system. 7. A plausible explanation of the satisfactory effects of castration is found in the fact that the internal secretion of the ovaries results in increased activity of the elimination of phosphates.

Original Communications.

THE EARLY DIAGNOSIS OF ECTOPIC GESTATION.*

By ANDREW F. CURRIER, M. D.,
NEW YORK.

There are few, if any, of the grave morbid conditions to which the generative organs of women are susceptible which have been more carefully investigated and are more thoroughly understood at the present time than is the tremendous accident which is known by the term *ectopic gestation.* The term is a vague and unfortunate one, and is about as accurate in defining the condition which it is supposed to indicate as that other unfortunate term *vicarious,* which is supposed to apply to an unusual form of menstruation. Both terms should be discarded if we feel any concern for scholarly precision in our medical nomenclature. A gestation which is *out of place,* if we analyze the word *ectopic,* may mean almost anything. This want of accuracy in the use of terms is the more noteworthy since our clinical experience, if it has taught us anything, has taught us that gestation must take place primarily either within the uterus or within that duct which bridges the space between the ovary and the uterus.

Primary gestation within the ovary or within the pelvic or abdominal cavity, if it occurs at all, occurs so rarely as to be in an extreme degree exceptional, and *exceptio probat regulam.*

I shall therefore assume that the proposition is not disputed that ectopic gestation in the present discussion means gestation within any portion of the Falloppian tube. This includes, of course, that rare form in which the product of gestation is partly in the tube and partly in the uterus, as well as the form in which it is partly in the outer extremity of the tube and partly in the pelvic cavity.

The form of pregnancy which is commonly known as interstitial, while unusual and dangerous, is, strictly speaking, uterine, and should be discussed from that standpoint. We must also eliminate from this portion of the discussion that form of tubal disease known as hæmatosalpinx, or tubal hæmatoma, which simulates tubal gestation by the profuse hæmorrhage by which it is often characterized, this condition forming the theme for another participant in the present discussion.

The question which I am to approach may therefore resolve itself into the diagnosis of tubal gestation during its first three months. Rupture of the tubal tumor usually occurs within that period, and subsequent to that period there are, as a rule, few pronounced symptoms which are the source of great disturbance until the growing fœtus has reached maturity. It is therefore a matter of the greatest importance to the woman who is thus afflicted that her condition be diagnosticated during these three critical months. If the diagnosis of tubal gestation is determined within the period mentioned, but one course of action is indicated, in my opinion, and that consists in the removal of the cause of the disturbance by abdominal section. It is generally recognized and admitted that gestation may occur in either tube or in both, and in both tubes either simultaneously or consecutively. It may also be initiated in any portion of the tube. As gestation progresses, the entire structure of the tube is usually involved, except when its seat is the fimbriated extremity. An early abortion usually terminates that form of gestation. The distinction as to the portion of the tube which is involved cannot usually be made until the abdomen is opened, nor is it essential to make such a distinction. The mere fact that tubal gestation exists, is a sufficient motive for such a course of action as will unquestionably bring prompt and certain relief, for this is one of the destructive conditions in which, as it seems to me, we can never be justified in assuming that any change for the better will result from delay.

The symptoms which determine the diagnosis of tubal gestation may be divided into the ordinary and the extraordinary. The ordinary symptoms are those which belong to gestation under ordinary, or normal, conditions; the extraordinary are those which are peculiar to this form of gestation.

Of the ordinary symptoms, one has only to recall the enlargement of the breasts with increased prominence of the veins and enlargement of the papillæ in the areola which surrounds the nipple—symptoms which are often overlooked—the bluish discoloration of the vaginal mucous membrane, and softness of the tissues of the vagina and uterus, in which the impression received by the examining finger is totally different from that which is obtained when gestation is absent.

To these may be added non-appearance of the menses, irritability of the stomach, with possible nausea and vomiting, increase in the size and change in the contour of the uterus, increase in the secretion of the glandular structures of the vagina and uterus, etc.

All these symptoms are familiar enough during the first three months of normal pregnancy, becoming determinable during the second month, and well accentuated during the third. As some of them are not of unvarying occurrence, the physician may be misled by the absence of one or more of them, and he may fail to detect gestation until it has proceeded so far that its detection is almost inevitable.

The point which I desire to make at this time, one which I have never seen emphasized elsewhere, is that when gestation occurs, be it normal or abnormal, it produces certain changes in the tissues and in the general condition of the patient which are characteristic of the pregnant state, which make the pregnant state a class by itself, and which make the latter the primary object to be determined by an examination. The fact that these changes are in most cases inconspicuous during the first

*Read before the Obstetric Section of the New York Academy of Medicine, March 28, 1901.

month renders them relatively indecisive in determining a diagnosis, whether the gestation be normal or abnormal, but the further the progress from this initial period the more pronounced are the changes which have taken place, and they should be carefully sought for and given due weight in deciding as to the existence of gestation and as to its normal or abnormal nature.

The extraordinary signs or symptoms should be regarded as confirmatory of the ordinary. They should teach us not only that gestation is present, but that it is present in a form which should excite alarm and call for immediate and radical methods of procedure. They are the complete antipodes of the ordinary signs. The latter incline us to quiescence, to the entire surrender, for the present at least, to the amply protective forces of Nature; the former command us in tones most imperious to interfere and correct the mistakes and the inefficiency of Nature.

There are certain conditions of the pelvic organs which seem to predispose to tubal gestation, and their ætiological importance should be considered in arriving at a diagnosis. Such are retroflexion of the uterus, precedent sterility, disease or dislocation of the Falloppian tubes, a bicornate structure of the uterus, precedent tubal gestation, etc. There are doubtless others, but these are the ones with which my experience has familiarized me.

In one of the first cases which came under my observation, many years ago, the patient had been sterile, and had been treated for months by an experienced gynæcologist for retroflexion. There was no suspicion of pregnancy, and when I saw her, a few days before her death, the retroflexion was palpable enough, but I failed to discover the fœtus, which had developed within the abdominal cavity. Rupture of the fœtal sac, peritonitis, and death soon followed, and the autopsy revealed a mature child within the abdominal cavity, the presence of which had apparently been most remote from the minds of the several physicians who had been watching the case.

Twisting or distortion of the Falloppian tubes, fixation by adhesions in unusual situations, inflammation of the tubal mucous membrane, have all furnished numerous examples of the possibility of tubal gestation in connection with such abnormal conditions.

Of tubal gestation in a bicornate uterus, I have seen but one example, the gestation being in the proximal third of the right tube, which was twisted outside, or beyond, the tumor. Rupture of the tubal sac had occurred and bleeding was in progress when I performed the operation. The diseased tube and its ovary were removed, and pregnancy with normal delivery has since occurred in the left cornu. A sterile period of twelve years intervened in this case between the tubal pregnancy and the previous normal one.

A tubal gestation occurring the second time in the same individual is, of course, a rare occurrence. The degree to which a sufferer from one occurrence of this kind is susceptible to another, I do not know. Not a few instances are on record in which this form of gestation has been repeated.

One such case has come under my observation. While the patient was in collapse from internal hæmorrhage in her first gestation she was seen by a gynæcologist, who, I was told, believed her so near death that he declined to operate upon her. She rallied, however, and two years later experienced tubal gestation the second time. I saw her after she had suffered repeated hæmorrhages and was already septic. The diagnosis was clear enough, but, recalling her previous experience, she declined an operation, she and her husband both declaring that they would assume all responsibility. Ten days later, after several additional hæmorrhages and increased evidences of septic intoxication, I was permitted to operate, and removed a beautiful specimen, which was still within its tubal envelope. The absence of the ovary upon the unimpregnated side and the encasement of the tube in a bed of dense adhesions confirmed the story of the precedent gestation. Anything but a fatal issue could hardly have been expected, in view of the long continuance of the septic condition. Death resulted on the sixth day. These predisposing factors must, therefore, be taken into account in reaching a conclusion as to the presence or absence of tubal gestation.

The extraordinary signs of tubal gestation, like the ordinary signs of normal gestation, are not always present, or always present at the same period, or always of equal intensity and significance. A single one of them may be convincing and determine immediate action, or several of them may leave one in doubt and uncertainty, which can only be dispelled by delay or by an exploratory incision.

By all odds the most important and the most convincing of the extraordinary signs is hæmorrhage. Seldom is the bleeding external or manifest; it would be unreasonable to expect that such would be the case, for the tension of the pelvic current is reduced to a minimum by the outflow from the ruptured vessels. Hæmorrhage is most likely to occur, and occurs most early, in those cases in which the seat of the gestation is the fimbriated extremity of the tube. It is least likely to occur when the oval sac is near the middle of the tube. The abundant blood supply of the broad ligament, tube, and ovary, and the comparative absence of contractility of the loose and delicate tissue in which the vessels are located, explain the profuseness of the hæmorrhages and their frequency. I have seen the belly filled with blood and hæmorrhage still in progress, though the patient had already been in a state of collapse and had rallied from it. A fœtal sac at the fimbriated end of the tube seldom progresses to the end of the first month without rupture, and, from the nature of the case, the hæmorrhage is frequently fatal. This is sometimes due to the fact that the comparative absence of a tumor misleads the physician as to the gravity of the case, and he temporizes until the time for effective surgical intervention is passed.

In any portion of the tube except the fimbriated extremity rupture is usually observed between the sixth and twelfth weeks, and the signs of hæmorrhage coming at such a time would usually exclude the fimbriated, or terminal, variety.

By rupture we do not necessarily mean the complete rupture of the fœtal sac, with escape of its contents. The pressure of the growing ovum may be sufficient only to tear the distended tissue of the tubal wall by which it is surrounded, with accompanying rupture of the blood-vessels which it contains. This may be repeated several times, as I have seen in a number of cases. Or the expansive force may be sufficient to rend the fœtal sac, expel its contents, and land the fœtus between the folds of the broad ligament, among the loose and mobile intestines, or at the bottom of Douglas's cul-de-sac. I have found one fœtus of the fourth month of development lying free in the last-mentioned location. The signs of hæmorrhage from tubal rupture are not easily mistaken; the weakness of collapse, the flickering pulse, the pinched face, and the shallow breathing can have but one significance.

Next in importance to bleeding as a diagnostic symptom is pain. It is not always present, it is usually paroxysmal, it is sharp and darting, and inclines the patient to relax the muscles of the thighs, and flex the thighs upon the abdomen. It is often associated with hæmorrhage, but I doubt whether this is always the case. Whether it is due to the stretching of the peritonæum or to its rupture, or to both, is not quite clear, although it is generally observed that the perforation of the peritoneal covering of any structure or organ causes acute pain. It may be the leading feature in a rapidly developing peritonitis with considerable abdominal distention. I recall such a case seen late at night in consultation, the distention being too great to permit abdominal palpation. Unfortunately, this woman was not again seen by a gynæcologist. She died very suddenly two days later, and the autopsy disclosed an unbroken tubal sac with a pedicle no thicker than one's finger, a perfectly ideal case for successful operation.

The third diagnostic point consists in the presence of a pelvic tumor. It is usually best determined by examination *per rectum,* the patient's thighs being flexed upon her abdomen. In most cases an anæsthetic is essential to success in such an examination. By the bimanual palpation through the relaxed abdominal walls the dimensions and location of the tubal mass, and its relations to the uterus and other pelvic structures, can usually be readily outlined. These three symptoms—hæmorrhage, pain, and tumor—are the most important of the extraordinary symptoms, and the most constant. If a diagnosis cannot be reached with these and the ordinary signs of pregnancy, the fault will probably lie with the examiner.

The passing of decidual membrane by the vagina, hæmorrhage from the uterus, pulsation of the vaginal arteries, and various other signs are all of minor importance. They doubtless have impressed individuals in particular cases, but they must not be regarded as of unvarying appearance or of undoubted importance.

Many cases are not seen by the gynæcologist until there have been repeated hæmorrhages, decomposition, septic absorption, and perhaps numerous unnecessary and unskilful attempts to find out the cause of trouble. This is tampering with precious opportunities. The patient is finally brought to the notice of the gynæcologist with a sallow and leaky skin, a rapid pulse, a dirty tongue, and other evidences of profound septic intoxication. The resources of surgery are of little avail for such cases. I recall a case in which, after hæmorrhage and collapse, the uterus was curetted and perforated. Another physician tapped the vagina and drew off a large quantity of blood. When the patient seemed ready to drop into the grave with sepsis and anæmia, I was asked to see her, and consented to operate, but with little hope that it would be of any use. The uterus was first removed and then the diseased appendages, and, strange to say, the woman recovered. I doubt whether one is justified, as a rule, in operating in these extreme cases, except with the clear understanding that it is only as a last resort.

The diagnosis of tubal gestation is not always conclusive even when the abdomen is opened, a tumor of the tube discovered, and a quantity of blood found in the abdomen or pelvis. Many errors of this kind have been made. The operative procedure may have been clearly indicated, but the case is not one of tubal gestation unless the fœtus is found within the tube or without the tube, or unless the microscopical examination of the tubal mucous membrane reveals the presence of decidual cells. Without a decidua, whether within the uterus or within the tube, there can be no gestation.

With the familiarity which has been gained by abundant experience with this form of a grave accident, there is now little excuse that a fatal issue should occur until at least an attempt has been made to recognize the situation and use all proper means to bring it under control.

130 East Thirty-sixth Street.

THE USE OF HOT-WATER VAGINAL INJECTIONS.*

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The local use of hot water in the treatment of pelvic diseases of women probably antedates the erection of the pyramids. In spite of this fact, I venture the assertion that no therapeutic measure is so frequently misapplied, so thoroughly abused, so imperfectly under-

*Read before the New York County Medical Association, November 19, 1900.

stood as the hot-water vaginal injection. Employed conscientiously and in accordance with the rules of common sense, it is one of the most valuable remedies at our command; employed, as it is in ninety-nine cases out of a hundred, it is capable of doing infinite harm. Its misapplication in almost every case is the fault of the physician, whether general practitioner or gynæcological specialist. It is a remarkable fact that therapeutic douches are so generally prescribed without an intelligent idea of how they accomplish good. That they act favorably in most inflammatory conditions of the pelvis is well known, but that is as far as the average practitioner inquires into the matter, and his patient suffers in consequence.

It is by no means unusual to learn from a patient that she has been employing hot-water vaginal douches for months, or even years, without appreciable benefit. Indeed, it has but too frequently been my experience to hear that, after persisting a few weeks or months in the treatment, the patient has actually felt worse, and has discontinued them. Sifting the information gleaned from these patients, of both classes, one readily arrives at the cause of failure. In the first place, the physician's directions have been indefinite regarding almost every detail of the douche, and the patient, for the most part, has been compelled to exercise her own judgment. On her part, the failure is to be attributed to one of several causes. Has she assumed a recumbent position when taking the douche, and has she used the water at as high a temperature as could be borne? She may answer in the affirmative, and then, when asked how much of this hot water she has used at each injection, she will answer "one quart!" Another patient will say she has used a much greater quantity of very hot water, but has squatted over a douche pan or sat at ease on a toilet while taking an injection. A third has lain flat on her back and has used a gallon or more of water of only moderate temperature; a fourth has possessed some knowledge of the proper method to employ, but has followed the treatment in very irregular and spasmodic fashion—and so it goes. The intention has been of the best, the practice of the worst.

The principles underlying the rational application of the hot-water vaginal injection are very simple. In the first place, the distinction between a cleansing douche and a douche taken for its therapeutic effects should be borne in mind. The former every intelligent woman will employ as often as her sense of cleanliness dictates, and the amount of water used may be small and of a temperature comfortably warm, but the therapeutic douche has a certain remedial duty to perform, and this may be done only in a certain way.

The initial effect on the tissues of water at a temperature of from 105° to 120° F. is to dilate the contained blood-vessels and thus cause congestion, or to increase that which may already be present; the secondary effect is that of contraction and consequent lessening of the congestion, the excess of blood being driven out. The writer well remembers the manner in which this was illustrated by the late Dr. Goodell. He said: "Plunge your hands into very hot water and keep them there four or five minutes. Then take them out, and they will be red and puffed up. If you wear a ring, you cannot get it off the finger. Then immerse your hands for fifteen minutes in this very hot water, and what happens? They become pale and shriveled, veritable 'washer-woman's hands,' as a result of the secondary or constricting effect of the hot water."

It is exactly this result which one should aim to bring about in the treatment of inflammatory conditions of the pelvic contents by the use of hot water. At the best, the conformation of the vagina allows the fluid to come in contact only with the cervix and vaginal walls, but, through the medium of the contained blood-vessels and nerves, the heat indirectly but markedly affects the circulation of the entire pelvis, either for good or for evil, according to the manner in which the application is made. I cannot conceive of a greater error than that of prescribing a two-quart hot-water vaginal douche for any purpose whatever, other than that of producing pelvic congestion or preserving cleanliness, nor can I appreciate the carelessness of the physician who neglects giving specific directions as to how the douches should be taken. Two quarts of water will pass through a fountain syringe to which an ordinary tube and vaginal nozzle are attached in exactly two minutes, the bag of the syringe being two or three feet above the point of exit. To my mind, it is preposterous to imagine that such a brief application of heat can do more than add to the congestion that is already present in the pelvic vessels, and therefore do great harm. Let one immerse his hands for that length of time in water heated to a temperature of 115° F., and note the result. Nor is greater good accomplished by the four-quart douche, but rather more harm, in a majority of cases, if not all.

In those cases in which the therapeutic douche is indicated, I give the patient a printed slip containing rules to be observed in taking the injections, cautioning her that the directions must be followed to the letter. A copy of these follows:

1. Use a large-sized fountain syringe or douche can attached to a support three or four feet above the body.

2. Always lie flat on the back when taking a douche, with the hips slightly elevated and the shoulders depressed.

3. Always use at least *three gallons* of plain water as hot as can be borne (at a temperature of from 107° to 120° F.) for each douche.

4. Take the injection twice daily, morning and evening, except on the two days preceding and the two days following the menstrual period, when it should be omitted.

5. Rest for half an hour or an hour in a recumbent position after taking each douche.

For my clinic patients, these directions are printed in English, French, Italian, German, Polish, Russian, and Yiddish.

In recommending the use of such a large quantity of hot water for each douche, I am perfectly well aware that it is in opposition to the accepted teaching of many authorities; nevertheless, I am convinced that a careful study of the subject will demonstrate the soundness of my contention. I do not lose sight of the fact that in some instances, in which it is desired to *increase* the amount of blood in the pelvic blood-vessels, the vasodilating action is best accomplished by the administration of moderate-sized douches, but these cases are much less frequently met with than those of pelvic inflammation, in which the large douches do so much good.

The frequent filling of the fountain syringe in order to use so large a quantity of water is inconvenient and wearisome, and, therefore, I usually suggest the substitution of an ordinary pail for the bag, the water being conducted from it by siphonage, or, better, through a short pipe inserted in the side close to the bottom. If household conveniences permit, a Y-shaped arrangement of tubing may be attached to the hot-water and cold-water faucets of a bathtub, and the temperature of the outflowing water regulated at will, the woman lying on her back in the tub and allowing the irrigation to continue for fifteen or twenty minutes. A hard-rubber vaginal nozzle, perforated at the sides rather than at the end, is to be preferred in taking these douches, so that the water may be projected laterally rather than directly on the cervix.

The question of how to dispose of the large quantity of water flowing from the vagina during the progress of douche-taking is of considerable moment, and, perhaps, it is inability to decide this point satisfactorily which influences so many women to take the douches improperly. An ordinary douche pan is entirely too small to collect all the water used, and a larger receptacle is out of the question on account of its use necessitating a change in the position of the body, making it practically impossible for the patient to remain in a recumbent position. A douche pan having a waste-pipe attached is sold by certain manufacturers, but it is inconvenient to use, because the point of exit of the water must be on the same level as the pan itself, or lower, which usually necessitates the taking of the douche while lying on a bed or couch. Lying on a bed with the feet supported by chairs placed at the side, a gathered rubber sheet conducting the water into a proper receptacle on the floor, is a plan that is not commended. The shoulders of the patient are apt to be above the hips in this position, and the bed or floor, or both, almost surely become wet. By all odds the most convenient method to adopt is that of taking the douches in a bathtub, provided, of course, it is of sufficient size. A couple of bricks covered with oilcloth will serve to raise the hips sufficiently, but a tightly-rolled blanket is better, as it prevents the water from flowing toward the head of the tub, and so keeps the body dry. In the case of dispensary patients, I have frequently suggested the use of an ordinary wooden washtub, two boards being stretched across it a couple of inches apart, upon which the woman lies flat, her legs being flexed, and the waste water finding its way into the tub between the boards.

The size of the tube leading from the syringe, the size and number of the orifices in the nozzle, and, to some extent, the capacity of the patient's vagina, bear importantly on the conditions governing the douche. Thus, if the tubing and nozzle orifices are larger than those ordinarily used, although the proper amount of water may be employed, it may be too quickly exhausted and the congested condition not relieved. If the vaginal walls and perineal body are much relaxed, or the latter is the seat of a marked laceration, unless the hips are maintained in a raised position the water is apt to drain off too quickly.

The three-gallon hot-water douche is of special value in cases of acute or chronic metritis, in subinvolution, in perimetric inflammation, and in perimetric and parametric exudations. Ovarian pain will frequently yield to it in a surprisingly satisfactory manner, while the bearing-down sensation and pain in the back, concomitants of disorders of the pelvic organs, very quickly disappear. A troublesome leucorrhœa, in a majority of instances, will be checked after a very few applications of the douche, due, of course, to the consequent toning up of the vaginal and uterine mucosa. In addition, my experience has been that, in the case of debilitated women, in whom the pelvic condition is not of sufficient gravity to demand special attention, these douches act as a general systemic tonic and are a valuable adjunct to other methods of treatment.

As a rule, I direct that the water be used without the addition of any medicament whatever, but, if the accompanying leucorrhœal discharge is profuse, I order a tablespoonful of the following mixture to be added to the last quart of water remaining in the douche-bag at the termination of the injection:

℞ Powdered alum,
Zinc sulphate,
Sodium biborate,
Carbolic acid, } each. . . . . 1 ounce;
Water. . . . . 6 ounces.

M.

This combination is cleanly and non-irritating, and acts admirably in selected cases. The addition of a small quantity of ordinary table salt to the water often acts well. In the elytritis characterized by a free discharge of acid reaction, containing shreds of epithelium and numerous bacteria, the use of an alkaline douche is indicated, and nothing better serves the purpose and brings about the desired result than bicarbonate of

sodium—one level teaspoonful to each quart of water used. Astringents should not be used in these cases. Bichloride of mercury, lysol, creolin, or other antiseptic agents, even in very weak solutions, with the sole exception of weak carbolic acid, should never be employed constantly in the ordinary therapeutic douche. The hot water of the douche greatly increases the power of absorption of the vaginal mucosa, and thus renders the use of these antiseptics dangerous. The action of mercuric bichloride, especially, on the lining epithelium is too well known to require further warning against its use. In mucopurulent catarrhal elytritis, non-gonorrhœal in origin, frequently met with in elderly women and young children, the addition of a tablespoonful of wood vinegar to each quart of water used has been recommended. With this agent I have had no experience in such cases. A weak solution of sulphate of zinc (one half per cent.) has answered every purpose in my hands.

Large hot-water vaginal irrigations should never be employed by a healthy pregnant woman, for the reason that they reduce the bactericidal power of the vaginal secretions. This fact has been thoroughly demonstrated by such investigators as Kronig, Döderlein, and others (*Annals of Gynæcology and Pædiatry,* September, 1897).

Reclus, of Paris, asserts that the use of hot enemata in pelvic inflammations is much to be preferred to the vaginal douche. He directs that the water be used at a temperature of from 122° to 131° F., and that after as large a quantity as possible has been very slowly introduced into the rectum, the patient must retain it for at least thirty minutes. On account of the anatomical relations of the parts, the hot water in this way comes into much closer contact with the organs which it is proposed to influence, and is correspondingly more beneficial in its action. He professes to have relieved or cured by this method, possibly combined with dilatation, curettage, and packing of the uterus, many serious cases of perimetrosalpingitis. He says that, if the treatment is correctly persisted in, the infiltration of the cul-de-sac disappears, the peristaltic movements of the intestine break down the adhesions, and, instead of large masses filling up the true pelvis, the exudations and purulent collections are absorbed, the vaginal cul-de-sacs become supple, the uterus is rendered movable, and the region in question resumes almost its normal condition, especially after judicious and moderate applications of massage. Some little practice is necessary to accustom the patient to these enemata, the tendency to tenesmus being difficult to overcome.

I have made use of this method in but a few cases, and not with entirely satisfactory results. The introduction of water at such a high temperature into the rectum produces great discomfort, and I have yet to see the patient that can accustom herself to its use. I am confident that the three-gallon injection, properly administered, will, in a majority of cases, bring about equally beneficial results.

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A CASE OF CYSTINURIA ENDING IN RECOVERY.

By JOHN REID, M. A., M. D., C. M.,

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The patient, the son of German parents, when seen by me, was about thirty-two years of age, married, and the father of healthy children. He was very obese and worked as a cook; but, nevertheless, his habits were active, and he hunted and worked in his garden. He had drunk wine in moderation, but stated that he had given it up, as it caused more pain in urinating. He had been strong and healthy, without any sickness, prior to the commencement of this disease, over six years before he came to seek my advice, when his family physician treated him for gravel. As, at that time, he did not improve, he consulted a very eminent surgeon, who passed a sound, causing him considerable pain, but obtained no evidence of calculus. He ordered alkalies and sedatives, and the patient said: "I paid two guineas, and the medicines did not do me a bit of good." He also had attacks of muscular rheumatism, which his family physician treated successfully with alkalies. In the summertime he had occasional attacks of diarrhœa, but his motions were otherwise normal and regular.

He complained of great pain in micturition, especially toward the point of the penis; and, on examination, I found a small ulcer in the urethra on the left side and about an eighth of an inch from the meatus urinarius. It was covered with thick pus and appeared to be progressing toward resolution, while it was so tender to the touch as to make me suspect imaginative fear. The urine had a sweet-brier odor, was of about normal color, and was without albumin and sugar, but, on being boiled with liquor potassæ, yielded ammonia. A portion evaporated on a slide showed hexagonal laminæ under the microscope, soluble in ammonia water and in liquor potassæ, and reprecipitated by acetic acid in crystals which dissolved in hydrochloric acid. The ammoniacal solution, evaporated, gave the six-sided crystals. On incineration, the characteristic odor of garlic was produced.

Hence I diagnosticated cystinuria, and, accepting the theory that this disease is due to arrested metabolism, I started treatment with quinine, nitric acid, tolu, salicylic acid, and rhubarb in a mixture on November 27th, and on December 17th the urine was improved, but the patient said his dysuria, which for a few days had disappeared, was as bad as ever, and he felt as if he would like to kill some one—a feeling which he often had. I tried, for the urethral ulcer, very weak lead and opium, opium and prussic acid, and lead lotions, but all caused intolerable pain, and the only local treatment which gave relief, was tolerable, and ultimately healed the ulcer, was with calomel. About December 6th I gave gray powder and Dover's powder at bedtime, which was absolutely useless after the first night. On the 16th, iron and strychnine mixture was ordered, and on the 17th, quinine and tannic-acid powders at bedtime.

18th.—Urine normal, and so it continued.

About the 23d he had a fresh attack of pain, and, on examining the urethra, it appeared raw and as if the in-

ternal lining had been removed throughout. He described his condition thus: "I feel, when I make water, as if all through my passage scalding water was being poured." With a mild lead astringent injection, which *now* caused no inconvenience, he was well in a few days, and in August of the following year he said: "I feel grand now; I wish I had seen you before, so as to save me these years of torture."

Dr. Walter Smith (*British Medical Journal,* April 8, 1898), writing on cystinuria, states that there are only seventy-five cases recorded since the disease was first recognized by Wollaston, ninety years before. He recommends disinfection of the intestine, when he records his two uncured cases. A case is reported in the *Bericht. der Deutsch. chem. Gesellsch.,* Vol. iii, 1891, in which the patient was passing fifteen grains of cystine daily, and in which milk of sulphur seemed to lessen the amount of cystine, but brombenzol and acid derivatives of mercaptan were without influence.

A fermenting organism is said to produce cystine, while it is artificially formed by acting on fibrin with calf's pancreas and salicylic acid for a long time.

Text-books report that cases go on for years without symptoms; but no case of cure has been, to my knowledge, recorded hitherto.

In Watts's *Dictionary of Chemistry,* Vol. ii, 1894, it is stated that cystine has been found in an ox's kidney, and in the liver of a drunkard who died of typhus; that in very small quantities it is a constituent of normal urine. Halliburton, *Chem., Phys., and Path.,* states that cystine is lactic acid in which H is replaced by NH_2 and OH by SH. In normal metabolism, cysteine, a substance akin to cystine, is, according to Delépine, converted into cystine by a torula (p. 769).

Whether the rheumatic attacks in my patient occurred when the cystine became lactic acid or not, I cannot say. I never saw him suffer from them.

Whatever theory of cystinuria may obtain, I think, from the above-reported case, that it is safe to conclude that the disease is curable.*

RADNOR HOUSE.

ACUTE SPINAL ATAXIA (NON-TABETIC), AND ITS RELATION TO OTHER FORMS OF ACUTE ATAXIA.†

BY CHARLES L. DANA, M. D.,

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ACUTE ataxia is a condition in which the patient, in the course of from a few days to one or two weeks, becomes affected with a marked ataxia of the lower, and sometimes of the upper, extremities. There are with it some other temporary or minor sensory disturbances and some motor weakness, but the ataxia is the dominant and most persistent symptom. Acute ataxia may be classed under the following heads: Acute bulbar and cerebellar ataxia, acute spinal ataxia, and acute peripheral ataxia due to a multiple neuritis of the sensory types. Sometimes ataxia comes on very rapidly in tabes dorsalis.

Historical.—Leyden first described cases of acute ataxia in his work on *Diseases of the Spinal Cord,* Vol. ii, page 203, in the year 1878. Later he described a number of cases having a similar symptomatology, and divided the acute ataxias into the central type and the peripheral type (*Zeitschrift für klinische Medicin,* 1891, p. 576). The central type consists of a group of cases in which the ataxic symptoms come on rather suddenly, and are associated, usually, with cranial-nerve as well as spinal symptoms. These cases were observed usually after acute infectious fevers, such as typhus, small-pox, and so on, and were thought to be due to a disseminated encephalomyelitis. No autopsy was reported.

Later, however, Ebstein (*Deutsches Archiv für klinische Medicin,* x) reported a case with autopsy, death having occurred some time after the first onset of the disease. In this case there were patches of sclerosis, and it was concluded that this, as well as some of the other cases, were early stages of multiple sclerosis.

A number of other observers have reported similar cases, most of them associated with disturbances of speech and other bulbar symptoms.

The peripheral type of acute ataxia includes those cases due to the sensory form of multiple neuritis, the type which is now known as pseudo-tabes.

Pick, in his article on ataxia in the *Real Encyclopädie,* divides acute ataxias into, first, an acute form, with rapid recovery; second, an acute form, with rapid fatal outcome; and, third, a chronic form. These divisions appear to include various types of the central and peripheral ataxias of Leyden. The divisions are rather academical and unimportant.

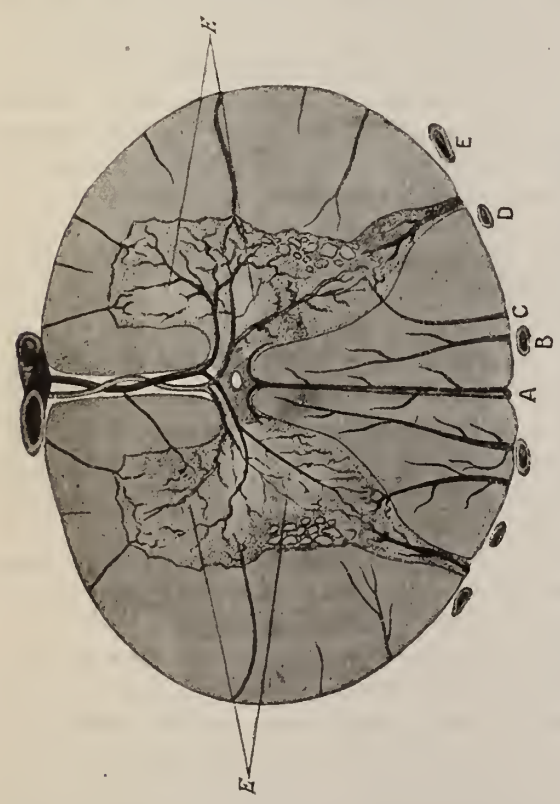
In Leyden's article on acute ataxia in Nothnagel's *Pathologie,* 1898, the only type described is that in which the lesion is mainly bulbar or pontile, and no reference is made to any distinct form of spinal ataxia. So far as I can learn, therefore, up to recent times, there has been no definite description of an acute ataxia of spinal origin alone not due to tabes.

In 1897, H. Strauss, in the *Charité Annalen,* gave a very careful and detailed account of two cases of acute ataxia with disturbance of the muscular sense and loss of the patellar reflex. Both these cases occurred in men of about the age of thirty-four: neither gave any history of syphilis or of any infection or poison, and the ætiology was obscure. The patients rather rapidly—that is to say, in the course of one or two months—became af-

*The increased pain, of an agonizing character, on applying narcotics, such as opium, etc., in solution to the urethra, is worth noting. It is noteworthy also that in arsenical neuritis, local applications of narcotics, such as opium, aconite, belladonna, chloroform and ether, may increase the pain, and that the inhalation of chloroform gives a still greater increase after the anæsthesia, while, topically, a solution of common salt, chloral, and alcohol relieves, but ammonium chloride in place of sodium chloride is worse than useless.

†Read before the New York Neurological Society, November 6, 1900.

fected with an ataxia which was very marked, with loss of knee-jerk and of muscular sensation, some motor weakness, a little temporary bladder trouble, no distinct cutaneous anæsthesia, and none of the classical signs of locomotor ataxia, such as the pupillary symptoms or lancinating pains. The cases passed into a somewhat chronic stage, but did not, according to the author, develop tabes. The exact pathology is not given, but the lesion is supposed to be either in the posterior columns or in the peripheral musculosensory neurones. On reading the cases, one is rather forced to the opinion that perhaps, after all, these are instances of tabes dorsalis with acute onset. They, at least, do not come under the category of those cases reported by me. The only case suggestive of or resembling mine is one reported



The arterial supply.—*A*, the artery of the posterior fissure; *B*, the interfunicular; *C*, the posterior horn; *D*, the posterior root; *E*, the posterolateral column.

briefly by Gowers in the first volume of his *Text-book*, page 366, that of a married woman, age not given, who had had a syphilitic infection with secondary symptoms the previous year. The ataxia came on suddenly in one day. The knee-jerks were present, although feeble in one leg. There was a slight motor weakness in the left leg, and there was a good deal of hyperæsthesia. The patient was unable to walk for four months, but steadily improved and eventually got well. Gowers refers to this case as one of probably acute parenchymatous myelitis or of acute myelitic ataxia. He refers, also, to certain cases of acute ataxia developing in one limb which he has occasionally seen.

Dr. Campbell Thompson, in the *Lancet* for 1897, Vol. ii, page 1586, gives an account of two cases of ataxia in which one or more limbs were involved. These cases, however, were complicated with other symptoms, and resemble only very slightly my own.

Dr. Williamson, in the *Lancet* for August 31, 1895, describes a case of acute ataxic paraplegia occurring in a man fifty years of age. The patient suddenly became paralyzed in the left and then in the right leg. There were pain and aching, retention of urine, and at first no cutaneous anæsthesia; the knee-jerks were present. There was, so far as could be told, some muscular anæsthesia. The patient became completely paralyzed later and died. On post-mortem, a vascular lesion was found including the posterior columns and the posterior part of the lateral columns; in other words, the areas supplied by the two posterolateral anastomoses of the spinal arteries. This case may be, perhaps, considered, a very exaggerated type of the kind I have observed, the lesion being more extensive and severe.

Acute Bulbar Ataxia.—This name may be given to certainly the larger proportion of cases first described by Leyden under the head of the acute central ataxias, although the lesion is not entirely bulbar, and probably to some extent involves the cerebellum and parts of the spinal cord; yet the bulbar symptoms seem to be most prominent, and the implication of this part seems to be the most severe. There can be no question as to the existence of the clinical features characteristic of this ataxia, but it seems to me pretty well settled, also, as stated in the Historical Review, that these cases belong to forms of multiple sclerosis.

A patient now under observation illustrates this class of disorders very typically.

F. M., aged twenty-eight, unmarried. His previous history was entirely good, so far as excesses or luetic history was concerned. He had, however, been working very hard and had been subjected, as a clergyman, to the dangers of hospital visitation. In May, 1900, he was attacked with a very active form of suppurative amygdalitis. The tonsils had to be opened and the pus discharged. This attack was followed by evidences of a marked pericarditis, pneumonia, and rheumatic inflammation of some of the joints. He had a very high fever and was delirious during this time. The acute symptoms lasted for over two weeks, during which his life was despaired of. On his becoming convalescent, it was found that he was unable to use his limbs and that his speech was thick and hardly intelligible. He had at one time a little difficulty in deglutition, which soon passed away. He gradually regained some power in the movement of the extremities and his speech became better, but he was entirely unable to coordinate his limbs or use his arms in any purposeful manner. He lay practically helpless in bed for about two months. He then gradually improved and was able to sit up, and he could use his arms a little; he was, however, unable to walk and his speech was thick and syllabic. He was seen by me eight months after the attack. He was then a well-nourished man. His mind was perfectly clear, his speech slow and syllabic. He had a fair degree of strength in both arms and legs, but the movements of these parts were to an extraordinary degree incoordinate and ineffective. There was some tremor of the hands, but in addition to that there were the incoordinate

movements which prevented him from feeding himself, or dressing himself, or writing, or using his hands for any but the simplest acts, and he was not able to stand without help.

The deep reflexes were marked and he had a slight ankle clonus and some rigidity of the limbs. This rigidity, however, was not at all great and there were no contractures. There was no atrophy or paralysis of any groups of muscles. He had no cutaneous anæsthesia of any kind and suffered no pain. There had been some weakness of the bladder, but this had disappeared, and all his visceral functions were normal. The Babinsky reflex was present in the soles of the feet. He had no nystagmus and no disturbance of any of the cranial nerves, except those connected with speech.

He improved rather rapidly, and was before long able to write and walk a little and use his arms rather effectively. The patient, however, still presents the marked characteristics of ataxia of the four extremities with the scanning speech; but I regard his as a case of multiple sclerosis following an acute infectious disease, presenting the type of bulbar ataxia.

Acute Spinal Ataxia.—The class of acute ataxias to which I particularly wish to call attention is that which I designate "acute spinal ataxia." Although I have no autopsical records to present, the clinical histories are such as to give little doubt as to the nature of the lesion. I feel justified in reporting them, because there has been, so far as I can find, no systematic presentation of this type of disorder. I can best give an idea of its character by reading the history of one of the cases:

Case I.—J. M. P., aged sixty; family history good; has lived a very active life; has been temperate; had lues twenty years ago, but had no secondary symptoms; has had no fall, or blow, or acute sickness; no excesses of any kind; has of late been under some business strain.

On January 9, 1890, he began to feel some numbness in the feet, and within twenty-four hours this had extended to the mid-dorsal region. He had no pain, fever, or loss of power in the limbs; the bladder and rectum were normal, except that the bladder was less sensitive and there was a tendency to retention. The symptoms gradually got worse. He was affected with a tight-band sensation around the waist and had a feeling of pressure on the chest. These sensations were worse at night and he could not sleep. He still had no distinct paraplegia, but he could not walk very well.

January 19th.—He is able to walk, but not well; he has a staggering, ataxic gait and suffers from general weakness, and soon tires. He cannot stand with the eyes closed. There is no marked loss of power in the arms or legs, as tested by passive and active movements. No atrophy. There is a slight degree of tactile anæsthesia in the lower limbs; no thermo-anæsthesia and no analgesia. There is no loss of sense of position; he can place the toe upon the knee of the opposite leg with the eyes closed. There is distinct static ataxia and ataxia upon walking. The arms are practically normal, though there is a slight ataxic tremor in the right arm. He cannot write quite so well as before. There is no trouble with the bladder or rectal functions. The knee-jerks are slightly exaggerated. The pupils are normal and react to light and accommodation. Optic nerve normal; mind is clear; other bodily functions are normal.

The case presented the history of a very acute ataxia, with slight loss of power in the lower limbs, without any pains. My diagnosis at the time was one of acute softening or hæmorrhage, involving mainly the posterior columns. The patient was confined to bed most of the time for several weeks. He then gradually improved, and finally recovered.

Case II.—C. H. A., aged sixty-six, married; is a man of somewhat corpulent habit, but vigorous constitution. His previous habits have been good; there have been no excesses in alcohol or tobacco and no specific history. He had been a very hard-working man, having great business responsibilities. He was seen by me in November, and I learned that during each previous summer he had had an attack of numbness in the right leg and right arm, and since then had had these temporary attacks on both sides, but they had completely passed away, and he had been pretty well during the latter part of the summer and fall. Previous to my seeing him he had exposed himself to wet and cold while out fishing. On November 24th, while going down-stairs, he noticed a numbness and weakness in the legs, but was able to walk, and took a train to a neighboring health resort. Within twenty-four hours his legs were so weak that he could not walk; they were also very numb. He had no pain, no bladder trouble, but his bowels were constipated. Three days after his attack he was seen by myself in consultation with Dr. William Wood, and could then walk a little if supported, but his gait was very ataxic and he could not stand alone with the eyes closed. While lying down he could move the limbs in all directions, but could not extend the toes or move the feet laterally without great effort. He had a slight degree of tactile anæsthesia in the feet, but no pain or temperature anæsthesia. There was very decided loss of muscular sense, as shown by his inability to locate his limbs placed in different positions, or to put them at a given spot. There was a considerable degree of motor weakness also in the lower limbs, but nothing more than what would be termed a partial paralysis. The arms showed some weakness also. Dynamometer; left, 20, normal being about 50. There was no anæsthesia in the arms of any kind, but a loss of muscle sense, as tested by weight. The plantar reflexes were present, the cremasteric absent; knee-jerks absent even to reenforcement. There was no atrophy or atrophic disturbance; the muscles responded well to the faradic current; muscular sensibility was good; vision was normal for his age; the pupils responded to light and accommodation; the optic nerve was normal; the hearing was good; there were slight incontinence of urine and some constipation; there was no disease of the heart, lungs, or kidneys.

Case III.—Mr. E., aged seventy-six, American, a business man. His family history is unimportant, except that he had one daughter who suffered from melancholia. He had lues at the age of twenty and was treated for it, and apparently got entirely well. He was an active, vigorous man, living a temperate and regular life, so far as was known. At the age of seventy he walked and got around like a man of fifty. One year ago, when he was seventy-five, he was again infected with lues and was treated for it, suffering from secondary symptoms, including iritis, which occurred about six months after the infection. Seen by me in January, 1900, in consultation with Dr. Sinclair. The history given to me was that he had been feeling perfectly well

and had had no pains of any kind. One week ago he felt some numbness in the feet, but no pain; this increased, and with it there was some weakness of the legs, so that in four days he had to go to bed, and on the sixth day he could not walk or stand unsupported, and he had some trouble in controlling the sphincters of the bladder and rectum. He suffered no pain during this time.

He was a well-nourished man of spare habit; speech somewhat thick and memory sometimes at fault, but, on the whole, clear-headed and sensible. He could move the legs in all directions and move the feet, but there was considerable loss of power, though by no means a paraplegia; the legs were about equally affected; he could stand with some support. There was no rigidity or spasm; the knee-jerks were normal or a little exaggerated; no Achilles reflex; plantar reflex and epigastric reflex slight; no atrophy. He had a slight tactile anæsthesia up to the line of the groin and the fold of the buttocks, but none of the scrotum; no pain or temperature anæsthesia; some loss of deep sensibility. He did not know the position of the limbs—placed them awkwardly at different points; did not know when they were crossed. When sitting and asked to cross the legs, he could not tell which one he would cross. On striking one of the patellar tendons, there was at times a reflex jerk of the tendon of the opposite side—crossed patellar reflex. The arms were normal in every way, there being no paralysis or ataxia or anæsthesia; there was no sweating, reddening, or atrophic disturbance; the pupils were normal, except that the right iris had been injured by inflammation. He had a characteristic copper-colored eruption all over the trunk and legs. Under antisyphilitic treatment he improved rapidly, and in two months was able to walk alone. Sensation returned to a marked extent and there was no evidence of any development of the symptoms of locomotor ataxia.

CASE IV.—Mr. D. G., aged thirty-eight, married, a lawyer by profession. Family and personal history good. Habits good. At the age of twenty he had a specific infection, followed by secondary symptoms, for which he was thoroughly treated. At the age of twenty-five he had some headaches and a slight aphasia lasting only a day. At the age of thirty he had, without any special warning, an attack of acute ataxia in the left arm. This came on in the morning with a feeling of numbness as though he had slept on it. There was a slight degree of tactile anæsthesia at the time, but the ataxia was the marked symptom, so that he was not able to use his hand in writing or buttoning his clothes, and he lost the sense of position. The arm was not paralyzed at this time. This acute ataxia lasted for several months, but steadily improved, and finally practically disappeared. Seven years later, when he was thirty-seven years of age, he had, rather suddenly, an attack of paraplegia, which was nearly complete, and accompanied with a good deal of numbness and paræsthesia, but with no anæsthesia at the time. From this also he gradually recovered, and is at the present time practically well, though he has slight ataxia still in the left arm. The two most marked incidents in his case have been, therefore, the acute ataxia in the arm and the later paraplegia of the legs.

Ætiology of the Affection.—I cannot attempt to draw any broad conclusions from the small clinical experience which I have had, and I have been unable to find any cases exactly like it in literature. Adamkiewicz has reported cases of spinal-cord disease due to lesions of the vessels somewhat suggestive of my own, but the lesions were by no means confined to the posterior columns. The same is true of cases reported by Williamson in his monograph, *Disease of the Nervous System Dependent upon Vascular Supply.*

The provisional conclusion which I should draw ætiologically is that the cases are due to senile arterial changes or to syphilitic lesion of the posterior blood-vessels of the spinal cord, causing either a blocking up, or hæmorrhage, or both, with the usual reactive process. It seems to be a characteristic of the luetic virus in its exudative stage to affect especially the lateral and anterior portions of the cord, producing the well-known type of syphilitic spinal paralysis.

It is the tendency of the disease in its degenerative stage to affect the peripheral sensory neurones, but it seems that in old age the exudative and vascular conditions caused by syphilis may also attack the posterior areas of the cord alone.

Symptoms.—In all my cases the ataxia was especially marked. The patients did not know the position of their limbs and could not stand or walk except in the characteristic ataxic manner. On the other hand, cutaneous sensations were not markedly involved in any cases. There was always some tactile anæsthesia, but no marked loss of pain or thermic sense. The knee-jerks were abolished in two cases, but not in the third, in which case they were slightly exaggerated. There was some loss of motor strength, but the patient could always move the limbs freely in every direction and could stand with help. There was loss of cutaneous reflexes. The Babinski phenomenon was not tested for. There was no special wasting of the limbs or change in electrical reaction. There was weakness of the bladder, with some constipation, but these functions were not entirely in abeyance. The patient suffered no pain, either at the time of onset or later. There were no lightning pains, no crampings or jerking, no girdle pains, though there were some girdle sensations. The vascular and glandular functions of the limbs were not especially disturbed. There was in no cases any lesion of the cranial nerves, nor were the arms affected, except in one case, in which there was some paræsthesia of the fingers for a time.

Course and Prognosis.—In all my cases the patients rather rapidly improved. One of them is practically well, eight years since his attack. Another is nearly well, six months since his attack. Another got very much better, but succumbed two years later to what was apparently cerebral thrombosis. Gowers's patient recovered. The prognosis may be said to be better than that of the ordinary type of syphilitic spinal paralysis, or transverse myelitis.

Diagnosis.—The disease is so characteristic that it can hardly be mistaken for any other malady. In young patients such a sudden onset might be produced by mul-

tiple sclerosis or multiple neuritis. I cannot deny the possibility of such an affection occurring in youth, but, if so, I should see no reason why it should not run the same course as in the older-age cases.

Locomotor ataxia never comes on with any such acute onset as in the cases which I am describing. In acute bulbar ataxia there are always some symptoms involving the cranial nerves, and the arms as well as the legs are affected.

Pathology.—It is perhaps unfortunate that I cannot complete my records by the presentation of a pathological demonstration, but the age of the patients, the acute onset, the history of syphilis, the characteristic symptoms, all make it practically certain that it is a vascular disorder involving either hæmorrhage or softening. The absence of pain or fever and the rapid recovery show that the process is not an inflammatory or a progressive and degenerative one.

The case reported by Williamson (*Lancet,* 1894) shows very conclusively what we should *a priori* expect to be true, namely, that there may be thrombotic softening of certain parts of the spinal cord by thickening of the blood-vessels through syphilitic endarteritis or other cause. It has been shown by Kadyi and Adamkiewicz, Williamson, and others that the posterior columns of the spinal cord and the posterior part of the lateral columns receive a blood supply from the two postero-lateral plexuses that run on the posterior surface of the spinal cord. These send arteries into the posterior column, the posterior root, the posterior horn, the intra-funicular fissure, and the posterior median fissure. It is perfectly conceivable that a lesion like a gummatous inflammation or the pressure of an inflammatory process from any cause might produce a blocking of one or more of these vessels, or that they might be stopped up by emboli from septic sources. The pathology of combined sclerosis shows that this is the case. In two patients of my own upon whom an autopsy was made, and who were suffering from combined sclerosis, there occurred finally a softening of the posterior part of the spinal cord, following closely the area supplied by these plexuses. In Williamson's case, above referred to, the same lesion was observed, and this author has called attention to the fact that in hereditary ataxia the early lesion, at least, follows more or less closely the vascular supply furnished by these vessels. There is little doubt in my mind that in the cases of acute ataxia which I described there was a sudden thrombotic softening produced by an involvement of these vascular areas.

Summary.—Acute ataxia occurs occasionally in tabes dorsalis, but is associated usually with characteristic symptoms.

Acute non-tabetic spinal ataxia occurs as a manifestation of spinal syphilis or senile arterial changes, and shows itself by a sudden onset of temporary motor weakness and bladder troubles, great ataxia, and minor sensory disorders. It may affect only one extremity, but usually affects the lower limbs. The tendency is to nearly complete recovery.

Acute bulbar or bulbocerebellar ataxia occurs as a sequel of some acute infection, and is usually the beginning of a form of multiple sclerosis.

Acute neuritic ataxia occurs as the result of multiple neuritis of the sensory type. It is seen usually in the non-alcoholic forms of neuritis, especially those due to metallic poisons, like arsenic, or to diphtheria.

THE PATHOLOGY OF INTRA-UTERINE DEATH.

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(Concluded from page 635.)

Treatment.—Among the causes of the death of a fœtus *in utero* not already enumerated may be mentioned hydrocephalus and malformations of the child, rupture of the uterus, deformities of the pelvis, and ovarian and fibroid tumors. These complications may so seriously interfere with normal labor as to render it absolutely impossible for a child to be born unless artificial means are adopted. These conditions, however, are so fully set forth in the various text-books of obstetrics that I refer my readers to them for further information.

It is not my purpose to enter fully into the methods of treatment of the many pathological conditions that produce the death of a fœtus. From what has been stated, it will be seen that the causes leading up to and producing the death and expulsion of a fœtus are exceedingly numerous and complicated. Disease has no creed or conscience, and it feels no sympathy or remorse. Occasionally it stalks forth in cold, haughty mien, gloating with leering jest over any agonies that it can inflict. More frequently it prefers the wily ways of insidious intent, and with quiet and stealthy tread it lurks about concealed from view, yet with subtle craft and cunning weaving devices and contrivances for the opportune moment. Between these extremes there are all manner of methods of attack upon a fœtus. They may come singly or in combination, innocently or maliciously. In what way soever they arrive, they prove an alarmingly serious menace to the welfare of the almost defenseless fœtus. Thus it is apparent that the treatment will vary according to the nature and intent of the particular attack. It would be obviously impossible to enter fully into a treatise on the treatment of so many different conditions and complications. I shall content myself with an outline of some of the salient principles only. These will be broad, general statements on some of the most frequent causes of this unfortunate condition. When a woman has lost the product of conception before the natural term of gestation, a very careful scrutiny should immediately be instituted. One of the first principles here involved should be to ascertain ac-

curately the history of the mother. This should include that of her parents as well. In this way any constitutional or congenital defect can usually be elicited. When this matter is cleared up, the menstrual history should be noted, and any peculiarities or anomalies carefully remarked. The question of falls, blows, jerks, or accidents of any sort, should be answered. Ascertain if the mother has recently changed from one climate to another. These and other questions which the peculiarities of the case may suggest will often throw a flood of light upon the case. It occasionally happens, however, that no unusual history of sufficient importance to account for reiterated miscarriages will be forthcoming. Under such circumstances the male parent should be examined, his previous illnesses, acquired or congenital defects, elicited, and, finally, his semen microscopically examined. If either parent has had syphilis it is impossible to determine when its lethal influence has entirely passed away; the fact that they give the history of a lengthened term of treatment should have no effect upon the judgment of the physician. It is quite probable that the majority of men and women who have contracted syphilis neglect to carry the treatment to the extent of entire elimination of the disease. This is due to carelessness, and not to the fact that the disease cannot be absolutely eradicated. When, therefore, either parent has been afflicted with syphilis, that one should at once be placed upon antisyphilitic treatment. If the disease is of recent origin, mercurial treatment is much more satisfactory than the iodide of potassium. On the contrary, when in the tertiary stage, the latter drug will be found to be the more beneficial. The physician should not be content with small doses. The tolerance of such people to the effects of the drug is remarkable. Beginning with ten grains three or four times a day, it should be gradually increased according to the effects produced, until twenty, thirty, or forty grains are taken at one dose. Sometimes it will be found that mercury or iodide of potassium, when given singly, does not answer so well as in combination. The treatment should be continued for many months, or until the physician is satisfied that none of the virus remains. Besides its beneficial effects upon syphilis, mercury is an excellent alterative, and frequently has acknowledged influence in hypertrophy of the uterus and in certain varieties of endometritis.

The treatment of pregnant women during an attack of pneumonia, typhoid fever, or any of the zymotic diseases, is full of great care and responsibility. If possible, the temperature should be maintained below 104° F. by antipyretics and other suitable treatment, for it has been demonstrated that the danger to the fœtus in diseases associated with elevation of temperature depends almost entirely upon the degree of heat that is attained.

Any constitutional peculiarity, such as a strumous, rheumatic, or gouty diathesis, should be treated by appropriate remedies. A constitutional condition that frequently predisposes to abortion is anæmia. The subjects of this complaint should be carefully guided back into good health by tonics of iron and other remedies, plenty of fresh air, massage, sea bathing, and suitable exercise.

The local conditions of the uterus and its appendages are to be ascertained, and treatment adopted in accordance with the requirements of any deviation that may be found present. Tight lacing and chronic constipation are frequent causes of catarrhal conditions of the uterus, and should be remedied by measures best calculated to the needs of such cases. One of the most frequent local conditions that seriously interferes with the progress of pregnancy is endometritis. This disease is much more frequent than is usually believed. An inflammation of the mucous membranes of the uterus may be brought about by either local or remote causes, and, in estimating the proper method of restoring the endometrium to a physiological condition, the remote causes should constantly be borne in mind. Valvular disease of the heart, cirrhosis of the liver, albuminuria, passive congestion of the portal circulation, obesity, tight lacing, constipation, each and all present their quota in accounting for the far-back commencement of a congested uterus. Local treatment for such causes is manifestly of little benefit and affords but temporary relief. I have long maintained that the reckless and indiscriminate use of the curette in the wholesale treatment of certain uterine ailments is positively unscientific and dangerous. In properly selected cases, this method is frequently followed by brilliant results, but it cannot be expected that all local pathological diseases of the uterus will yield to any one operative procedure. It is difficult sometimes to properly estimate how far the cause depends upon constitutional defects and how far it is attributable to local causes only. It is a wise precaution, so far as possible, to put the various emunctories of the body in a satisfactory condition before attempting to rectify the local defects. It should be constantly borne in mind that curettage of the uterus is an operation extremely difficult to perform properly, and that it is often attended by unforeseen dangers. When there are no complications present, it is usually a simple procedure and should not result in untoward symptoms. Difficulties arise when there have been antecedent inflammatory attacks in the tubes or ovaries. Frequently then the uterus is bound down by inflammatory adhesions, and the surgeon, in order to bring the uterus down sufficiently far into a proper field for inspection, is apt to tear away adhesions and bring about an acute attack of pelvic peritonitis. When fœtal products have remained in the cavity of the uterus for some time, its walls are so soft and friable that a sharp curette is liable to penetrate into the peritoneal cavity unless the surgeon is on his guard. It is, therefore, not wise to look upon this operation as one free from risks, for frequently disastrous results follow in the wake of indiscriminate recklessness. It is probably a more dangerous operation to undertake than is an

uncomplicated ovariotomy. A serious condition obtains when the uterus is in a perfectly healthy state and the fœtus has gone to the full term of gestation and yet delivery cannot take place for mechanical reasons. The causes, then, are usually a contracted pelvis or obstruction due to a tumor being jammed down in the pelvis. There is then such a disproportion between the natural passages and the size of the fœtus that it becomes impossible for a viable child to be delivered except by artificial means. Such a complication is one peculiarly hazardous to the child and places the medical attendant in a tremendously responsible situation, for the life of both mother and child are then in imminent jeopardy. It is at the same time a position that calls for the most evenly balanced judgment that it is possible to imagine.

In attempting to discuss this complication here, I shall endeavor to approach the subject free from the thraldom of preconceived ideas and unbiased in the advocacy of any one method of surgical procedure beyond its merits. When the deformity of the pelvis of the mother, or some unnatural development on the part of the fœtus, is so pronounced as to render delivery impossible, the cunning hand of the surgeon may then be of the utmost importance to life. It is highly commendatory to the standing of the medical profession that the principles now advocated have been so beneficial to mankind. The methods in vogue, not many years ago, of resorting to the operation of craniotomy, with all the appalling disasters that follow in its wake, are, happily, now much less frequent. Craniotomy forms one of the darkest pages in the history of obstetrics. When one contemplates the frequency with which this operation was resorted to in the past, in preference to others much less dangerous, it would seem that the spirit of scientific midwifery was long lulled to sleep and that Nature had become emasculated. The operation of eviscerating the yet warm and quivering body of an innocent babe from its mother's womb should be reserved for very rare and exceptional cases, such as hydrocephalus, or when the child is already dead. Much more satisfactory and humane methods are the Cæsarean section or Porro's operation. Unlike the majority of recent triumphs in surgery, Porro's operation is not one that has been accepted after having been performed and described many years before, but is of comparatively recent origin. The first successful case upon record was performed in the year 1876 by Porro, of Batavia. It has since been performed both in Europe and in this country with comparatively good results. Heretofore, and even at the present time, this operation and Cæsarean section have been indiscriminately advocated when the complications present called for one or the other method. I believe this to be a mistake. Whether the classical section can have any advantages over its recent rival rests entirely upon a question of morals. It is probable that each of these operations has its peculiar indications. Certain it is that there are well-defined conditions and complications present in pregnancy when Porro's method would seem to be the only scientific course to adopt. Each method may possess well-defined advantages over the other, and, in estimating the relative values of these two operations a number of important conditions should be remembered. In all cases where pregnancy has advanced to the full term and labor is complicated by the presence of a fibroid tumor in the substance of the uterus, hysterectomy is the preferable operation. There are exceptional cases when the tumor is small and of the nodular variety; it may then be possible to enucleate the growth when performing the Cæsarean section. In those instances in which there is contraction of the pelvis, or obstruction due to other causes, and where labor has proceeded for a long time and the uterus has become putrid, Porro's operation ought to be the one selected. In certain operations begun as Cæsarean section, but which become complicated by difficulties in the detachment of the placenta, uncontrollable hæmorrhages or atresia of the vagina, Porro's is the preferable operation. These are some of the advantages that this operation possesses over the Cæsarean section. The objection that has been raised against this operation is that the woman forever afterward remains sterile. When a case is encountered where a woman has a deformed pelvis and a contraction of its diameters, so that one or other of these two operations is called for, and granted that one method will save her life equally certainly with the other, the one that would place her in such a condition that pregnancy could not again occur, it would seem, ought to be the preferable operation. I look upon this point alone as a decided advantage for Porro's method. Such a procedure leaves the life of the woman absolutely free, so far as any future dangers of this kind are concerned.

There is no reason why either of these operations, when properly planned and the details carried out with as much care and precaution as in other abdominal sections, should not be almost entirely free from risk, so far as the lives of the mother and child are concerned. It is to be greatly regretted that in the majority of instances the idea of an operation does not enter into the mind of the attending physician until the patient has become almost entirely exhausted from the reiterated efforts of the uterus to expel the fœtus. An operation of this character, above all others, should be done opportunely, and not left until rough manipulations have exhausted the strength of the woman and materially reduced the chances for success. It can readily be understood why the mortality of these operations has remained so high, in view of the fact that it is usually done as a forlorn hope. An operation that has recently sprung into prominence, and one that has received considerable attention, is symphysiotomy. This method of delivery is not of recent origin, but is one that was advocated and described by a French medical student so far back as the year 1768. At first his method was received with incredulity, but subsequently having performed the operation success-

fully upon a woman who had previously given birth to four dead children, his operation was at once adopted and he became the recipient of much adulation and esteem. He was looked upon as a benefactor of mankind, and the neglected student became in the eyes of the nation an illustrious personage. Shortly afterward, however, the operation lapsed into neglect, until recently revived. The conditions calling for this method of operation are exceedingly limited. It is only in slightly contracted pelves that any benefit can be effected. In well-marked deformities, this operation gives way to one or other of the abdominal methods, and probably should only be performed in cases where the question of premature labor may be entertained. According to the most recent accounts, it is an operation frequently beset with difficulties and positive dangers. Septicæmia, hæmorrhages, ossification of the symphysis, laceration of the bladder, and prolapse of the vagina have followed as a result.

Some time ago a very interesting case of complicated pregnancy was presented to me for an opinion. The patient was under the care of Dr. E. J. Rothwell, of Denver. She was thirty-two years of age, of good general health, and had been married for several years. A few years previously she was delivered of twins weighing three pounds and a half each. Afterward she became pregnant again, but it was found quite impossible to deliver the child on account of a contracted pelvis, and craniotomy was done. She was confined to her bed for four months afterward as a result of septicæmia. Again she became pregnant, and was within two weeks of the period of her expected confinement when I was called in to see her. On making an examination, several interesting conditions became manifest. I could determine that the child was alive and situated higher up than normally, and in the left occipito-posterior position. The abdomen was enormously distended. *Per vaginam* it was quite impossible to reach the cervix. I could not at first account for the high situation of the child. The outline of the lower part of the abdomen appeared somewhat uneven, and, by further and more careful examination, I had a suspicion that there was an ovarian cyst jammed down in the pelvis. It was difficult, however, to give a positive opinion on account of the unusual degree of distention. All the diameters of the pelvis were contracted, and it was utterly impossible for the woman to be delivered by the normal route. The necessary preparations were made for a Porro's or Cæsarean section. Chloroform was given and an incision made down the median line from a point above the umbilicus to the pubes. When the peritonæum was cut through, the uterus bulged forward into the opening. A rubber ligature was passed round the uterus close to the cervix and tied tightly. An incision was then made into the substance of the uterus, beginning at the fundus and going straight down the full length of the uterus. The membranes were soon reached and the child extracted. Before this last step was undertaken flat sponges were packed well around the uterus and over the intestines. This precaution was taken to prevent any liquor amnii from dribbling into the peritoneal cavity. When the child was removed the reasons for its high position became apparent and the suspicion of a tumor was confirmed. There was a large cystic tumor, evidently of the left ovary, packed down in Douglas's sac, and a second one from the right ovary. When I saw the nature of the complication and the fact that the pelvis was much contracted, I concluded to remove the uterus with the tumors. What made the whole situation more unique was the fact that the tumors were both dermoids. They contained broken-down sebaceous matter, hair, skin, and teeth. The case was a very satisfactory one in every respect. Both the child and mother recovered, and are today alive and well.

I have now reached the end of my task, however incompletely it may have been accomplished. To me it has been a pleasant recreation, and I have had the sensation of one tramping through an unexplored forest. A rich harvest remains to be garnered, although yet so unfruitful.

12 WEST FORTIETH STREET.

GRIPPE, PNEUMONIA, AND INSANITY.

BY EMILE ARONSON, M. D.,
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IN a very interesting article published in a recent number of the *Journal of the American Medical Association* Dr. H. S. Anders spoke on some clinical features of epidemic influenza observed by him. Out of 128 cases, he found only one which manifested extreme mental disorder in the shape of an acute maniacal delirium lasting about three weeks. Melancholic depressions as a sequel of influenza have been frequently observed, yet the case which I hereby report has shown so many peculiar phenomena that I have thought it worth publishing:

Miss E. R. has always been well; the family history shows nothing abnormal, only that the mother died of carcinoma of the uterus. The patient has always been of pleasant and cheerful disposition. During the epidemic of influenza her brother and sister had just recovered without any unusual complications or after-effects, when, on January 14th, I was called to see this patient. I found her in bed with all the manifestations of influenza, *i. e.*, sore throat, headache, and back-ache, extremely nauseated, the tongue heavily coated, the temperature 102° F., the pulse 90. By the 16th all the symptoms had left except the nausea, which, under the use of bismuth, lime water, etc., also passed away. All in all, I considered it a mild attack of the grippe, yet the patient was very much worried about her condition and requested me to call twice daily. On the 18th she felt strong enough to leave her bed and go to a dance, from which she returned complaining of a severe chill and intense pain in the right side of her chest. On the 19th or 20th a sanguinolent sputum appeared, the pain and cough were distress-

ing, the nausea returned, and the temperature ran up to 103° and 104° F. The patient complained of intense headache and became slightly delirious; there was a constant interlocking and unlocking of the fingers, and the wrists were kept frequently in dorsal flexion; the tongue was thick, pasty, and heavily coated; a slight nosebleed was also observed. Under the idea of a meningeal complication, another physician was called in, who, while fully agreeing with me in the diagnosis of grippe-pneumonia and cerebral involvement, and endorsing my treatment, thought of the possibility of malaria. On the 21st the patient was a raving maniac, screaming and yelling, trying to tear her clothes off and to leave her bed. The sputum was clear and the temperature went down to 100° F. On the 22d she was quiet, lying with closed eyes, which even considerable force could not open. She did not respond to questions, did not talk, and did not ask for anything. The muscles of the neck were rigid, and the jaws tightly locked; the abdomen was flat, yet even a slight touch on the abdomen caused an expression of pain on her face; in fact, this hyperæsthesia of the skin of the abdomen was the only thing that called forth any manifestation of consciousness or sensibility. She passed urine and stools involuntarily. She would take no food or medicine by the mouth, and I had to resort to cleansing and nutrient enemata. On the 23d the temperature was 100° F. (9 A. M.), 102° F. (3 P. M.), and 100° F. (6 P. M.); she slept well and was only partly delirious. On the 24th she took some nourishment in the shape of milk, beef-tea, and grape-juice. In the afternoon she became restless again; there was constant rambling talk, and she sought to leave the bed, insisting that she was dead, that her body and her spine were twisted, and that she had done something wrong.

The alarmed family urged another consultation, to which I agreed. After a most careful and close examination, the consulting physician was inclined to consider the case one of the abnormal forms of typhoid fever, which diagnosis was accepted by me with some reservation, since many symptoms of typhoid were missing, yet pronounced symptoms of meningitis, such as Kernig's sign, etc., were also missing. For the next thirty-six hours his diagnosis seemed to be correct, considerable meteorism appearing and enemata bringing away several stools of the color of typhoid fever stools. On this day (the 24th) the temperature was 100° F. (8 A. M.), 102° F. (9.30 A. M.), 102° F. (12.30 P. M.), 101° F. (4 P. M.), 103° F. (7.30 P. M.), and 102° F. (1 A. M., 25th). During the 25th she did not sleep, but lay with the eyes quite open. She seemed to understand what was said to her, but did not answer, except with some inarticulate sound, yet took medicine and nourishment.

On the 25th the temperature was 102° F. (8 A. M.), 101° F. (noon), 101° F. (4 P. M.), 101° F. (8 P. M.), 101° F. (1.30 A. M., 26th).

On the 26th the temperature was 103° F. (8 A. M.), 101° F. (noon), 101° F. (4 P. M.), 100° F. (8 P. M.), and 102° F. (midnight).

On the 27th the temperature was 100° F. (8 A. M.), 100° F. (noon), 101° F. (8 P. M.), and 100° F. (midnight). She took some peptonized milk, had her nutrient enema, and slept the whole day. At midnight she expelled a large amount of gas and lay in a deep stupor, the extremities cold. She did not swallow.

On the 28th the temperature was 99° F. (8 A. M.), 99° F. (noon), 100° F. (4 P. M.), 100° F. (8 P. M.), 100° F. (midnight).

On the 29th the temperature was 100° F. (9 A. M.), 100° F. (noon), 100° F. (4 P. M.), 99° F. (8 P. M.), 99° F. (midnight).

From the 30th of January to February 5th the temperature ranged from 99° F. to 98° F. every day.

The entries made by two competent day and night nurses show, then, that only on the 25th and 26th the temperature was above 102° F., with the exception of the temperature on the 19th and 20th, when the pneumonia appeared. The entries show, further, that the morning temperatures were always higher than those of the evening; the temperature was always taken by the rectum, and the thermometer was left five minutes *in situ*.

The pulse was good all along and ran in typical relation to the temperature, only once mounting to 112, on the night of the 26th, and being mostly between 80 and 90 and of good volume.

The periods of stupor and coma became shorter, she began to gain in strength, and she was soon able to sit up and take sufficient food by the mouth. Yet almost two months from the beginning of her sickness she did not show any interest in her surroundings, was apathetic, did not believe that she would get well, complained of being overfed, wished to kill herself, and, with this thought of self-destruction in her mind, managed repeatedly to escape the watchfulness of her attendants, and was found one cold morning barefooted on the back porch of the house, another time hiding herself under the house. She was otherwise docile and gentle, took her medicines willingly, and took outdoor exercise every day.

The recovery has been a very slow one, yet the prognosis seems to be favorable, and I believe that in the course of time she will regain her normal mental and physical health. The treatment of the case had to be adapted to the indications arising. Her diet was naturally a liquid one, consisting of peptonized milk, beef-tea, and grape-juice; brandy was given only when absolutely necessary. Nutrient enemata were given first at six-hour intervals, and, seeing that they were absorbed, at shorter intervals; the addition of a few drops of tincture of opium to the nutrient enemata seemed to help considerably. A cleansing enema of a simple solution of salt in water (warm) was given every day. To allay the intense excitement, morphine, bromides, and hyoscine had to be used. Chloretone, in ten-grain doses, procured sleep more promptly than trional in twelve- to eighteen-grain doses. Full baths, sponging, and ice-bags to the forehead and neck were used according to the conditions arising.

NOTES ON THE TREATMENT OF DIPHTHERIA, BASED ON THE METHODS OF THE NEW YORK CITY HOSPITALS.

By WILLIAM L. SOMERSET, M. D.,

NEW YORK.

About ten years ago, the chief characteristic of the treatment to which diphtheria patients were subjected was activity. As regards the doctor, his fertility of resource was certainly admirable, even though his judgment might occasionally be condemned. As regards the patient, the life was strenuous, to a degree equaled only by that of the nurse. The treatment was then, as now, specific and symptomatic; local and constitutional. There were irrigations, fumigations, or, better, inhalations, swabs and sprays, local and systemic specifics, al-

teratives and resolvents. Emesis, stimulation, purgation, or depletion, all played their part, and continue to do so—with a much more rational appreciation of when and why they are indicated, however. Far be it from me to refer to the treatment of that time with anything but respect. Some of it was ill-advised and overdone, and, perhaps, injurious; some of it was certainly ineffectual; but it was all indicative of anxiety to relieve, and out of it has been culled a system of treatment that, judiciously coupled with the last great specific, antitoxine, answers every practical and theoretical requirement and takes every possible advantage of this most treacherous disease. It may be of interest and advantage to indicate, briefly, the lines along which the existing methods of treatment were evolved.

The idea has prevailed for at least fifty years that there was, or, in any case, ought to be, some means of exerting an influence on the human body whereby the further formation of pseudomembrane would be stopped and that already formed would be hastily got rid of. Inasmuch as the disease—fifty years ago—was considered to be a strictly local one (except in malignant cases, where some influence poisonous to the system was recognized), the specifics of those days were for local effect only. The bromide, chlorate, and sulphide of potassium, bromine, glycerin, the alkalies, all received limited recognition. Emetics were freely used, but they were not considered to have any effect on the *peculiar nature* of the inflammation. By far the most popular remedy advocated by Bretonneau himself was mercury. If the system was brought under the mercurial influence, then would the "peculiar nature" of the inflammatory process be modified. The character of the secretion would be changed from "plastic to mucous, or to puruloid and diffluent." The further production of false membrane would be prevented. The separation of that already formed would be favored, also possibly its solution and absorption. Mercury came to stay, and until it was driven from the field by antitoxine there were many who insisted on its use in the form of bichloride by hypodermic injection, the argument still being that it caused the absorption of fibrinous exudate. Mercury did not have the field to itself. Tincture of the chloride of iron was used with frequency and freedom. The stock solution was one third iron and two thirds glycerin. The dose was a teaspoonful every hour, or even every half hour. Fever was not a contraindication to the use of this mixture. If the nausea produced was excessive, the local effect was sacrificed and the mixture was diluted with vichy. The iron frequently was discontinued on account of its ill effects. The same was true of mercury. Alcohol, in the form of whiskey or brandy, was relegated to its proper place as a stimulant early in the nineties, having lost prestige as a specific. Potassium chlorate, at about the same time, fell into general and richly merited disrepute. As a matter of fact, the evidence in favor of any of the specifics, prior to antitoxine, was very incomplete and unsatisfactory. In 1895 the use of antitoxine became general. There was, of necessity, considerable difference of opinion about the dose. From twenty-five hundred to four thousand units are, I think, the most generally accepted limits at the present time. I have no sympathy with such use of antitoxine as is recommended to us from Boston, viz., twenty thousand units daily for three or four successive days. With the introduction of antitoxine, other specifics dropped out of use, I trust, permanently.

That something ought to be done locally for a diphtheritic throat has long been firmly believed, and many methods have been resorted to. Applying the sulphate of zinc or of aluminum or the nitrate of silver, in solution; or dusting with astringent powders, was in vogue as long ago as fifty years. Bretonneau believed in dusting the membrane with calomel. Sprays and irrigation solutions came later. Local applications, during the last ten years, have been used to dissolve the membrane, to disinfect the infected area, to lessen the inflammation, or to cleanse the throat—thus diminishing the absorption of toxines and products of putrefaction and contributing to the comfort of the patient.

The attempt to dissolve or digest diphtheritic pseudomembrane *in situ* has, I think, been abandoned. To render the pharyngeal and nasal mucous membrane of a diphtheritic patient free from Klebs-Loeffler bacilli by means of germicidal solutions has been proved to be impossible. The surface of a mucous membrane to which an antiseptic solution has been applied may be made sterile for two hours—no longer. Furthermore, to hasten the final disappearance of the germs after recovery, antiseptic solutions have no advantages over salt water. At the present time, sprays and insufflations have been practically abandoned, and irrigation remains as the accepted method of local treatment. This process has undergone great change since its first introduction. Its earliest purpose was to disinfect. The solution used was one of bichloride of mercury, 1 to 2,500; the irrigation was done through the nose only. Later, fluid was also introduced into the mouth, if possible. The irrigation was performed every fifteen minutes and kept up for five minutes. The children were left in their cribs and were not wrapped. Fortunately, most of the nurses' time was spent in refilling the little syringe. But little benefit was derived from this style of irrigation, and it was discontinued after a sufficiently long trial. There followed a period of spraying. Various medicaments were used in the sprays and various forms of apparatus were employed for their application. At one time the children were all brought to the big compressed-air cylinder; at another, heat was employed to furnish the power, and every patient had its own apparatus, consisting of an alcohol lamp and support and a little spherical metallic boiler with an atomizer attached. The possibility of an explosion lent the added charm of uncertainty to this method.

After a term with the sprays, irrigation was returned to in a modified and much improved form. By this method of treatment, as at present practised, the attempt is made to cleanse, as thoroughly as may be, the infected areas and to lessen pain. The frequent cleansing of a diphtheritic throat and nose contributes to the comfort of the patient; it removes decomposed membrane and thus lessens the absorption of products of putrefaction; it, furthermore, improves markedly the odor of the breath. Finally, hot irrigation affords the best means of relieving the intense pain frequently present when the throat is much swollen, by reason of the great amount of accompanying non-diphtheritic inflammation.

Preparatory to irrigation, the patient should be made comfortable and accessible. Adults may be irrigated in bed. Children are best placed on a table, where they are wrapped in a sheet or blanket and protected by a thin rubber sheet. A rubber-covered pillow and Kelly's pad —for drainage—are desirable. Either a fountain or a hand-ball syringe is necessary; the former expedites matters for hospital use; the latter furnishes greater force when it is required to clear a nose obstructed by pseudomembrane. The nozzles are best made of hard rubber, one form for the nose and one for the throat. The nasal tip should fit the nostril tightly, so that the fluid introduced into one nostril shall escape from the other. The tip for the throat should be of sufficient length so that, after a preliminary washing of the mouth, it may be pushed well back, act as a tongue-depressor, and render it possible to wash the pharynx. The patient will probably gag and thus assist. The nose should be washed first, and every child should have its own tips, kept in an antiseptic solution. The fluid should be delivered in a single stream from a hole in the end of the tip. All the fittings of the syringe should be of hard rubber.

Exhaustive comparative trials were made with several solutions as to their effect on membrane and on persistence of Klebs-Loeffler bacilli: bichloride of mercury of different strengths, peroxide of hydrogen, and salt water. The last—a teaspoonful to the quart—was finally selected. It answers every requirement for either hospital or private use. It is cheap and always available, requires the very minimum of time and experience to prepare, is harmless if swallowed, as some of it must be, and is thoroughly cleansing and non-irritant. The temperature most frequently used is 110° F. If there are excessive pain and swelling, this may with advantage be run up to 138° F. Concerning the frequency of irrigation, each case is a rule unto itself. There are cases in which, for a day or two, the patients are undoubtedly benefited and relieved by being irrigated as often as every hour—when awake; more frequently, three or four times a day is often enough. Some persistently refractory children are better not irrigated at all. It is surprising, however, how quickly even the smallest children, if properly handled and wrapped, learn not only to be tractable, but even to render assistance by way of opening their mouths and lying still. To irrigate well requires experience under proper training. There is no evidence that irrigation favors infection of the middle ear.

The old-time practice of making applications to the larynx, in cases of croup, by means of insufflation or by a brush, gave way to inhalation. Calomel, as a sublimate, was used extensively. It produced coughing, sometimes emesis. It is no longer in use, so far as I know. Sulphur has been used in much the same way and with equally unsatisfactory results. Medicated steam is still in use. Properly applied, it is undoubtedly beneficial in some cases—especially to prevent the necessity of reintubation.

The nasopharynx, the larynx, and the eye are the three most dangerous sites for a diphtheritic deposit. Each of these lesions gives a distinct set of conditions and, aside from antitoxine, requires its individual line of treatment. In nasopharyngeal diphtheria, the danger is toxæmia, with resultant heart failure, early or late. There may be abundant membrane on the tonsils and anterior pillars and but slight danger. The rapidity of absorption of toxines from the posterior nares and nasopharynx is, of course, explained by the scarcity of protecting connective tissue and the abundance of lymphatics beneath the mucous membrane. The danger seat is largely out of sight, and instrumental meddling is strictly contraindicated. The anterior cervical glands will give warning unless the disease is so rapid as to be properly called malignant. Indications of approaching danger travel, also, along the lines of the motor branches of the pneumogastric nerve. Nasal voice, coughing, and regurgitation in swallowing are usually the first signals. These changes are only too often the precursors of a change in the heart's action. A rapid and feeble, or worst of all, an intermittent, pulse indicates a most serious condition. Absolute rest—morphine may be a most valuable adjunct in securing this—stimulation, and every possible attention to the nourishment of the patient cover the ground of early available treatment. Gavage is frequently indicated. Paralysis of the abductors of the vocal cords may necessitate intubation. I wish to reiterate the importance of paying the strictest heed to the earliest, and even the slightest, indications of oncoming diphtheritic paralysis. The disappearance of such indications may be a question of weeks or of months, but so long as they are present they mean unmistakably a dangerous and critical condition. The heart is peculiarly susceptible to diphtheritic toxines, as not only its nerve, but its muscular structure also, is liable both to parenchymatous and to interstitial changes. When the paralysis has affected groups of muscles, as in an arm or a leg, faradaism, passive motion, and massage may be of service, when the affected muscles begin to show improvement. When there is no tendency to spontaneous improvement, treatment is of no avail. Permanent disability, such as multiple sclerosis or hemiplegia, is usually due to hæmorrhage into the spinal cord or brain.

In diphtheritic laryngitis, stenosis is the immediate danger. Toxæmia is improbable, unless the lesion extends below the larynx. Either of the operations for the relief of laryngeal stenosis introduces a large foreign body into the larynx and trachea, acts as a contributing cause to the development of pneumonia, interferes with nutrition, and favors the extension of membrane. The avoidance of an operation is, therefore, the first consideration. Ventilation, air space, and temperature are of great importance; a ward temperature of 72° to 76° F.; frequent change of air without draughts; one hundred and fifty square feet of floor space for each patient (in a room not less than ten feet high); freedom from the presence of pneumonic or septic patients, are the desiderata for all cases. In selected cases, hot applications to the neck, steam inhalations, and, rarely, emesis are beneficial. Poultices are contraindicated when they are irritating; when used, they must not be allowed to cool before renewal. Fifteen minutes is about the period of utility of a well-made poultice. To poultice for an hour at intervals of two hours is often a good method. In late cases, with detached or probably detachable membrane, emesis may be indicated—if it is not too exhausting. To apply steam to the best advantage to a child, a room must be available in which the atmosphere can be kept warm and moist by escaping steam—medicated as one may prefer. A croup kettle is satisfactory with adults only. Keeping a child as quiet as possible—to reduce the requisite amount of oxygen to a minimum—is, of course, desirable.

It is very gratifying to a physician to feel assured that a patient was intubated at exactly the right time; not too early, thus, perhaps, unnecessarily transferring a case from a class with low mortality to a class in which the mortality is much higher; not too late, thus possibly nullifying the benefits otherwise to be derived from the operation. The slightest insufficiency in respiration—otherwise incapable of quick relief—calls for operative interference, and sufficient breathing may be so labored that an operation is indicated. A child that cannot sleep needs relief, even though getting enough air. After prolonged exertion, a child may be too weak to struggle; this condition of apparent rest must not be mistaken for sleep. The pulse will tell the difference. Indications of interference with the venous return, such as cyanosis, or diminution of the respiratory murmur, especially at the bases (indicating a beginning exudation of serum into the air vesicles), should be relieved at once. If a patient is progressively getting worse it is better to be a little early than a little late. The above last-named condition is a grave hindrance to recovery.

In cases in which the pseudomembrane has extended below the larynx (this can be told with considerable certainty by the character of the breathing), and in cases in which the nasopharynx is extensively involved, primary tracheotomy is indicated. In this operation, in small children, usually both the cricoid and the upper two or three rings of the trachea are cut. Concerning the operation I will only say, that, as soon as the trachea has been reached (it is easily distinguished either by the finger or by the eye), its position should be fixed by means of a tenaculum inserted into its anterior wall, just off the median line. The initial incision into the air-passage should be the upper extremity of the final incision, and should be enlarged with a blunt-pointed bistoury.

The O'Dwyer tube of to-day is made of vulcanized rubber strengthened by a metallic lining. It consists of a body, retention-swell, neck and head. The outside anteroposterior diameter of the body, retention-swell, and neck is the same. The outside transverse diameter of the retention-swell at the middle of its fusiform enlargement is slightly greater—for each size of tube—than is its anteroposterior. The cricoid cartilage is the only completely cartilaginous ring through which the tube passes. Its lower border is the smallest part of this ring, and is the "measure" for the outside dimensions of the tube. This lower border is slightly elliptical—major axis anteroposterior. The difference between the two diameters at one year old is about 1 mm.; at four years, 1½ mm.; at ten, 2 mm.; in adults, 3 mm. This excess of the anteroposterior over the transverse diameter is continued downward in the trachea beyond the point reached by the lower end of the tube. Now, remembering that the proportions between the diameter of the retention-swell are the reverse of those of the cartilage, it is evident that the tube rides in the cricoid; the line of supporting contact being the lower border of the cartilage and a line drawn round the tube just below the maximum part of the retention-swell. The true vocal cords, while immediately below the head of the tube, do not carry any weight, in fact, are entirely relieved from continuous pressure, taking their origin, as they do, from the upper border of the cricoid. Their function, in intubation, is, by their approximation, to prevent the tube from being coughed up too easily. The frequency with which tubes are coughed up demonstrates the weakness of their resistance. It requires, on the other hand, considerable pressure to push the middle of the retention-swell through the cricoidal ring. If this is done, of course, the head of the tube goes below the vocal cords and beyond the reach of the finger. In such a case, excited efforts (and they are very likely to be excited) with the extractor may push even the head of the tube below the cricoid. The extractor should not be used unless the head of the tube can be felt by the finger. bimanual extraction without the instrument being safer and, furthermore, avoiding such possible displacement of the larynx as to allow the tube to slip forward and upward until its head rests under the hyoid bone. The possibility of this complication should be borne in mind whenever a tube disappears from its usual position after ineffectual attempts at instrumental extraction.

While a child is carrying an intubation tube, certain

lines of special treatment are indicated. In the first place, careful attention must be given to the drainage of the air-passages, and irrigation of the throat is not desirable. All mucus and membrane coughed up, but not expelled, should be removed by the finger. The child is best laid on a table, wrapped. (If a patient's cough is insufficient, it may be strengthened by the introduction of a little whisky into its throat.) This procedure is carried out regularly, the frequency varying with the requirements. Nasal irrigation is permissible.

In feeding, whenever possible, the child should drink from its cup in the ordinary way, and this is possible in many cases during the entire intubation period. Once in a while the Casselberry method is of service. If a child cannot swallow in a normal posture, however, gavage is usually the remedy. If gavage is contraindicated, as by swelling, hæmorrhage or pain, semi-solid food may be given. Ice cream may tide one over a difficult day or two. Rectal feeding, of course, may be resorted to. The stomach, however, is usually accessible in some way.

Internal medication should be reduced to a minimum. If the case is complicated by an exudation of especially tenacious mucus, the inhalation of medicated steam should be tried. The worst cases are those complicated with a nasopharyngeal lesion or with extension of membrane below the tube. Here, on account of the threatened heart failure, absolute rest is essential, and the use of morphine by hypodermic injection is the one way to get it. The influence of this drug may be kept up for several days if necessary.

The stay of the tube should be as short as possible. In regard to this, there is, in each case, a number of things to be considered: the degree of inflammation in the larynx, as evidenced by the amount of mucus and membrane coughed up; the appearance of the membrane in the throat, if there is any; the temperature, pulse, and general condition; the age—the younger the patient, *cæteris paribus,* the longer the stay; the duration of the disease, and its duration prior to the administration of antitoxine. These are all matters of importance and make each case a law unto itself. In all early cases, the tube should be removed by the fifth day at furthest. The morning is the best time for extubation.

When a tube has been removed, the first consideration is to avoid the necessity for its return. Sulphate of morphine, from a sixteenth to a twelfth of a grain, given fifteen minutes before extubation, is an excellent precaution. Should dyspnœa recur, poultices, hot baths, narcotics, and steaming are all important aids. A stay of several days in the steam room may be necessary to avoid reintubation. Children under two years generally carry their tube two weeks or longer, so that in these cases two or more reintubations are regularly necessary. Other causes of "retained tube" are: Congestion, causing a more or less rapid return; paralysis, diphtheritic or due to the pressure of the tube; granulations, following ulceration; and, later, cicatricial contraction. In sthenic cases, having had a laryngeal condition only, depletion may very well be of distinct advantage. Leeches and even purgation are indicated. In cases of paralysis, the return of the tube must be immediate. In granulation cases, several days may elapse. Smaller tubes, or "special" tubes to relieve or vary the site of pressure, are indicated, and in the latter cases medicaments placed on the outside of the neck of the tube are used. In the late cases, in which cicatricial tissue plays a part, tubes larger than the age of the patient calls for, left in for long periods of time, have effected several cures. In general, neither tracheotomy nor thyreotomy is of any avail in these protracted cases. O'Dwyer said: "If you get rid of an intubation tube by means of a tracheotomy tube, you will, later, in each case get rid of the tracheotomy tube by reintubation." I have still to hear of the exception that proves this rule.

Some minor changes for purposes of asepsis and convenience have recently been made in intubation instruments, but, so far as concerns a perfect appreciation of conditions in laryngeal diphtheria and of all essentials requisite to meet these conditions, O'Dwyer may certainly be called the author and finisher of intubation of the larynx.

A diphtheritic eye requires a specialist and two experienced nurses. Many doctors, nurses, and others having to do with the care of diphtheria patients suffer frequently from infected fingers. This infection often produces paronychia. It usually, however, remains superficial, and recovery comes about without an operation, through the influence of heat and moisture. If, on the other hand, throbbing pain is present, worse at night, showing subperiosteal effusion, immediate incision is indicated.

244 East Nineteenth Street.

Correspondence.

LETTER FROM TORONTO.

The Late Dr. J. Archer Watson.—The Matriculation Requirements of McGill University.—The Chinese in Canada.—The Hospitals of the Province of Ontario.—Queen's Medical College, Kingston.—Barber-shop Sanitation in the Province of Quebec.—A Canadian Surgeon Wins the Victoria Cross in South Africa.—The Protestant Hospital for the Insane, Verdun, Quebec.

Toronto, *April 13, 1901.*

Dr. J. Archer Watson, a well-known practitioner of Toronto, was instantly killed on the morning of the 11th inst. The doctor, who was an enthusiastic horseback rider, started out on that morning to ride out to Weston, his former home, a distance of some ten miles. While he was crossing a railroad at Lambton Mills his horse, a young and spirited animal, became very restive and backed on to the track in front of an approaching

train, throwing the rider violently against the engine boiler. Both rider and horse were instantly killed. Dr. Watson graduated from Trinity Medical College with the class of 1885, and shortly after graduation received an appointment in the anatomy department of that institution, which he subsequently relinquished. His funeral, which took place this afternoon, was attended by a large concourse of physicians. He was unmarried.

McGill University purposes raising its standard of medical matriculation, and the change will come into effect in September, 1902. After that date all candidates will be required to show at least a practical knowledge of chemistry and a sound theoretical acquaintance with physics, statics, and dynamics. Greek, German, and French will be the only optional subjects after that date, and one or another of these must be taken. Later on, it is the purpose of the authorities to still further raise the standard by requiring all candidates before matriculating in medicine to show that they have taken the first year arts course. Not long ago McGill lengthened its session from six to nine months and established a combined arts and medical course. Last year great improvements were made in the pathological department, and with the improvements which are in contemplation for the present year, combined with these advances in matriculation requirements, McGill hopes to lead the world in its medical department. The present changes in the matriculation standard are designed to keep students constantly at work, not allowing of their participation in other work outside their college course.

The question of Chinese labor as affecting Canadian labor is at the present time being inquired into by a royal commission appointed by the legislature of British Columbia. This commission has been sitting in Victoria, B. C., and last week summoned Dr. O. M. Jones, health officer of that place, to give evidence as to the sanitary conditions of the Chinese quarters and the habits of life of these Orientals. Dr. Jones stated that lately their quarters had been much improved, owing to the erection of new buildings, but that these people paid little attention to the well-known laws of sanitation. He considered that they were constantly a slight menace to the health of the general public, on account of fresh arrivals from Chinese ports which were notoriously infected with small-pox all the year round. Personally, he stated, they were very eager to be vaccinated. Referring to the existence of leprosy, he had attended to about five cases. The Chinese took every pains to hide cases of leprosy. He had not observed a distinct case of leprosy among the children of white people. Some time ago there had been an epidemic of mumps among the Chinese in Victoria, and many of the clerks in the banks contracted the disease, which he considered had been due to their handling the money of the Chinese. As to their calling in physicians when sick, the wealthy class did get the white doctors. The Chinese hospital was under the supervision of the medical health officer, who made regular visits, and Dr. Jones thought this a better plan than appointing a resident house physician.

The annual report upon the hospitals, refuges, etc., of the Province of Ontario has just been issued, and it shows that there are between fifty and sixty hospitals in this Province, all receiving their share of governmental aid. That the public confidence is increasing in these institutions is shown by the fact that there has been a large increase in the hospital population over the previous year; and there has been a great improvement in the refitting, furnishing, and sanitary conditions, which, combined with the successful medical and surgical attendance and nursing, helps to increase the faith the public have in their efficiency. On the 1st of October, 1900, the number remaining in the various hospitals of the Province was 1,893. The number of patients admitted during the year was 27,061, and the number of deaths during the year was 1,451. The total number of days' stay was 739,816. The Ontario government contributed $110,000, and the balance of the total revenue amounted to $498,579.17. The expenditure amounted to $570,150.36, being an average daily cost of 83½ cents for each patient. There are one hundred houses of refuge, etc., in the Province, with a population of 5,042, and the yearly expenditure for their maintenance is $234,602.53.

The annual convocation ceremonies of Queen's Medical College, Kingston, Ont., were held on the evening of the 10th inst., when Dr. Herald, the secretary of the faculty, performed the ceremony of presenting the Dean Fowler Scholarship, which has lately been founded by the faculty and medical graduates of Queen's in the United States and Canada, in commemoration of the lifelong services of Dr. Fife Fowler to Queen's medical faculty. Dr. Fowler came to Kingston from Edinburgh in 1854, at the time when Queen's medical faculty was being founded, and received the appointment of professor of materia medica, which he held until 1878, when he was advanced to the chair of medicine, which he only a short time ago relinquished to Dr. James Third, who was at that time superintendent of the Kingston General Hospital, and whose death is expected daily from an attack of apoplexy which occurred some weeks ago. Dr. Fowler was appointed dean in 1883, and that title he still holds. During this long period of forty-six years he has done good work for Queen's, and in recognition of his past services it was decided that a scholarship in medicine would be a proper tribute to those services. The scroll setting forth the purpose of the scholarship was presented to the chancellor, Sir Sanford Fleming, and Dr. Fowler made a suitable reply, referring to the fact that, of all the founders of Queen's Medical Faculty, he alone remained alive at that day.

In the matter of barber-shop sanitation, the Province of Quebec easily leads all the other provinces of the Dominion. A barbers' association is also in existence and has been the means of doing much good toward the re-

form of the habits of the tonsorial artist. This association extends its jurisdiction over towns and cities of 5,000 and upward. It and the existing conditions have been created by act of Parliament, and according to this provincial law no barber can work in a factory during the day-time and conduct a barber-shop on Sundays and week-day evenings. The law as it now stands compels barbers to take out a license or abandon business, and the rules of the association make it obligatory upon customers who may be affected with any skin or scalp disease to possess their own razors, soap, brushes, etc., which are kept in a specially constructed cabinet approved by the Provincial Board of Health. The law is said to be working satisfactorily, antiseptic measures are carried out, hot water is in every barber-shop, and on every hand the customer and the barber are being protected from unsightly skin diseases.

A Canadian doctor has just received the Victoria Cross for distinguished bravery on the South African battlefield. Dr. H. E. M. Douglass, who is in receipt of this unusual honor, graduated from Queen's Medical College, Kingston, in 1897. He was attached to the Gordon Highlanders as surgeon, and it was at the battle of Maegersfontein that he so signally distinguished himself. He was with the Black Watch on its death march, and, it is stated, when the fire opened, though slightly wounded himself, crawled amid the hail of bullets to the head of the column. Here the officers of his regiment were lying about dead or wounded. He dressed the wounds of all within reach, and made his way back safely, and being then the senior officer, rallied the scattered ranks of the Gordons and led them out of action. While performing this duty he was wounded by a bursting shell, which carried away a portion of one cheek.

The annual report of the Protestant Hospital for the Insane, Verdun, Quebec, shows that the number of patients in that institution is on the increase. Since its establishment, in 1887, there have been admitted 1,418—766 males and 652 females. There were 497 patients treated in this hospital during last year, of whom 265 were males and 232 females. Ninety-three patients were discharged during the year. Of these, fifty were men and forty-three women. Fifty-two were discharged as having recovered, twenty-eight improved, and thirteen unimproved. This is a discharge rate of 66.90 per cent. and a recovery rate of 37.41 per cent., a marked improvement over the previous year, when these percentages stood 52.42 and 33.33 respectively. The average period of residence of those permanently discharged was a trifle over eleven months. There were thirty-five deaths during the year—twenty-two of men and thirteen of women.

The Austro-Hungarian Hospital.—We are informed that the erection of the Austro-Hungarian Hospital, on the site of the East Side Dispensary, at 322-324 East Third Street, New York, is to be proceeded with forthwith. The hospital is to be devoted to the treatment of the poor of that section of the city.

Therapeutical Notes.

Echinacea Angustifolium in the Treatment of Hæmorrhoids.—Dr. E. V. Hall, of Conroy, Ohio (*Cincinnati Lancet-clinic,* March 23d), has found rectal injections of the fluid extracts of hamamelis and echinacea very efficacious in the treatment of internal hæmorrhoids. He gives the following formula:

℞ Fluid extract of echinacea..... 1 ounce;
Fluid extract of hamamelis..... 2 ounces;
Distilled water..... 1 ounce.
M. S. Inject two fluid drachms after each stool.

A slight burning sensation follows the injection, he says, but it soon passes away, giving place to a peculiar cooling effect. In one instance he has thus cured hæmorrhoids for which an operation had been recommended as the only means of cure.

For Eczema.—The *Journal des praticiens* for March 23d mentions the following ointment as giving excellent results in some cases of eczema:

℞ Camphorated naphthol..... 7½ grains;
Zinc oxide..... 75 "
Petrolatum.....750 "
M.

Guyon's Lubricant for Instruments.—According to the *Journal des praticiens* for March 23d, Professor Necker uses the following for lubricating instruments, especially catheters and urethral sounds. It is said to possess exceptional lubricating qualities besides being antiseptic and non-irritating:

℞ Corrosive sublimate..... $\frac{30}{100}$ths of a grain;
Water..... 375 minims;
Powdered soap..... 750 grains;
Glycerin..... 375 minims.
M.

Ichthyol in Erythema Nodosum.—In a letter from London, by Dr. Raymond Crawfurd, published in the *Therapeutic Gazette* for March, Dr. Brownlie is cited as recommending the following formula:

℞ Ichthyol..... 2 drachms;
Alcohol, } each..... 3 "
Ether, }
M. The alcohol and ether are first mixed, and then the ichthyol added; else an insoluble deposit is formed. Painted on, it is said to relieve the burning pain speedily. Dr. Crawfurd himself recommends a paint consisting of a drachm of ichthyol in an ounce of collodion.

For Amenorrhœa.—*Revue médicale* for March 27th gives the following:

℞ Crystallized apiol..... 1 part;
Sterilized oil..... 5 parts.
M.

One cubic centimetre (fifteen minims) may be injected subcutaneously every day.

An Ointment for Intertrigo.—We find the following formula in Reed's *Text-book of Gynæcology:*

℞ Zinc oxide, } each.....30 grains;
Bismuth subcarbonate. }
Carbolic acid.....10 drops;
Vaseline..... 1 ounce.
M. To be smeared on the affected surface.

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THE GROWTH OF THE AMERICAN MEDICAL ASSOCIATION.

As the time draws near for the association's next annual meeting, interest in its affairs naturally grows more active among the profession at large. As to the meeting itself, which is to be held in St. Paul on the 4th, 5th, 6th, and 7th of June, there can be but one opinion and but one confident expectation, namely, that it will be at least the equal of any former meeting of the same body, whether from the point of view of the scientific work that will be done or from that of a reunion of the best elements of the American profession. As one annual meeting after another approaches, however, one's thoughts turn more and more on questions more closely bearing upon the association's future usefulness than most of the proceedings that are likely to mark the occasion. The American Medical Association has accomplished a great work, but is it, as at present organized, fitted in the best possible manner for the work that is yet before it? There are those—and they are among the association's best friends—who, recognizing fully that it was originally organized in a way admirably fitting it to cope with the problems of half a century ago, are inclined to think that changed conditions call for some modification of its machinery if it is to keep on doing for the profession the best that can be expected of such a body.

When the association was organized, American medicine was in a decidedly unpromising state. There was, to be sure, no lack of brilliant and progressive men in the profession, but the teaching faculties were almost entirely irresponsible bodies, issuing at their pleasure diplomas which, while certifying to but little that a man could be proud of, gave their holders unquestioned prestige with the general public. Everybody had the right to practise medicine, and quackery was rampant. Authoritative pronouncements by the better class of physicians were required to educate the people up to the point of remedying these evils. Such have proceeded from the American Medical Association and from other medical organizations, and they have slowly taken effect. They were authoritative in proportion as they came from a representative body. It was seen at the outset that this would be the case; hence the delegate system in the association's organization.

But the delegates have now become so numerous, about fifteen hundred in all, that, though there are always many absentees, the general session is almost sure to be unwieldy on occasions when a conflict of opinion is to be settled by a vote, many uncalled-for speeches are apt to be made, not a few of the voters fail to get an adequate idea of the merits of the question, and emotion rather than calm judgment is prone to carry the day. All this hinders the real purposes of the meeting so far as legislative action is concerned, and it diverts men's minds from the scientific work in hand, to say nothing of the waste of time entailed. Quasi-legislative action on the part of the association—and by that term we mean the adoption of resolutions, memorials, and the like, calculated to influence State and national legislation—seems to have become less and less important of late years, for the defects which it was formerly needed to correct have been almost wholly remedied. A decided reduction of the number of delegates, the proportion for each constituent body remaining the same, would, it seems to us, enhance the scientific work done in the sections and give time for a greater number of formal addresses, papers of general interest, and demonstrations. There need be no limit to the number of non-voting members, so that the attendance at the meetings would go on increasing as it has done up to the present time. In short, we can see no objection to a decided curtailment of the representative element, and we believe that it would prove advantageous. Such a move, we are quite aware, would involve practically a reorganization of the association; if our ground is well taken, however, why should not a reorganization be effected?

THE PATHOLOGICAL EXHIBIT IN ST. PAUL.

LAST June we had the pleasure of commending the enterprise and good judgment of some of our Indiana brethren as shown in the exhibition of pathological specimens given in connection with the Atlantic City meeting of the American Medical Association. We were convinced that it could not have failed to make a most favor-

able impression, and we are glad to have our view confirmed by the announcement that a display of practically the same scope is to be made in St. Paul in June, this time under the association's official recognition and as an integral part of its work. The committee in charge of the St. Paul exhibition, consisting of Dr. Frank B. Wynn, of Indianapolis; Dr. A. P. Ohlmacher, of Gallipolis, Ohio, and Dr. Hugo Summa, of St. Louis, has recently issued a circular of information from which we infer that a similar exhibition is hereafter to be a feature of all the association's annual meetings.

Gross pathological specimens, it is stated in the circular, will naturally constitute the greater part of what is to be displayed, but the committee add that they "will seek to present a wide range of practical scientific demonstrations, imposing only the condition that they bear absolutely no commercial impress." The educational object is to be kept constantly in view, particularly that of demonstrating the fundamental relationship of pathology to diagnosis, therapeutics, and sanitary science. In addition, however, to the pathological specimens, the committee will make an effort to present demonstrations of research and experimental investigation, which, it is quite properly remarked, will tend to stimulate original inquiry among the members of the association, all of whom are appealed to to contribute specimens. It is suggested that in many instances such contributions may advantageously be made in connection with papers read before the sections. Besides their appeal to individual members of the association, the committee urges upon State and other medical societies that they should select representatives to collect and present material on their behalf. Substantial cooperation is expected on the part of medical colleges, hospitals, laboratories, and various scientific institutions, among them, we hope, the Army Medical Museum.

It is announced that an energetic local committee is charged with securing suitable quarters for the exhibition, separate and distinct from those of the commercial exhibits. Contributors are asked to have their material well in hand by the 1st of May, and to furnish the committee with complete lists of their specimens by the middle of that month. Institutions will be encouraged to present groups of specimens illustrative of some particular phase of pathology or bacteriology, and will be permitted to maintain them intact, but smaller collections and single specimens entrusted to the care of the committee will be disposed in the manner best suited to display their instructive features. It is asked that, so far as possible, all pathological specimens be accompanied by a history of the case and, unless the condition is so typical as not to call for it, a description of the specimen. Copies of the circular—which, by the way, is remarkably well written—together with further information, may be had by writing to Dr. Frank B. Wynn, No. 18 East Ohio Street, Indianapolis, to whom and to his fellow-members of the committee, we must add, the physicians of the whole country should feel indebted for their intelligent and zealous management of this most important undertaking.

THE ROCKY MOUNTAIN INDUSTRIAL SANATORIUM.

In our issue for April 6th we briefly announced the incorporation of this institution. We have known in a general way for the past two years of the effort to establish it, so that at least the plan is not one that has been hastily formed. Some such means of aiding in the fight against consumption has been needed in this country ever since the value of the climatic and pure-air treatment of incipient tuberculous disease came to be generally recognized. Similar institutions are in successful operation on the continent of Europe, if we are not mistaken, and it cannot be doubted that their establishment in all civilized countries is but a matter of a little time.

As we have often pointed out, and as has been insisted upon by many others, a person in the curable stage of pulmonary consumption cannot, as a rule, be safely allowed to return to his former place of abode and resume work under the old conditions as soon as his symptoms have yielded, no more bacilli are to be found in his sputum, and he feels restored to health and strength. Even in the most favorable cases a prolonged stay in the locality found to be suitable is a most necessary precaution, and in many instances the reclaimed consumptive can never go back to his former life with impunity. But health resorts do not abound in opportunities for remunerative work; how, then, shall a person whose disease has been checked be enabled to live, provided he is not a person of wealth? He cannot go home, for fear of sealing his doom, and he cannot remain with no means of support.

It is precisely to meet this dilemma that an industrial sanatorium is designed. The one under consideration is represented to us by a well-known Denver physician as having been most carefully organized with a view to a wide field of usefulness, and not for pecuniary profit to its promoters. Necessarily, a large sum of money will be required to establish and maintain the actual sana-

torium. At present it exists only on paper, but the proverbial energy of the people of the West may well be trusted to hasten its material existence. Not that Colorado alone is at work, for we are assured that prominent physicians and business men in all parts of the country are cooperating, but the task of organization and administration must almost of necessity fall upon the people of Colorado. They undoubtedly realize that it is far better for their interests to have their consumptive immigrants intelligently and systematically cared for in sanatoria than to have them scattered among the general population, and they can see, too, that the competition of even large industrial institutions, provided they are properly managed, is a matter which they can afford to ignore. Moreover, it has for some time been no easy task for tuberculous patients to secure suitable quarters with the householders. Consequently, not only from the economic point of view, but also from the sanitary, the establishment of large sanatoria of the sort in question is most desirable.

THE PHYSICIAN'S LIABILITY WITH RESPECT TO ANSWERING CALLS.

A SPECIAL communication to the *New York Times* for April 5th states that the Supreme Court of Indiana decided on April 4th, in the case of Hurley *v.* Weddingfield, that a practising physician was not legally bound to attend any patient for whom he was called, although he might have acted as family physician in the past, and that he was not liable for damages for refusing to answer calls. Dr. Weddingfield had been summoned three times to attend the wife of Mr. Hurley and had declined on each occasion, even though offered his fee in advance. It was alleged that in consequence of the lack of medical aid the woman's death had ensued, for which a claim was made of $10,000. The ethical aspect of the case we are not in a position to discuss, being ignorant of the facts on both sides. It is conceivable that many different conditions might exist which would exonerate a practitioner from any ethical obligation to answer a call —not only imperative conditions, such as ill health, his own urgent private affairs, etc., but even questions of mental attitude—all of which could only come under the overruling demand of "common humanity," obeyed of all good physicians when the case was one of instant life and death, or other aid was unobtainable. Such moral obligation is only a part of the general obligation of humanity to afford aid according to its means and capacity *in extremis*. But the idea that it should be legally compulsory upon every physician to attend any one who might summon him, and under all and every circumstance, would be to reduce the practitioners of medicine to servitude, and would be too intolerable a burden to be maintained. We do not see how the decision could well have been given otherwise.

THE MINNESOTA MARRIAGE BILL.

THE Chilton marriage bill for Minnesota, having passed both houses, is now dangerously near becoming, if it has not already become, law for that State. This bill provides that, henceforth, every candidate, male or female, for matrimony in Minnesota, must undergo a medical examination before a license to marry can be obtained. The object of such medical examination is, of course, by preventing "the marriage of the unfit," to exclude from the right of procreation all persons having a psychopathic, tuberculous, or venereal taint. To say nothing of the manifold methods by which such restriction can be evaded, it is clear that for it to be at all effective, every woman who henceforth desires to be married in the State of Minnesota must be subjected to a thorough physical exploration of her genital organs, both internal and external. If this examination is not exhaustively and impartially made, the whole affair becomes a perfunctory farce, and its very enactment, being thus rendered valueless and unnecessary, is humiliating and degrading; if it is enforced, how long are the women of Minnesota going to put up with it without rebellion? These are points which we shall watch with interested curiosity.

THE HEALTH OF HAVANA.

IN all our administration of Cuban affairs since we took possession of the island there has been nothing more creditable than what we have accomplished in sanitation under very discouraging circumstances. By the last report of the chief sanitary officer of Havana, Major Gorgas, we learn that the death rate for the month of March was only 26.28 in a thousand, and that from March 23d to the date of the report, April 6th, there was not a case of yellow fever. The subsidence of this disease is largely attributed to the systematic destruction of mosquitoes over a large area around each focus as it has been recognized.

GASTROPTOSIS AND THE CORSET.

WOMEN may perhaps escape at least one of the evil effects ascribed to the corset—that, namely, of falling of the stomach—if in their girlhood they do not don the stays at too early an age. At least, Rostoski (*Münchener medicinische Wochenschrift*, 1900, No. 40; *Wiener klinische Wochenschrift*, January 24th) has found gastroptosis quite exceptional in chlorotic girls who did not begin to wear the corset before attaining the age of fourteen years, but very common in those who began its use at an earlier age.

News Items.

Society Meetings for the Coming Week:

MONDAY, *April 22d:* Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, *April 23d:* New York Dermatological Society (private): Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynæcology); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, *April 24th:* New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society.

THURSDAY, *April 25th:* New York Academy of Medicine (Section in Obstetrics and Gynæcology); New York Orthopædic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private) (annual); Pathological Society of Philadelphia (conversational).

FRIDAY, *April 26th:* New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, *April 27th:* New York Medical and Surgical Society (private).

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending April 13, 1901:

DISEASES.	Week end'g Apr. 6		Week end'g Apr. 13	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	29	11	29	14
Scarlet Fever	725	44	619	50
Cerebro-spinal meningitis	0	3	0	7
Measles	289	6	348	10
Diphtheria and croup	266	48	285	47
Small-pox	42	8	44	11
Tuberculosis	269	148	253	173

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from April 6 to April 13, 1901:

BUFORD, O. H., Acting Assistant Surgeon, is granted leave of absence for seven days, with permission to apply for an extension of twelve days.

FARR, CHARLES W., First Lieutenant and Assistant Surgeon, will proceed to Fort Reno, Oklahoma Territory, for duty, to relieve FRANCIS MCCULLUM, Captain and Assistant Surgeon, who will proceed to San Francisco for transportation to Manila.

NEWGARDEN, GEORGE J., Captain and Assistant Surgeon, will proceed to Fort Mason, California, for duty..

RICHARDS, J. W., Acting Assistant Surgeon, is detailed as treasurer and exchange officer.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for Two Weeks ending April 13, 1901:

BIDDLE, C., Surgeon. Ordered to the Philadelphia Navy Yard, to relieve W. G. FARWELL, Medical Director.

FARWELL, W. G., Medical Director. Detached from the Philadelphia Navy Yard and ordered to special duty in Philadelphia.

GRIFFITH, S. H., Surgeon. Ordered to duty at the Pan-American Exposition, Buffalo, April 25th, in charge of the exhibit of the Bureau of Medicine and Surgery, Navy Department.

SCOFIELD, W. K., Medical Director. Detached from special duty in Philadelphia and ordered home to await orders.

WAGGENER, J. R., Medical Inspector. Detached from the Naval Hospital, Cavite, and ordered to Mare Island Hospital, California.

WILLIAMS, R. B., Assistant Surgeon. Detached from the Pensacola Navy Yard, Florida, and ordered to the Key West Naval Station, with temporary duty at Dry Tortugas.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera and plague were reported to the surgeon-general during the week ending April 13, 1901:

Smallpox—United States.

Los Angeles, California	Mar. 23-30	1 case.	
Oakland, California	Mar. 16-23	1 case.	
San Francisco, California	Mar. 23-30	7 cases.	
Washington, District of Columbia	Mar. 30-Apr. 6	2 cases.	
Jacksonville, Florida	Mar. 30-Apr. 6	19 cases.	
Chicago, Illinois	Mar. 30-Apr. 6	9 cases.	
Evansville, Indiana	Mar. 23-30	1 case.	
Terre Haute, Indiana	Mar. 18-25	1 case.	
Clinton, Iowa	Mar. 30-Apr. 6	1 case.	
Ottumwa, Iowa	Mar. 16-23	1 case.	
Wichita, Kansas	Mar. 30-Apr. 6	17 cases.	
Lexington, Kentucky	Mar. 30-Apr. 6	8 cases.	
New Orleans, Louisiana	Mar. 30-Apr. 6	8 cases.	2 deaths.
Shreveport, Louisiana	Mar. 23-Apr. 6	4 cases.	
Detroit, Michigan	Mar. 30-Apr. 6	3 cases.	
West Bay City, Michigan	Mar. 30-Apr. 6	2 cases.	
Minneapolis, Minnesota	Mar. 30-Apr. 6	20 cases.	
Nebraska City, Nebraska	Mar. 2-23	7 cases.	
South Omaha, Nebraska	Apr. 1-6	6 cases.	
Manchester, New Hampshire	Mar. 30-Apr. 6	6 cases.	
Newark, New Jersey	Mar. 30-Apr. 6	2 cases.	
New York, New York	Mar. 30-Apr. 6	42 cases.	8 deaths.
Cincinnati, Ohio	Mar. 29-Apr. 6	3 cases.	
Cleveland, Ohio	Mar. 30-Apr. 6	35 cases.	2 deaths.
McKeesport, Pennsylvania	Mar. 30-Apr. 6	1 case.	
Philadelphia, Pennsylvania	Mar. 30-Apr. 6		1 death.
Pittsburgh, Pennsylvania	Mar. 30-Apr. 6	3 cases.	
Steelton, Pennsylvania	Mar. 30-Apr. 6	1 case.	
Riverpoint, Rhode Island	Mar. 10-Apr. 8	5 cases.	
Charleston, South Carolina	Apr. 2	A few cases.	
Memphis, Tennessee	Mar. 30-Apr. 6	22 cases.	1 death.
Nashville, Tennessee	Mar. 30-Apr. 6	14 cases.	
Salt Lake City, Utah	Mar. 30-Apr. 6	28 cases.	
Roanoke, Virginia	Mar. 1-31	71 cases.	4 deaths.
Wheeling, West Virginia	Apr. 1-8	2 cases.	
Green Bay, Wisconsin	Mar. 31-Apr. 7	2 cases.	

Smallpox—Foreign and Insular.

Buenos Aires, Argentina	Feb. 1-28	37 cases.	21 deaths.
Prague, Austria	Mar. 8-23	7 cases.	
Antwerp, Belgium	Mar. 8-16	3 cases.	1 death.
Hong Kong, China	Feb. 23-Mar. 2	9 cases.	7 deaths.
Cairo, Egypt	Mar. 4-11		1 death.
Paris, France	Mar. 16-23		6 deaths.
St. Etienne, France	Mar. 1-15	1 case.	
Bradford, England	Mar. 8-23	3 cases.	
Liverpool, England	Mar. 16-23	2 cases.	
Southampton, England	Mar. 16-23	1 case.	
Glasgow, Scotland	Mar. 22-29		11 deaths.
Bombay, India	Mar. 5-12		10 deaths.
Calcutta, India	Mar. 2-9		85 deaths.
Karachi, India	Mar. 3-10	12 cases.	4 deaths.
Madras, India	Mar. 2-8		11 deaths.
Progresso, Mexico	Mar. 22-29	8 cases.	
Rotterdam, Netherlands	Mar. 23-30	2 cases.	
Moscow, Russia	Mar. 8-16	4 cases.	3 deaths.
Odessa, Russia	Mar. 8-23	13 cases.	3 deaths.
Warsaw, Russia	Mar. 8-16		9 deaths.
Malaga, Spain	Mar. 1-15		2 deaths.
Geneva, Switzerland	Mar. 2-9	1 case.	
Manila, Philippines	Feb. 16-23		1 death.

Ponce, Porto Rico, from beginning of epidemic to Mar. 15, 132 cases.

Yellow Fever.

Port Limon, Costa Rica	Apr. 6	1 case.

Cholera.

Hong Kong, China	Feb. 23-Mar. 2	6 deaths.
Bombay, India	Mar. 5-12	4 deaths.
Calcutta, India	Mar. 2-9	26 deaths.
Singapore, Straits Settlements	Feb. 2-23	1 death.

Plague—Foreign and Insular.

Hong Kong, China	Feb. 23-Mar. 2	7 cases.	6 deaths.
Bombay, India	Mar. 5-12		1,196 deaths.
Calcutta, India	Mar. 2-9		557 deaths.
Manila, Philippine Islands	Feb. 16-23	7 cases.	6 deaths.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending April 11, 1901:

ALTREE, G. H., Acting Assistant Surgeon. Granted leave of absence of four days from April 15th.

BANKS, C. E., Surgeon. Granted leave of absence for six days from April 15th.

BROWN, F. L., Hospital Steward. Relieved from duty at Boston and directed to proceed to Cape Charles Quarantine Station and report to the medical officer in command for duty and assignment to quarters.

COFER, L. E., Passed Assistant Surgeon. Designated as chief quarantine officer of the Territory of Hawaii, relieving Surgeon D. A. CARMICHAEL.

FRANCIS, EDWARD, Assistant Surgeon. To proceed to New York and report to the medical officer in command, Immigration Depot, for duty.

GAHN, HENRY, Hospital Steward and Chemist. To assume temporary charge of the Purveying Depot during the absence of the medical purveyor.

GREENE, J. B., Passed Assistant Surgeon. Relieved from duty at Berlin, Germany, and directed to proceed to Washington.

GRUBB, S. B., Assistant Surgeon. Granted leave of absence for seven days. Upon expiration of leave, to proceed to Washington and report at the Bureau for duty.

HASTINGS, HILL, Assistant Surgeon. To proceed to Santa Barbara, California, for special temporary duty.

KINYOUN, J. J., Surgeon. Relieved from duty at San Francisco Quarantine Station and directed to proceed to Detroit and assume command of the service. Granted leave of absence for fifteen days.

LAVINDER, C. H., Assistant Surgeon. Bureau telegram granting Assistant Surgeon Lavinder leave of absence for ten days amended so that said leave shall begin April 1st instead of March 27th.

LUMSDEN, L. L., Assistant Surgeon. Upon the departure of Surgeon J. J. KINYOUN, to assume temporary command of San Francisco Quarantine Station.

PECK, F. H., Hospital Steward. To proceed to San Francisco for special temporary duty.

PERRY, T. B., Surgeon. Department letter of March 2, 1901, granting Surgeon Perry leave of absence for thirty days amended so that said leave shall be for twenty days.

Promotion.

Assistant Surgeon H. S. MATHEWSON promoted and appointed passed assistant surgeon, to rank as such from April 7th.

Appointment.

J. A. MONCURE reinstated and appointed acting assistant surgeon, United States Marine-Hospital Service, for duty at the Gulf Quarantine Station.

The Tenement House Bill Signed.—Governor Odell has signed the four tenement house bills which the New York legislature passed on the recommendation of the Roosevelt Tenement House Commission.

The Latin-American Scientific Congress, which was held recently at Monte Video, discussed at great length the subject of yellow fever and its prophylaxis, and also discussed leprosy.

A Proposed State Colony for Epileptics. –The Illinois legislature is reported to be considering the establishment of a State colony for epileptics to involve an initial expenditure of about $250,000.

A Woman Coroner Appointed in Nebraska.—Dr. Ella E. Summers, a young woman of twenty-six, and a graduate of an Omaha medical college, was recently appointed coroner of Franklin County, Neb. Her uncle was the former incumbent.

The Crusade against the Spitters.—Arrests of men charged with expectorating in public conveyances have been frequent in New York city during the past week, and President Sexton, of the Board of Health, reports that there will be no let-up in the crusade. Most of the magistrates before whom the offenders have thus far been arraigned have been lenient, allowing the men to go with a warning if it was their first offense.

The Attachés of a San Francisco Hospital Honor Retiring Resident Physician.—The attachés of the French Hospital at San Francisco, Cal., recently presented to Dr. J. D. de Chantreau, the retiring resident physician, who has been connected with the hospital for nine years, a bust of Pasteur, costing $200.

The Municipal Physicians at Munich Strike.—Following the example of the municipal physicians at Leipsic, those at Munich have gone on strike for higher pay and better treatment. All the Munich physicians have declared themselves in sympathy with the strikers and in favor of solidarity in the movement.

A Banquet Tendered to a Naval Surgeon Wounded at Peking.—Surgeon Thomas M. Lippitt, U. S. N., who was one of the marines cooped up in Pekin by the Boxers and who was wounded in the siege while helping to train the guns against the Chinese, was tendered a banquet on April 8th at Berryville, Va., by his boyhood friends.

Washington Physicians to Study in European Hospitals.—Dr. Samuel H. Greene, Jr., of the University Hospital (Columbian), and Dr. Edgar P. Copeland, of the Children's Hospital, Washington, D. C., sailed recently on the Cunard steamship *Lucania* for Liverpool for extended study and observation in European hospitals.

Judge Decides in Favor of Christian Scientists in Wisconsin.—Judge Elliott, in the Circuit Court, Milwaukee, recently decided that Christian Scientists were not liable to prosecution under the State Medical law. The Court ruled that the Scientists could no more be held for practising medicine when their means for healing was by prayer than could a minister who prayed at the bedside of the sick and received therefor a fee, either directly or indirectly.

Graduating Exercises.—The graduating exercises of the St. Louis College of Physicians and Surgeons was held on April 9th at St. Louis. There were fifty-two graduates.——The annual commencement of the Baltimore University School of Medicine was held on April 11th. The graduating class comprised twenty-nine men and two women.——The ninth annual commencement exercises of the Barnes Medical College were held at St. Louis on April 12th. There were 110 graduates.

A Marble Bust of Chicago's First Woman Physician.—Friends of the late Dr. Mary Harris Thompson, founder of the Chicago Hospital for Women and Children, which now bears her name, are preparing to further perpetuate her memory by having a marble bust of her made by Daniel Chester French, the Boston sculptor. The bust will find a permanent home in the Art Institute of Chicago. Dr. Thompson was the pioneer woman physician of Chicago.

A Physician is Elected Mayor of Galesburg, Ill.—Dr. William O'Reilly Bradley, a former resident of Rochester, N. Y., was elected mayor of Galesburg, Ill., at the recent municipal election. Dr. Bradley was born in Rochester thirty years ago, and received his medical education at the University of Buffalo. He was elected coroner's physician in Rochester in 1883. His father, Dr. Thomas Bradley, was prominent in Democratic State politics, being at one time chairman of the Democratic central committee of New York State.

A New York State Nurses' Association.—A movement is on foot to form a New York State Nurses' Association, and to that end a meeting has been called for April 16th and 17th at Albany. The meeting will be in the nature of a conference, as a State society cannot be formed with individual membership, but must have the nurses organized in local clubs before the State association is possible.

The Paris Academy of Medicine Discusses the Mosquito.—The mosquitoes of Paris have earned the distinction of attracting the notice of the Academy of Medicine of that city. At its last meeting Dr. de Hove suggested that they might be the means of propagating disease, and proposed that all stagnant sheets of water in the city should be either converted into running water or covered over with a slight layer of petroleum to prevent their breeding. Dr. Laveran, Dr. Chatus and Dr. Proust backed up Dr. de Hove's proposal, but expressed the opinion that Parisian mosquitoes were harmless from the point of view of disease, though undoubtedly a great nuisance.

The Wisconsin Courts Define the Rights of Medical Examiners.—The Wisconsin State board of medical examiners has the right to determine whether an applicant for registration is a reputable resident physician, and its decisions on this question cannot be reviewed by mandamus. Such is the rule recently laid down by Judge Siebecker in the Circuit Court at Madison, Wis. The decision was rendered in the case of Dr. W. M. Caswell, of Hillsboro, against the State board, Dr. Caswell seeking to compel the board to grant him a certificate of registration. The board has been waiting for the disposition of the case before beginning prosecutions against a number of unregistered physicians in different parts of the State.

A Student of Ann Arbor has Bubonic Plague, but Will Recover.—Dr. Victor C. Vaughan, dean of the medical department and one of the most noted bacteriologists in the country, appeared before the State board of health, at Ann Arbor, Mich., on April 15th, and practically acknowledged that the case of the student, C. B. Hare, was one of bubonic plague. He assured the board that there would be no spread of the disease and the student would recover. Dr. Novy, who attends Hare, wears a germ-proof rubber garment that covers him from head to foot, and he also injects preventive doses of serum into himself. Dr. Vaughan told the board that Hare contracted the disease by an accident almost identical with that which occurred in Vienna in 1898. Professor Nothnajle and his assistant, Barisch, were conducting bacteriological experiments on bubonic plague bacilli. Barisch caught the disease and died, as did also Dr. Muller, who attended him.

The Dinner of the Faculty of the Post-Graduate Medical School and Hospital took place on the 15th inst. The president, Dr. St. John Roosa, was toastmaster, and the attendance numbered about one hundred. After dinner, Dr. Roosa paid a tribute to the memory of the late Dr. Hanks. He spoke of the prosperous condition of the institution which, he said, now numbered more students than any similar institution in the world, and referred to the presence of a member of the Fahnestock family, which recently founded a nurses' school in connection with this institution. Mr. Fahnestock replied, and then the secretary stated that in addition to wiping out the debt of $8,000, the sum of $15,000 had been invested. Speeches were made also by Professor Allen, Dr. Beaman Douglas, Professor McKiernan, Dr. Powell, Professor Boldt, Professor Gant, Dr. Weber, Dr. Van Fleet, and Dr. Dana, of Cornell.

The New York County Medical Association.—The annual election of officers of the New York County Medical Association, held on April 15th at 17 West Forty-third Street, resulted as follows: President, Dr. Parker Syms; first vice-president, Dr. Alexander Lamert; second vice-president, Dr. Francis W. Murray; secretary, Dr. Ogden C. Ludlow; corresponding secretary, Dr. M. L. Madura; treasurer, Dr. Charles E. Denison; member of the executive committee (for three years), Dr. C. S. Benedict; member of the nominating committee, Fifth District Branch, Dr. John W. S. Gouley. The membership of this organization has in the last year increased to over nine hundred. The bronze statuette, "Devoir," by Gaudez, was presented to James Taylor Lewis, of this city, counsel to the county and State associations. Dr. E. Eliot Harris, chairman of the committee on legislation and of the special committee, made the presentation speech. He called attention to the importance of the legal status of the association as fixed by the courts and of the work done in securing a special charter, and expressed the gratitude of the association.

The Society of Medical Jurisprudence of New York City met on April 8th at the Academy of Medicine. A paper by Dr. John B. Huber on Faith Cures and the Law was read by Dr. A. W. Warden, the author being absent. The author said: "If the Christian Scientists' position be admitted, a thug might, I submit, upon the same principle be justified in committing murder on the ground that murder is a practice required by his religion. And when a person ignorant of the most rudimentary principles of sanitary science treats those who are sick of contagious disease in wilful disregard of laws enacted to conserve the general health of the community, may he claim respect for his personal liberty to the jeopardy of the lives of his reasonable and sane neighbors?" E. H. Benn, Alfred E. Ommen, and others participated in the debate which followed. The society will hold its eighteenth annual dinner at the Waldorf-Astoria on Saturday evening, April 20th. Eminent speakers, representing all the various professions, will be heard. The following committee is arranging the details of the occasion: Theodore Sutro, chairman; Stephen C. Baldwin, Dr. Carl Beck, Dr. Edward F. Brush, Charles Bulkley Hubbell, Dr. C. A. Von Ramdohr, George W. Cotterill, John C. West, Alfred E. Ommen, James P. Foster.

The New York Academy of Medicine.—At the last stated meeting, on Thursday evening, the 18th inst., the following papers were read: Introduction to the Psychological Study of Backward Children, by Dr. William B. Noyes; The Ætiology of Mental Deficiency, by Dr. Pearce Bailey; Heredity as a Factor in Dull-minded Children, by Dr. T. Alexander MacNicholl; Dullness Due to Eye Defects, by Dr. Charles Stedman Bull; The Function of the Teacher in Ascertaining and Treating Mental Deficiency, by Professor Lightner Witmer, of the University of Pennsylvania; and The City's Obligation to Provide Special Education for Defective Children, by C. E. Melency, Superintendent of the New York Board of Education.

At the next meeting of the Section in Laryngology and Rhinology, on Wednesday evening, the 24th inst., the order will be as follows: The Importance of Preventing Chronic Suppurating Ethmoid Disease by Prompt Local Treatment, by Dr. Clarence Rice; and Nasal Conditions Observed in the Aged, by Dr. Beaman

Douglass. Cases will be presented and new instruments and specimens will be exhibited.

At the next meeting of the Section in Obstetrics and Gynæcology, on Thursday evening, the 25th inst., the following papers will be read: Symphysiotomy, by Dr. Edward A. Ayers; Cæsarean Section, by Dr. E. B. Cragin; Dilatation of the Cervix, by Dr. Henry J. Garrigues; Axis-traction Forceps, by Dr. Egbert H. Grandin; and Version: Indication, Limitation, and Technics, by Dr. S. Marx.

State Medical Society Meetings. — The twenty-eighth annual meeting of the Florida Medical Association was held at Jacksonville on April 10th.——The Medical Association of the State of Alabama met in Selma on April 16th to 19th. A large number of papers were promised for the meeting. A special feature of the meeting was the Jerome Cochran lecture, by Dr. William Osler, of Baltimore.——The fifty-first annual meeting of the South Carolina Medical Association was held at Florence on April 17th and 18th, the annual address being delivered by Dr. Wharton Sinkler, of Philadelphia, his subject being The Importance of a More General Knowledge of the Diseases of the Nervous System.——The Louisiana State Medical Society held its twenty-second annual meeting at the medical department of Tulane University on April 18th, 19th and 20th. A large number of papers were promised in the preliminary programme.——The Medical Society of the State of Tennessee met at Nashville on April 11th. Officers were elected as follows: President, Dr. D. J. Roberts, of Nashville; first vice-president, Dr. J. B. Murfree, Jr., of Murfreesboro; second vice-president, Dr. L. A. Yarbrough, of Covington; third vice-president, Dr. W. B. St. John, of Bristol; secretary, Dr. A. B. Cooke, of Nashville; treasurer, Dr. W. C. Bilbro, of Murfreesboro. The address of the president, Dr. J. A. Cook, of Jackson, had for its subject The Medical Society, its Advantages to the Profession and Value to the Public. A special address was delivered by invitation by Dr. Wm. R. Pryor, of New York, giving An Analysis of My Ablations for Pelvic Inflammation. The programme was an excellent one, including some fifty papers.

Medical and Chirurgical Faculty of Maryland.—The following is the programme of papers for the annual meeting of this association, which will take place on April 23d at Baltimore: Splenectomy for Wandering Spleen, by Dr. T. A. Ashby; Uterine Myomata and their Treatment, by Dr. T. S. Cullen; A Case of Schönlein's Disease, Death from Acute Glomerulo Nephritis, by Dr. W. T. Watson; The Story of the Ophthalmoscope, Illustrated by Early Publications and Historical Models, by Dr. H. Friedenwald; Intestinal Dystrypsia, by Dr. J. C. Hemmeter; Herpes Zoster Ophthalmicus in Loss of the Eye, by Dr. R. L. Randolph; Double Suppurative Chorioiditis in Association with Purpura Hæmorrhagica, by Dr. R. L. Randolph; Remarks on Twenty-five Fractures Treated in March, 1901, by Dr. R. W. Johnson; Tendon Transplantation, by Dr. S. M. Cone; Valvotomy, with Report of Two Cases, by Dr. S. T. Earle, Jr.; Wireless Telegraphy, by Dr. W. Simon; Some of the Causes of the Acute Insanities, by Dr. S. Paton; Experience with Chloretone, by Dr. W. R. Dunton; Should Cold Baths be Used for High Temperatures in Children? by Dr. C. O'Donovan; Cases of Diarrhœa Due to a Parasite hitherto Unobserved in Maryland, by Dr. W. S. Thayer; A Consideration of the Treatment of Hæmorrhoids, by Dr. J. Turner; A Case of Anthrax of the Face, Operation, Recovery, Exhibition of Patient, by Dr. W. B. Platt; Tumors of the Neck Due to Congenital Conditions, by Dr. R. Winslow; A Case of Typhoid Fever Complicating the Puerperal State, by Dr. A. G. Barrett; Report on Renal Surgery, with Special Reference to Nephrectomy in Renal Tuberculosis, by Dr. F. Martin; The Ætiology of Typhoid Fever and Treatment in Private Practice, by Dr. G. E. Dickinson; Acute Dilatation of the Stomach, by Dr. J. Friedenwald; Rabies, Tabulation of 200 Cases Successfully Treated Prophylactically (Pasteur method), by Dr. N. G. Keirle; Blood Changes in Puerperal Eclampsia, by Dr. E. L. Whitney; The Practical Value of Blood Examinations in Medicine and Surgery, by Dr. T. R. Brown; A Case of Squamous-celled Epithelioma Probably Primary in the Thyreoid Gland, by Dr. W. M. Lewis; The Relation of Appendicitis to Rheumatism, Report of Cases, by Dr. J. M. T. Finney and Dr. L. P. Hamburger.

Hospital Staff Changes.—Dr. L. Webster Fox, of Philadelphia, has been appointed a manager of the Orthopædic Hospital and Infirmary for Nervous Diseases at Philadelphia by Governor Stone, to fill the vacancy caused by the death of James B. Nicholson.——Governor Odell has appointed the following managers of the Middletown State Homœopathic Hospital: James B. Carson, Frederick W. Devor, Edward Tompkins, John W. Slauson and William K. Stansbury, reappointments; Edward F. Pierson, who failed to qualify, was reappointed.

The Chicago Baptist Hospital Loses the Estate of Mrs. Anna B. Duval by the verdict of a jury in a Chicago court on March 28th. Mrs. Duval had bequeathed all her estate to the hospital, where she was a patient at the time of her death. Her only child, Ernest Augusta Duval, of Brooklyn, N. Y., was cut off without any legacy. The three witnesses to the instrument were Isaac E. Roll, Mabel Clark, and Bridget Kelly. As they expressed their opinion that Mrs. Duval was not in her right mind at the time the will was drawn, the Probate Court refused to admit it to probate.

The Opening of the Charitable Annex of the Loomis Sanitarium.—The charitable annex in connection with the Loomis Sanitarium, at Liberty Heights, Sullivan county, New York, was opened on March 22d with twelve patients. The present capacity of this annex is twenty-four patients. The patients are charged five dollars a week, for which they receive their board, lodging, medical attendance, medicines, and laundry; they also derive all the benefits of the main sanitarium in the way of scientific care and oversight. The deficit between the five dollars a week charged to patients and the actual cost of maintenance is made up by a maintenance fund raised annually by subscription. While the financial affairs are administered from the main sanitarium, there is a superintendent in charge at the annex. Dr. J. Edward Stubbert, physician in charge at the main sanitarium, visits the annex once a week as consulting physician, while Dr. Stephen W. Wells, resident house physician, and Dr. Thomas I. Shannon, resident assistant house physician at the main sanitarium, constitute the regular visiting staff, making daily visits and keeping daily office hours at the annex. The nurses are furnished from the training school at the main sanitarium. This annex has a thoroughly equipped treatment room, and patients receive practically the same treatment that is given at the main sanitarium.

Births, Marriages, and Deaths.

Married.

CLAIBORNE—CLAIBORNE.—In New Orleans, on Tuesday, April 16th, Dr. John Herbert Claiborne, Jr., of New York, and Miss Marie Louise Claiborne.

COOK—BARLOW.—In Wilmington, Delaware, on Tuesday, April 9th, Mr. Edward Glenn Cook and Dr. Drusilla G. Barlow.

CUTCALT—NEW.—In Baltimore, on Wednesday, April 10th, Dr. C. E. Cutcalt, of Fredericksburg, Maryland, and Miss Lydia New.

DAWSON—LEARNED.—In St. Louis, on Monday, April 8th, Dr. Percy M. Dawson, of Baltimore, and Miss Agnes W. Learned.

DAY—HARRIS.—In Rochester, on Tuesday, April 9th, Dr. Harry W. Day, of Cohocton, N. Y., and Miss Nellie L. Harris.

DODDS—LITTLE.—In Rochester, on Tuesday, April 9th, Dr. Seelye W. Little and Miss Mary Bellows Dodds.

HARDIN—SCOTT.—In Warrenton, Virginia, on Wednesday, April 10th, Dr. B. Lauriston Hardin, of Washington, and Miss Rosalie T. Scott.

HOPKINS—WOOD.—In New Market, Maryland, on Wednesday, April 10th, Dr. Howard H. Hopkins, Jr., and Miss Alice Eleanor Griffith Wood.

HOWARD—MCCLELLAN.—In Lakewood, N. J., on Tuesday, April 9th, Dr. Frederick Hollis Howard, of Philadelphia, and Miss Mary Malleville McClellan.

LORD—STURGIS.—In Boston, on Monday, April 8th, Dr. Sidney Archer Lord and Miss Anne Outram Sturgis.

LOUDEN—MANSFIELD.—In Seaford, L. I., on Tuesday, April 9th, Dr. John T. Louden, of Amityville, L. I., and Miss Gertrude Florence Mansfield.

LOVE—SMITH.—In New York, on Wednesday, April 10th, Dr. Cornelius Ruxton Love and Miss Grace Anderson Smith.

MURPHY—STOREY.—In Onawa, Iowa, on Monday, April 8th, Dr. Francis J. Murphy, of Sioux City, Iowa, and Miss Mabel Storey.

NASON—MOSELY.—In Newburyport, Massachusetts, on Thursday, April 11th, Dr. Arthur Clark Nason and Miss Charlotte Augusta Mosely.

PELTON—SMITH.—In Newburgh, New York, on Wednesday, April 10th, Dr. Henry Hubbard Pelton, of New York, and Miss Nathalie Smith.

RAYMOND—CRAVEN.—In Philadelphia, on Tuesday, April 9th, Dr. Joseph Howard Raymond, of Brooklyn, and Miss Rachel Biddle Craven.

REESE—BENT.—In Baltimore, on Wednesday, April 10th, Dr. Charles Lee Reese, of New York, and Miss Harriet Stedman Bent.

SCOTT—MURRAY.—In New York, on Monday, April 15th, Dr. William Walter Scott and Miss Grace Edna Welch Murray.

SEXTON—HYDE.—In New York, on Wednesday, April 10th, Mr. William Lord Sexton and Miss Ida Josephine Hyde, daughter of Dr. Frederick E. Hyde.

SKILLIN—TUCK.—In New York, on Wednesday, April 10th, Mr. James Harper Skillin and Miss Rosamond Tuck, daughter of Dr. Henry Tuck.

TOMES—PURDY.—In New York, on Tuesday, April 9th, Mr. George H. Tomes and Miss Italia Inez Purdy, daughter of Dr. Charles G. Purdy.

WHARTON—SHIMER.—In Jamaica, L. I., on Tuesday, April 9th, Dr. J. Cambridge Wharton, of New York, and Miss Maud Cary Shimer.

WILSON—LOVELY.—In St. Paul, on Monday, April 15th, Dr. F. Leslie Wilson, of Walker, Minnesota, and Miss Ruth Lovely.

Died.

ABBOTT.—In Buffalo, on Tuesday, April 9th, Dr. Frank Wayland Abbott, in the fifty-ninth year of his age.

CHARLES.—In Kansas City, Missouri, on Tuesday, April 9th, Dr. J. W. Charles, in the sixty-eighth year of his age.

GURNEY.—In St. Paul, on Friday, April 5th, Dr. G. L. Gurney in the forty-seventh year of his age.

SUMMERALL.—In Kissimmee, Florida, Nellie Davis Summerall, wife of Dr. William B. Summerall, United States Army.

TUCKER.—In St. Paul, on Tuesday, April 9th, Dr. James M. Tucker, formerly of the United States Army, in the fifty-seventh year of his age.

Pith of Current Literature.

Medical News, April 13, 1901.

The Immediate and Remote Results in One Hundred Conservative Operations on the Ovaries and Tubes, with Brief Reports of Four Cases. By Dr. W. L. Burrage.—The length of time consumed in the performance of conservative operations should be considered when operating on enfeebled patients, and the author's rule is to do nothing more than can be well done in two hours. Out of one hundred and fifty-six patients operated upon, three died as a result of operation. Symptomatic cure was recorded in seventy-three out of a hundred cases, and twenty-seven were not relieved after a year's observation. In regard to the probability of pregnancy occurring after conservative operation upon the ovaries and tubes, the author has found that nearly one-third become pregnant. In his opinion, the most unfavorable cases for conservative operations are the pronounced neurasthenics who are approaching the menopause; also patients with long-standing gonorrhœal infection, and those having both ovaries thoroughly riddled with cysts.

Tropacocaine Hydrochlorate—A Substitute for Cocaine Hydrochlorate in Spinal Anæsthesia. By Dr. Willy Meyer.—The main points in favor of tropacocaine hydrochloride as compared with cocaine hydrochloride are, that the former is less than half as toxic, while its depressing action upon the cardiac motor ganglia and on the cardiac muscle is much less, and recovery from its effects is much more rapid than is the case with cocaine hydrochloride. The author asserts, furthermore, that its solution is far more stable.

A Study of Cases Presenting Symptoms of Asthenopia and Anomalies of the Ocular Muscles in which Ablation of the Middle Turbinal was Effective Treatment. By Dr. Heber Nelson Hoople.

Acute Traumatic Malignancy. By Dr. William B. Coley.—The author reports seven interesting cases which lead to the conclusion that trauma is a very important factor in the causation of malignant tumors. He points out that this relationship between injury and malignant tumors furnishes additional, and by no means unimportant, evidence in support of the infectious origin of such tumors.

The Akouphone and its Limitations. By Dr. J. A. Kenefick.

Perforating Gunshot Wound of the Chest, with Fracture of both Bones of the Left Leg and Lacerated Wound of the Right Thigh. Recovery. By Dr. Victor Cox Pedersen.—This case is adduced as illustrating the value of the free use of sedatives in such conditions.

Medical Record, April 13, 1901.

Remarks on Enteroptosis. By Dr. Max Einhorn.—The author asserts that the corset is an important factor in the causation of enteroptosis, and he quotes from several authors to that effect. However, he also states that, in enteroptosis, some congenital anomalies are very frequently encountered. As to the frequency of enteroptosis, he quotes Glénard, who asserts that in female patients suffering from digestive disorders, about one in four is affected. It is much more frequent in women than in men. Though this condition may exist without any symptoms whatever, the patient often complains of a faint feeling or a certain weakness after rising. Frequently there is considerable fatigue after slight exer-

tion, such as walking, and in women this is often combined with pronounced backache. A feeling of weight in the lower half of the abdominal cavity is sometimes felt, while a dragging sensation is encountered in the epigastric region. Flatulence, constipation, and frequent micturition, are also met with. If this condition is kept in mind, it is not likely to escape detection. The prognosis is good. The treatment consists in the application of a well-fitting abdominal supporter, though ample nutrition is perhaps more important than the bandage. *More* than is absolutely necessary for the maintenance of the balance of the body should be eaten. Milk and bread and butter should be taken between meals. Outdoor sports are indicated. The value of massage is doubtful. All the digestive disturbances should be managed according to the general rules.

Small Hospitals and their Administration. By Dr. Louis N. Lanehart.—The author makes a strong plea for the rural hospital, and asserts that it is difficult to conceive of any community of moderate population where modern medical methods are dominant, in which a hospital is not needed. Little by little, such hospitals should come to be the educational centres from which emanate modern ideas of hygiene. That such rural hospitals should practically co-operate with their city neighbors is feasible and desirable, though the greatest good the rural hospital can accomplish is among its own community.

X-ray Photography. By Dr. Eugene R. Corson.—The author points out that the main thing in x-ray photography is an apparatus which generates powerful x-rays, and he asserts that mere spark length is no index of x-ray efficiency. In coil manufacture, after a certain length of spark has been obtained, every effort should be toward increasing the ampèrage, and a ten-or twelve-inch spark is quite enough, if the spark is a fat or a multiplied one, *i. e.,* has a relatively high ampèrage. Proximity of the bone to the photographic plate is very important, and care should be taken to prevent any movement even from the arterial pulsation.

Some Facts of Responsibility in Spirit and Drug Takers. By Dr. T. D. Crothers.—A large percentage of all medico-legal cases is associated with inebriety, and the legal responsibility of inebriates is decided from theories formulated centuries ago. The author points out that the question of responsibility is a question of facts —not theories. The influence of heredity, injuries, strains, and all the vast range of influences and forces which enter into the acts and character of every person, must be considered in the solution of the problem of responsibility. A new jurisprudence is demanded, and a new scientific study of, and recognition of the facts in, the cases of these inebriates and their disabilities are called for.

An Unusual Case of Partial Recovery from Embolism of the Arteria Centralis Retinæ. By Dr. Edgar S. Thomson.

Boston Medical and Surgical Journal, April 11, 1901.

A Review of the Literature of the Therapeutic Use of the X-rays. By Dr. Harvey P. Towle.—The author concludes: (1) That the real nature of the x-rays is not yet determined definitely, nor is it known whether the therapeutic action following their use is due to the action of the rays themselves or of something of electrical origin accompanying them; (2) that the treatment is not without danger unless the greatest care is used; (3) that the effects of the x-rays remain for a long time, and recovery is very slow; (4) that whatever may be the exact origin of the effects produced, a definite reaction is caused in the skin by the use of the x-rays; (5) that the changes induced in the skin are similar, histologically, to those seen in ordinary inflammation; (6) that the x-rays are not proved to have any bactericidal power; (7) that their therapeutic effect is probably due to the inflammation excited; (8) that hair can be removed by their use, and that lupus and several other diseases can be healed over; (9) that in a few reported cases we may fairly assume that a permanent cure has been effected, but that, in a majority of the reported cases, too little time has elapsed to rule out the possibility of a return of the disease; (10) that the effect of exposure to the x-rays is so extraordinarily slow in disappearing that months should elapse before an absolute cure is assumed; (11) that while the permanency of the cure effected may perhaps be doubtful as yet, it is certainly desirable to experiment further.

Pathology of the New-born as Illustrated in the Practice of the Writer. By Dr. Frederic W. Taylor. —The author, in a statistical article, gives his observations in six hundred and fifty-four obstetric cases. Ten per cent. were abnormal, either at birth, or during the first few days of life. All had been carried at least seven months. Twenty-three were still-born, twenty-two died within a few days, and in ten, respiration was delayed. There were three cases of mild ophthalmia, and two cases of melæna.

Oblique Subtrochanteric Osteotomy, for the Lengthening of the Femur, and Correction of the Deformity of Flexion Resulting from Hip-joint Disease. By Dr. E. G. Abbott.

A Case of Chin Left Posterior. By Dr. N. T. Swain. —This case is interesting as showing how easily a head well down in the pelvis, in a position rendering delivery impossible without violence, can be replaced above the brim; and, also, as showing the impossibility of the commonly accepted mechanism in this case, for while the head was so far down that it could advance no further without violence, the chin was not infringing upon anything.

Journal of the American Medical Association, April 13, 1901.

Reflections upon the Recent Status of Clinical Medicine. By Dr. Aloysius O. J. Kelly.—Inaugural address delivered at the opening of the session of the Medical Department of the University of Vermont.

The Present Status of Spinal Surgery. By Dr. Samuel Lloyd.—The author believes that it is unnecessary to say that no surgeon would undertake an operation of this magnitude where there was any chance of recovery by other means, but there still remains a considerable number of cases that occupy debatable ground, where the chances of recovery without operation are very slight, where continued mechanical treatment yields little or no result, and where an extension of the disease may render the patient hopeless if it does not destroy life. Such patients had better be operated on. Tables of seventy-nine cases of Pott's paraplegia accompany the article. (*To be continued.*)

Joint Tuberculosis. By Dr. De Forest Willard.—The author's injunctions are briefly summarized: 1. Diagnosticate early; treat early. 2. Do not look for positive inflammatory signs as indications of tuberculous invasion: the symptoms are entirely different, but are

equally positive, if a careful examination is made, muscular rigidity being one of the earliest and most reliable. 3. Discard entirely the existence of rheumatism of a single joint in children.

Permanent Catheterization. By Dr. J. Rilus Eastman.—The author believes that the danger of mechanical urethritis and cystitis as the result of the presence of a retention catheter, has been somewhat overestimated, and that after such a catheter has been in contact with the urethral mucosa for several days, there develops a distinct tolerance on the part of the urethra for the instrument, and that large catheters are rather to be chosen for permanent retention than smaller ones. A large catheter is much more easily retained than a small one.

Suggestions for the Reconstruction of Syphilitic Noses. By Dr. John B. Roberts.—The author gives a number of cases to demonstrate that the belief that syphilitic nasal deformity is incurable is an error. Aseptic methods, carefully planned and well-executed operations, and judicious after-treatment hold out the same hope of benefit as in other departments of surgery.

The Medical Treatment of Peptic Ulcer. By Dr. Frederick C. Shattuck.

Lavage of the Stomach as a Therapeutic Agent in the Treatment of Habitual Constipation. By Dr. C. D. Spivak.—The author states that a certain percentage of individuals suffering from habitual constipation are apt to have a spontaneous movement of the bowels the following day after the stomach has been washed for the first time, and the majority of such patients will eventually recover the normal functions of their bowels, if lavage is continued daily for two or three weeks, and later at greater intervals. The best results are obtained from the use of cold water or hot and cold water alternately, and the best time for such lavage is one hour before breakfast.

What Drug Standardization Means for the Physician. By A. R. L. Dohme, Ph. D.

A Visit to "Jesus Hilfe," or the Leprous Hospital at Jerusalem. By Dr. Jacob E. Schadle.

Conjugal Tuberculosis. A Study of Case-to-Case Infection. By Dr. H. M. Bannister.—The facts, as presented by the author, would seem to indicate a much greater risk, so far as personal danger of acquiring tuberculosis is concerned, from having a phthisical parent than from having a tuberculous husband or wife.

Keloid Following Traumatism. By Dr. W. M. Cole.—The constant application of flexible collodion is said to be of benefit in reducing the growth. The author advises complete excision, however, as the most rational treatment, provided that the flaps are properly coaptated, or, that the denuded surface is thoroughly covered with skin grafts.

Immunity against Zymotic Diseases. By Dr. William J. Class.—In districts where a certain zymotic disease is endemic the germs of this disease are comparatively widely distributed, though in a very much attenuated form. Epidemics are due to these germs becoming virulent, either by repeated passages through the animal body, or in some unknown manner. Immunity or insusceptibility to a given zymotic disease is usually acquired through the activity of the attenuated germ, which, although not capable of producing a typical attack, is still capable of producing an antitoxic body.

Yellow Fever and its Transmission. By Dr. Charles Finlay.

Some Technical Supplements in Complicated Enucleations. By Dr. W. F. Weymann.

Special Article—On the Plague in San Francisco.

Philadelphia Medical Journal, April 13, 1901.

Ligation of the Carotid Artery as an Operation Preliminary to Resection of the Superior Maxilla. By Dr. Carl Schlatter.—The author asserts that, by the application of a preliminary ligature, the hæmorrhage, as well as the danger from blood aspiration, is markedly diminished. This ligation is indicated in all anæmic individuals, and in those whose vitality has been lowered from cachexia and hæmorrhages, provided they do not suffer from diseases of the blood vessels, particularly arteriosclerosis. Exposing the bifurcation of the carotid in advanced cases is in itself indicated for the purpose of extirpating the lymphatic glands, which, in this region, are generally the first attacked by metastasis. In by far the majority of cases, ligation of the external carotid alone will suffice; the latter should be a permanent ligation. Conducted antiseptically, the procedure is without danger. The ligature can be applied by enlarging upward the incision which has been made for exposing the bifurcation. In exceptional cases it becomes imperative to ligate the common carotid, which, if done temporarily, seems to be less dangerous than a permanent ligation.

Thoughts on the Treatment of Diabetes Mellitus, being Part of a Clinical Lecture Delivered at the Philadelphia Hospital, March 13, 1901. By Dr. James Tyson.—The author suggests that our search for curative treatment should be directed, more than it has been in the past, to measures that aid oxidation. Any tendency to actual cure brought about by the withdrawal of carbohydrate food must be because a greater or less arrest of the glycogenic and glycolytic offices of the economy may lead to the restoration of function. This benefit may happen in the mildest cases only. The author commends the use of arsenic in *small doses,* long and uninterruptedly continued. The fact that arsenic increases the number of red blood discs and the quantity of hæmoglobin in them, and thus facilitates oxidation, explains its good effects. Iron is also good, but a drawback lies in its constipating effect. Massage, bathing, and exercise are of importance in the proper treatment of diabetes. The author explains the effect of codeine and other derivatives of opium, and the less settled effect of the petroleum products advocated by the French school, as being due to the influence upon the metabolism of glucose in the distant capillaries of the economy. In conclusion he says that, while the dietetic treatment will remain our chief resource for some time, for complete curative treatment we must look elsewhere.

The Medical Relations of the Prevailing Forms of Food Adulteration. By Dr. Henry Leffmann.—The author directs attention to some common misstatements and misapprehensions in regard to glucose, oleomargarin, baking powders, and other substances. He notes that the farmer influence in many States has secured laws forbidding the coloring of oleomargarin, while no restriction has been placed on coloring butter.

Ruptured Traumatic Aneurysm of the Femoral Artery Due to Gunshot Wound, with Report of a Case. By Dr. Wallace Neff.—From the literature, the author concludes that while traumatic aneurysm of the femoral artery due to gunshot is not uncommon, ligations are usually followed by gangrene and subsequent amputa-

tions, and it rarely happens that the limb is saved, as in this case it was, particularly when the aneurysm is of the ruptured variety. He concludes that while the very heavy mortality during the civil war was due in a measure to a lack of modern aseptic and antiseptic precautions, the chief difficulty was the non-establishment of collateral circulation, and even now, with a technique well-nigh perfect, the same danger exists.

Multiple Tumors of the Sciatic Nerve. By Dr. John B. Roberts.

Venous Angeioma of the Flexor Muscles of the Fingers. By Dr. John B. Roberts.

Diabetes Mellitus as a Cellular Fault. By Dr. Thomas C. Ely.—The author considers in detail five general reasons for regarding diabetes as a fault of cellular protoplasm: (1) A biologic reason; (2) an hereditary reason; (3) a reason by exclusion; (4) associate diseases; (5) a therapeutic reason.

Lancet, April 6, 1901.

Diseases and Disorders of the Heart and Arteries in Middle and Advanced Life. By Dr. J. M. Bruce.—In the third and last of the Lettsomian lectures the author deals with the application of the facts considered in the two previous articles. A mitral presystolic murmur is never significant of a senile lesion. An aortic diastolic murmur, alone or along with an aortic systolic murmur, means something more than atheroma produced by gout, alcohol, tobacco, or cardiovascular disease of nervous origin. Aortic incompetence developed in later life is the result of syphilis or of acute or chronic valvular strain; many instances can, of course, be traced to juvenile endocarditis. Always a serious lesion, aortic incompetence due to syphilis is particularly grave, as being so frequently associated with coronary disease and consequent myocardial degeneration. A fully developed basic systolic murmur is a very common sign of atheroma of the aortic arch and valves and great vessels in association with gout, diabetes, corpulence, etc. It is also one of the physical signs of syphilitic and traumatic affections of the aorta. An ill-developed basic systolic murmur is not uncommon in alcoholism, chronic Bright's disease and nervous strain. A fully developed and audible systolic murmur in the mitral area (independently of leakage in cardiac failure) is usually due to early endocarditis of rheumatic or other origin. But in some instances it may be due to valvular atheroma. An accentuated ringing second sound in the aortic area is of great value in the diagnosis of arterial tension and atheroma. Slight reduplication of the first sound is common over senile hearts strained in youth, and hearts degenerated by alcoholism. The *bruit de galop,* or cantering rhythm of cardiac sounds, is practically pathognomonic of Bright's disease, and is one of the most valuable, because one of the most ominous, of physical signs. A normally sized heart, with irregularity, increased frequency, and a variable mitral systolic murmur, is characteristic of tobacco poisoning. A heart enlarged on both sides and acting irregularly without murmur is, apart from cardiac failure, suggestive of strain in early life. Cardiac symptoms taken individually are of less diagnostic value than signs. No symptom is pathognomonic. *Prognosis:* In tobacco heart the prognosis is always good, if the use of tobacco is stopped; the author has never seen serious damage done by tobacco alone in sound hearts. A much more unfavorable estimate is to be formed of the prospect of life in the alcoholic heart. It is almost impossible for the patient to give up the use of alcohol, and the cardiac degeneration is complicated with cirrhosis, neuritis or dementia. Prognosis in gouty heart is very difficult. While patients of this class sometimes improve under treatment, and the atheroma is repaired by sclerosis, yet sudden death from angina is far from uncommon. Most unfavorable is the forecast in syphilitic lesions; cardiac failure, aneurysm, or angina, usually develops, and proves fatal. Strain of the heart for the first time after the age of forty years is not so grave as might be expected. In all these conditions the possibility of the intercurrence of acute disease must not be forgotten. In conclusion, the author briefly reviews the question of *treatment,* dwelling on the following points: Iodide of potassium should be given freely in syphilitic lesions; it is a specific remedy of great value. Do not be afraid to purge every morning if necessary. When the appetite flags and flatulence occurs, instead of slops calomel should be given, and light solids persevered with. Nocturnal restlessness and sleeplessness should be met by permission to spend the night in an easy chair. Acupuncture and drainage are often of the greatest service in senile cases with dropsy.

Sclerotic Hyperplasia of the Pharynx and Nasopharynx. By A. B. Kelly, M. B.—The author reports the case of a man, aged thirty-four years, presenting the following striking features: A greatly enlarged uvula concealing the posterior pharyngeal wall; a thick band descending in each half of the posterior wall of the pharynx, passing down to and overhanging the arytenoids; and a thickening of the roof and floor of the nasopharynx leading to a marked diminution of its lumen. The uvula was removed with a galvanocautery, and the morbid process was found to consist of a diffuse uniform thickening, proving to be a marked interstitial hyperplasia. No history or evidences of acquired or hereditary syphilis were obtained; there was no cicatricial contraction as in rhinoscleroma, and cultures failed to show the presence of the *Bacillus rhinoscleromæ.* The case shows that the pharynx and nasopharynx may be the seat of a sclerotic hyperplasia unconnected with syphilis, rhinoscleroma, or other known infective disease. A similar morbid process may manifest itself beneath the vocal cords as subglottic hypertrophic laryngitis. The condition resembles closely that seen in the hyperplastic variety of hereditary syphilis of the pharynx and nasopharynx.

On the Existence of Immunity after Enteric Fever. By B. A. Nicol, M. R. C. S.—The clinical experiences of the author have led him to doubt the existence of any immunity against the disease, following an attack of typhoid fever. He cites two cases which show that the supposed immunity produced by very severe attacks of typhoid fever was not sufficient to protect the patients for more than six months from a recurrence of their illnesses. The presence of the Widal reaction in the blood of a patient is no guarantee that immunity has been produced. Many of the soldiers in South Africa, who had received antityphoid inoculations, and whose blood showed the Widal reaction, contracted typhoid fever within a very few months.

The Pathology and Treatment of Rheumatoid Arthritis. By Dr. P. W. Latham.—The author reviews the present status of our knowledge of the pathology of rheumatoid arthritis, and holds that the joint troubles in the disease are due to spinal congestion or chronic myelitis chiefly affecting the ganglion cells of the anterior horns, but extending also, when the disease is associated with "glossy skin," to the ganglion cells in the posterior

horns. If this is the case, the natural inference would be that, in the earlier stages of the malady, the treatment should be directed to the abatement of this spinal congestion and that probably this can be most effectively done by cupping or blistering the spine. He cites two cases in which this plan of treatment was adopted and followed by great improvement. But when the disease is advanced, the ends of the bones enlarged and the cartilages destroyed, one cannot hope to restore these to their normal condition by any counterirritation. But even in chronic cases, where there are exacerbations of pain and swelling, the application of blisters to the spine is of use, and the author has seen these conditions very quickly alleviated thereby and the further extension of the disease arrested.

A Case in which a Large Pyloric Tumor Disappeared after Gastro-enterostomy. Post-mortem Examination Eleven Years after Operation. By F. B. Jessett, F. R. C. S.—The author reports the case of a woman, aged fifty-six years, in whom a tumor the size of a small cocoanut completely occluding the pylorus and having all the naked-eye appearances of a carcinoma, disappeared after operation. A gastrojejunostomy was performed in 1890 with perfect success, and the patient remained well until 1900, when she died of apoplexy. At the necropsy the tumor was found to have disappeared, and the pylorus was patent, though somewhat constricted. There was also a constriction about the centre of the stomach, forming a typical hour-glass contraction, the pylorus opening just beyond the constriction. After the atrophy of the tumor, the food had evidently passed through the pylorus and duodenum as well as through the artificial opening.

The Influence Exerted by Air upon the Exhibition of Anæsthetics. By Dr. G. Flux.—Air governs the administration of anæsthetics; by it the patient is enabled to live while he inhales the anæsthetic, and by its instrumentality the dose of the anæsthetic is determined. No manner of administration that involves the curtailment of a patient's air-supply or that fails to direct the course traversed by the air on its way to a patient, can ensure either accuracy of execution or limitation of results. No patient can live long without air, nor can tolerate, without injury or discomfort, any deprivation of his natural air supply. It is the air which ultimately determines the amount of anæsthetic inhaled. The system of administering anæsthetics by means of the air, is simple, and has the advantage that it is equally applicable to all anæsthetics. It consists, not in attempting to control the output of vapor by varying the copiousness of the source of supply, but in regulating the amount of fresh air that is permitted to take up fresh anæsthetic vapor at each inspiration, this amount being, though definite in composition, variable in quantity at discretion, and it becomes added to the fresh air which completes the inspiratory volume. The author uses, when carrying out this system in its entirety, apparatus of his own devising —namely, an inhaler for chloroform, an open apparatus for nitrous oxide gas, a special form of stopcock for use with nitrous oxide or for use when employing Clover's ether inhaler, whether with or without gas.

Three Cases of Acute Ascending Paralysis. By Dr. T. A. Green.

British Medical Journal, April 6, 1901.

A Plea for a Pro-maternity Hospital. By Dr. J. W. Ballantyne.

On a Uterus which Contained One Hundred and Twenty Fibroids. By J. Bland Sutton, F. R. C. S.—The author reports the case of a woman upon whom hysterectomy was performed for profuse bleeding due to fibroids. On opening the uterus four sessile fibroids were found projecting into the cavity of the uterus. The cut surfaces of the uterine wall were very thickly dotted with small rounded fibroids. Microscopical examination showed each of these to correspond in every way to the larger, fully developed fibroids. From a careful computation of the tumors in the various sections, this uterus, which scarcely exceeded the dimensions of a fist, contained one hundred and twenty fibroids.

Placenta Prævia. By Dr. R. P. R. Lyle.—For clinical purposes it is unnecessary to divide placenta prævia into more than two varieties—complete and incomplete. The prognosis as regards the mother depends (1) on the variety of placenta prævia, the complete form being more dangerous than the incomplete; (2) on the treatment adopted, any form of mechanical dilatation of the cervix or the rapid extraction of the child being extremely dangerous to the mother's life; (3) on the amount of interference; (4) on early treatment. The prognosis on behalf of the child depends (1) on the period of pregnancy; (2) on the amount of hæmorrhage; (3) on the rapidity of labor.

For purposes of treatment, most cases of placenta prævia may be divided into three classes as follows:

1. Incomplete placenta prævia, in which the first stage of labor is well advanced; rupture of the membranes and the application of a tight abdominal bender will usually be found sufficient. 2. Cases of complete or incomplete placenta prævia, in which the os uteri is sufficiently dilated to admit two fingers. In cases of complete or central placenta prævia the placenta is perforated with the fingers, version (if necessary) is performed, and a foot brought down, a tight abdominal bender is applied, and the subsequent delivery left to Nature, unless, of course, the continuance of hæmorrhage should necessitate slight traction on the foot. In incomplete cases, the membranes are ruptured instead of perforating the placenta. The advantages of version and bringing down a foot are: (*a*) it does away with the tampon and consequent danger of infection; (*b*) it allows early operation; (*c*) it arrests the hæmorrhage with great certainty; (*d*) it gives time for the patient to rally; (*e*) it gives time for labor pains to set in and for consequent natural dilatation of the cervix; and (*f*) there is less danger of *post-partum* hæmorrhage. 3. Cases of placenta prævia in which the os uteri is not sufficiently dilated to admit two fingers. Such cases are rare and should be converted into cases of the first or second class by plugging the vagina tightly with boiled cottonwool until labor has advanced sufficiently to dilate the cervix. During the ten years, 1889-99, 74 cases of placenta prævia were treated at the Rotunda Hospital, with only 4 maternal deaths. Of the 74 children, 28 lived.

A Case of Puerperal Infection Treated by Operation (Pryor's Method). By N. S. Fraser, M. B.—The author reports a case of puerperal fever occurring in a primipara; earlier on the day of confinement he had seen a case of appendicular inflammation perforating the abdominal wall in an old man. The labor was normal, but on the second day the patient had a rigor, the temperature rising to 105° F. The temperature continued elevated and a second rigor occurred two days later. The uterus was then curetted and irrigated with salt solution; a broad incision was made into Douglas's pouch, and enough twenty-per-cent. iodoform gauze applied to completely fill all parts posterior to the uterus, and the uterus

was packed with the same. The temperature remained elevated for two days, and then gradually fell to normal by the seventh day. Colon injections of salt solution were given every eight hours, as recommended by Dr. Pryor. The urine gave an iodine reaction within eight hours after the operation.

A Note on the Separation of the Placenta in the Third Stage of Labor. By Dr. J. D. Slight.—The author advances the theory that the separation of the placenta is due to a stretching of the placental site. This stretching is caused by contraction of the thick, muscular portion of the uterine wall, which contraction not only compresses the placenta, but drags upon its site. The placenta having been thus freed is next expelled, and in the process of expulsion the membranes are stripped from the walls of the uterus.

Case of Ectopic Gestation; Operation; Recovery. By H. H. L. Patch, M. R. C. S.

Diseases and Disorders of the Heart and Arteries in Middle and Advanced Life. By Dr. J. M. Bruce.—The third and concluding Lettsomian lecture. (See abstract of the *Lancet* for April 6, 1901, in this number of the *Journal.*)

The New Type of Scarlet Fever from a Public Health Point of View. By Dr. W. Robertson.

A Preliminary Note on the Use of Ox-Serum in Rectal Feeding. By O. F. F. Grunbaum.—The author records some of the results obtained in rectal feeding with ox-serum, glucose, and milk, with liquor pancreaticus. Two grains of chloretone were added to each ounce of serum, that drug being a sedative as well as an antiseptic. Serum does not give rise to offensive stools, such as often occur when egg-albumen is used; its proteid is readily absorbed by the mucous membrane of the large intestine, and it is inexpensive. By introducing 90 cubic centimetres every four hours, 540 cubic centimetres of serum is introduced in the twenty-four hours, containing 38 grammes of pure proteid. In no case did a rash appear, or any albuminuria or albumosuria.

The Value of Diphtheria Antitoxine in the Treatment of Membranous Non-diphtherial Tonsillitis. By J. N. d'Esterre.—The author reports the case of a woman, aged thirty-five years, who within six months had two attacks of amygdalitis, in which the tonsils were completely covered with a yellowish membrane-like deposit. Cultures showed the presence of streptococci alone. Fifteen hundred units of diphtheria antitoxine were injected each time, and its use was promptly followed by a fall in the temperature and rapid improvement of the patient.

Gazette hebdomadaire de médecine et de chirurgie, March 24, 1901.

Palmar Luxation of the Index Finger.—M. Alexis de Hinto reports the case of a young woman who fell while carrying a vase, the index finger being pushed back upon the palm by the edge of the vase. This is a very rare accident. Reduction is performed by strong traction upon the finger, pressure upon the proximal end of the first phalanx and finally flexion.

Intra-arachnoid Anæsthesia.—M. P. Reclus says that lumbar injection of cocaine for the purpose of surgical anæsthesia may fail because of a fault in the technics, the needle completely traversing the canal, or the eye of the needle not reaching it, or the needle becoming filled with blood. Again, analgesia may be incomplete or may not last sufficiently long to permit of an operation. He reports one case in this connection in which anæsthesia failed to appear for one and a half hours after a correctly performed injection. The analgesia disappears sometimes in as short a space of time as eleven minutes, as happened to the author while performing an operation for hernia. Omitting consideration of the fleeting, disagreeable symptoms, M. Reclus records a case in which vomiting persisted for four days, another in which paresis of the anal sphincter lasted for seven days, another in which a paraplegia of the legs was found a month after the injection. Finally, he reports in his own experience and in that of a few others, eight deaths immediately following the subarachnoid injection, out of a total number of 2,000, a mortality of two fifths of one per cent. Ether, chloroform, and the local use of cocaine, show no such high mortality figures as this. M. Reclus concludes that the ordinary methods of anæsthesia cannot, at the present time, be replaced by the subarachnoid method, which is dangerous, obscure in its technic, and sometimes uncertain.

March 28, 1901.

A Case of Bulbar Tabes.—M. Debove reports such a case, giving the symptoms and the results of the physical examination in detail.

Lyon médical, March 24, 1901.

Prostatic Elements in the Urine of Patients with Bacterial Orchitis.—M. L. Hugounenq and M. J. Eraud conclude from thirty-four examinations that certain proteid substances allied to the mucins are found in the urine of men suffering from tuberculous or gonorrhœal orchitis. The polariscope shows a deviation which is not present in traumatic orchitis, in ordinary gonorrhœal urine without orchitic involvement, or in the urine of healthy women.

Idiomuscular Excitement in Tabetics.—M. F. Duplant says that while idiomuscular irritability in tabetics seems exaggerated, it is most frequently normal. Œdema of the muscles is obtained more easily in them, however, than in healthy persons. The apparent exaggeration demonstrates the integrity of the muscles, as the reaction is not due to irritation of the cutaneous or muscular nerves. The hypotonic condition of the muscles which is constant in locomotor ataxia, makes the idiomuscular reaction appear to be greater than normal, although it is not.

Centralblatt für Chirurgie, March 30, 1901.

Radical Operation for Large Ventral Hernia.—Dr. Salistscheff operated on a large umbilical hernia successfully by dividing the rectus muscle and covering in the defect with it. For this purpose, the muscle was split and then divided perpendicularly. An excellent result in this and in a subsequent case.

Wiener klinische Wochenschrift, March 21, 1901.

Poisoning by Agaricus Aorminosus.—Dr. Hugo Goldman describes the symptoms of poisoning by this fungus as beginning four or five hours after ingestion with nausea, headache, pain in the abdomen, and a sense of impending danger. Vomiting follows at intervals, at first of food, then of bile, sometimes of a little blood. The thirst becomes intense. Tenesmus and diarrhœa of a high degree appear, and collapse finally comes on. Anuria is usual. The physical signs correspond with the symptoms. Tannin by the mouth and by the rectum is the best means of treatment, and saline infusions are indicated.

Arthritic Affections in Scarlatina.—Dr. Edmund Homa reports a number of cases in which swelling of one or more joints, followed by suppuration, appeared during the course of scarlet fever.

Primitive Sight Organs. By Dr. Theodor Beer.

Centralblatt für Gynäkologie, March 30, 1901.

What are Brow Presentations?—Dr. Arthur Mueller pleads for a revision of the nomenclature of fœtal positions as a necessary precedent for the more thorough study of the more uncommon positions.

Klinisch-therapeutische Wochenschrift, March 31, 1901.

New Method of Treating Tuberculous Osteo-arthritis.—Dr. C. Trunecek treats fistulous opening of tuberculous nature in the neighborhood of joints with injections of the following solution:

℞ Sulphate of sodium	6.4	grains;
Chloride of sodium	73.8	"
Phosphate of sodium	2.25	"
Carbonate of sodium	3.15	"
Sulphate of potassium	6	"
Distilled water	100	"

This formula represents the normal amount of these salts in human serum. The injection is made through a cannula attached to a hypodermic syringe, the skin first being anointed with borated vaseline. After the injection is made, the part is covered over with cotton and a Priessnitz pack is applied. Rest is then enjoined. No disagreeable results have so far attended the treatment. (*To be continued.*)

On Multiple Neuritis. By Dr. Karl Gumpertz. (*Conclusion.*)

Riforma medica, February 22, 1901.

Bier's Injections in Sciatica. By Dr. Felice Pulle. The author has used injections of a two-per-cent. cocaine solution by the intraspinal route, as has been suggested by Bier, in a case of sciatica. He concludes that this method is to be recommended as one easy of execution and satisfactory in its results. In speaking of the rise of temperature that has been noted in patients with sciatica who had received lumbar injections of cocaine, by Bier himself, by Manega, and by the author in the present case, he gives the various hypotheses that have been suggested as explanations of this febrile phenomenon: The mechanical and chemical irritation produced by the injected liquid upon the spinal meninges and upon the nerve matter in the cauda equina: the effusion of blood that inevitably occurs in the epidural space as the result of injury to the vascular network which is encountered between the periosteum of the vertebra and the dura; and, finally, the irritation of the spinal cord and brain produced by the cerebrospinal fluid, mixed with cocaine solution and the extravasated blood. It is improbable that infection introduced in the act of injection of cocaine is the cause of the fever, for the rise of temperature is very constant in spite of the greatest antiseptic and aseptic precautions. The author is in doubt as to whether the paralysis that sometimes follows lumbar cocainization is due to the influence of the cocaine or to local pressure caused by the fluid injected.

Gazzetta degli ospedali e delle cliniche, February 3, 1901.

Concerning the Treatment of Varicocele. By Dr. Giovanni Benassi.—The author discusses the various methods of treating varicocele and describes more particularly a method recently introduced by Parona (*Policlinico*, VI, fasc. 1). Parona sought to combine those advantages of the two methods that gave the best results —namely, ligature of the veins, and resection of the scrotum—and to eliminate the disadvantages of each. His incision begins a little above the external abdominal ring and descends downward for five or six centimetres to the scrotum. After exposing the sheath of the cord and the inguinal ring, the testicle is drawn out, care being taken not to injure its envelopes. The testicle is then raised and the tunica vaginalis is incised at a point opposite to the epididymis, so that the testicle may be drawn forward through the incision. The tunica vaginalis is now drawn from below upward toward the ring, in such a manner that the aperture from which the testicle issues is brought close to the inguinal ring, and the cord with its enlarged veins is gathered in the portion of tunica thus turned up. The edges of the incision in the tunica are then sutured to the margins of the inguinal ring, taking care that the testicle has a natural position and that the cord is not twisted. Finally, the incisions are sutured. Although Parona reports good results, the great disadvantage of this method is that the testicle is thereby deprived of the tunica, and that certain serious lesions may follow in the testicular substance as the result of this denudation, as has been shown experimentally by Alessandri.

Resection of the Knee; the Use of Gussenbauer's Hooks. By Dr. A. Dandolo.

Idiopathic Epidemic Parotiditis. By Dr. Nicola Gallo.—The author observed during the year 1899 a small epidemic of idiopathic parotiditis, consisting of nine cases, in which transmission of infection was clearly established. He concludes from a study of these cases, as well as from a consideration of the literature of the subject, that parotiditis may be an infectious disease, but not one that can be inoculated—at least he has not succeeded in reproducing the disease by this means. The fact that the secretion of the parotid is not infectious in these cases does not exclude the possibility that the disease is a general infection (an exanthem) in which the parotiditis is due to the action of a toxine upon the parotid gland.

A Contribution to the Study of Epidemic Icterus. By Dr. Achille Franchini.—The author observed, during the year 1899, an epidemic of jaundice in the commune of San Leo. This disease affected with preference the poorer classes, the members of the same family, and persons between the ages of twenty and forty years. The epidemic has gradually subsided, until it is almost extinct at present. The number of cases observed by the author exceeded sixty. The symptoms resembled those of benign catarrhal jaundice. At first there was a marked sense of general malaise, pain and heaviness in the abdomen, more or less marked anorexia, nausea, and vomiting. Jaundice appeared after four or five days, and was accompanied by changes in the color of the fæces, urine, etc. The liver was slightly enlarged and tender, the spleen was almost always normal. Pruritus was rarely observed. Albumin was found in the urine in one fatal case. An urticarial rash appeared in another. The average duration of the disease was two or three weeks. This epidemic occurred in a mountainous region which was supplied by excellent water, thus contradicting the statement of Kelsch to the effect that epidemics of jaundice occur in marshy, low places with foul water supply. No

other infectious diseases occurred in connection with this epidemic. These cases must not be confounded with infectious icterus, as described by some authors, in which there are febrile symptoms and swelling of the spleen, and which are probably caused by the *Bacillus coli* or the bacillus of Eberth. The author's cases were due to an undetermined species of the *Bacillus icteroides.*

An Apparatus for Determining the Seat of a Urethritis and Urethrocystitis of Gonorrhœal Origin. By Dr. Ismaele Castracane.—The author calls attention to the inaccurate results which are obtained with the Thompson "two-glass" test and the Fenger "three-glass" test, and suggests the use of a special apparatus for the determination of the site of a gonorrhœal urethritis or urethrocystitis. This appliance consists of a glass tube, two centimetres in diameter, having a capacity of 300 cubic centimetres, bent at right angles into the shape of a U, each arm gradually decreasing in size. One end is widened to admit the stream of urine, and each arm bears a scale indicating the amount of urine which it holds. The apparatus is mounted upon an iron support.

When the patient urinates into this tube, the first portion of the urine voided enters the first arm, the second into the horizontal portion, and the last into the second arm. On introducing an aniline solution into any one of the three portions, and on filling the other parts of the tube with water, it was found that there was scarcely any intermixture between the three parts of the tube. The presence of turbidity in the first, second, or third portion of the tube indicates the location of the inflammation, according to the principles laid down by Thompson, Ultzmann, and Fenger. The advantages of the apparatus are, that there is no interruption in the act of micturition; that the urine is distributed in such a manner as to render examination and comparison easy, so that the slightest degree of turbidity may be detected; that the amount of sediment may be estimated by looking at the scale on the tube, and that this sediment may be easily withdrawn for further examination by means of a pipette.

Concerning the Treatment of certain Cases of Syphilis which Rebel against Mercury and the Iodides; Flushing the System with Artificial Serum, with or without the Addition of Solutions of Mercuric Bichloride. By Dr. Michele Gravagna.—The author has used injections of artificial serum, with or without the addition of bichloride, in two cases of refractory secondary syphilis. In the first case the patient was suffering from an unusually intense syphilitic infection, against which various mercurials, Zittmann's decoction, etc., were used without avail. Injections of large quantities of Hayem's fluid—so-called artificial serum—gave no better results, and the patient died of syphilitic cachexia. In the second case there were persistent lesions on the face which would not yield to ordinary specific treatment. No effects whatever were obtained from injections of Hayem's fluid, or from injections of Franceschini's solution of bichloride. The lesions disappeared when Zittmann's decoction was administered and when they were treated locally with an ointment containing calomel and zinc. The author concludes, so far as he may from two cases, that the new method of treatment is not to be relied upon. A similar conclusion was reached by Tomassoli in an article on this subject.

Return of Reason in the Pre-agonal Stage of Dementia. By Dr. Riccardo Albericci.—The author reports a case of senile dementia in which the patient's reason returned for a brief period just before death.

Vratch, February 24, 1901 (March 8, New Style).

Large Fœtuses. By Dr. B. N. Agafonoff.—The author reports a case of labor in which the child weighed 5,950 grammes and measured 58 centimetres in length. The other measurements were: *Circumferences of the head*—horizontal, 38 centimetres; oblique, 43.5 centimetres. *Diameters*—occipitofrontal, 12 centimetres; occipitobregmatic, 14 centimetres; suboccipitobregmatic, 10.5 centimetres; biparietal, 9.5 centimetres; bitemporal, 8 centimetres. *Circumference at shoulders*—49 centimetres; biacromial diameter, 18 centimetres. The measurements of the mother's pelvis were: Spines, 25 centimetres; crests, 29 centimetres; external conjugate, 22 centimetres; transverse, 35 centimetres. The head measurements thus exceeded but slightly those of an average infant at term. The head of this child was, in fact, small in proportion to its body, the diameters of the shoulders and buttocks being considerably larger than in the average newly-born child. This circumstance was the explanation of the comparatively easy descent of the head and the delay in the passage of the shoulders. The author was called after a midwife had delivered the head and no further progress could take place on account of the impacted shoulders. The child's face was black, and there were no signs of life when the physician arrived. The shoulders were delivered with a great deal of difficulty and the child was found to be dead. The placenta was very large and weighed 1,190 grammes. The mother was a middle-aged multipara, and both parents were of unusually large size. The largest "giant fœtus" on record was that reported by Blach (*Medical Record,* March 22, 1879, and December 29, 1883). This child weighed 12,000 grammes and the placenta weighed 5,000 grammes.

The Treatment of Tetanus. By Dr. M. I. Rostovtzeff.—The author reports two cases of tetanus which he treated in 1899. The older remedies should be administered as the symptoms require, even when Behring's antitoxine has been used. The local treatment of the site of infection is of great importance, as the tetanus bacilli cannot spread through the body, but send their toxines to the nerve centres from the primary infecting focus. The use of diuretics, diaphoretics, baths, and subcutaneous injections of normal salt solution, may also be of value in causing the elimination of the toxines. In the first case the author observed the phenomenon known as "local tetanus," which is rarely seen in man; the first signs of tetanus appeared in the affected limb. The explanation of this phenomenon is not yet clear. Four injections of Behring's serum were used and the patient recovered slowly from an attack of tetanus of average severity. In the second case, the author used injections of an emulsion of calf's and pig's brain. The patient recovered slowly, but remained in a condition of cachexia and muscular atrophy, so that she could scarcely walk. Kernig's sign was present in a marked degree during the convalescence, and the author says that the presence of this sign has never been noticed before in tetanus, probably because no attention has been paid to it. Its presence is probably due to the fact that the toxines of tetanus that accumulate in the spinal cord have an irritating influence upon the meninges, without actually causing an inflammation. The second case was more severe than the first. While it cannot be denied that the patient may have recovered without the injections of brain emulsion, the improvement after these injections was very well marked; the symptoms became stationary instead of

progressing, as they did before the injections, and the general condition improved.

Initial Stages of Heart Disease in Soldiers. By Dr. D. I. Vieriujsky.—The author calls attention to the fact that in the initial stages of organic heart lesions there may be no physical signs warranting the diagnosis of heart disease, and that, under unfavorable conditions of military life, a well-marked set of physical signs may appear during the third or fourth year of service. He has observed this occurrence in a number of cases. In a certain number of men who come before the examining physician of the military post there are no fully developed physical signs that speak of an organic lesion, and yet there may be enough to suspect that the heart is not perfectly normal. It is difficult to decide in many instances whether one has to deal with healthy heart, or with a latent heart disease. In 57 doubtful cases, 45 had been rejected as having heart disease; the rest were found to be cases of functional disturbances—neurasthenia, anæmia, etc., and the cardiac symptoms disappeared after a period of observation in the military hospital. Of the 45 men in whom heart lesions were found, 36 were recruits and 9 were privates with more or less service behind them. Of the 36 recruits, 29 were sent to the hospital for confirmation of the diagnosis, the rest for existing illness other than the heart trouble. Of the privates, two came to the hospital on account of heart symptoms, the rest for other illnesses, and the heart trouble in these was found accidentally. Of the 45 cases, 20 had well-marked physical signs, 17 imperfectly developed signs and 8 no other sign than a slight inconstant murmur at the apex. Mitral insufficiency was the diagnosis in 44 cases, and aortic stenosis in one case.

Letters to the Editor.

A FLAGRANT CASE OF SUBSTITUTION.

154 East Thirtieth Street,
New York, *March 20, 1901.*

To the Editor of the New York Medical Journal:

Sir: A few weeks ago I wrote the following prescription for one of my patients, a young lady fifteen years old, for the purpose of examining her eyes for an error of refraction:

℞ Homatropine hydrobromate. . . . . gr. 1;
Cocaine hydrochlorate. . . . . gr. i;
Aq. dest. . . . . dr. i.
M. D. S. Use as directed.

The directions, as given by me to the patient, were to put two drops of the solution in each eye in the evening before going to bed; then, the next morning, to put two drops in each eye every fifteen minutes, five times, starting one hour before leaving her residence for the purpose of coming to my office for examination, and to bring the drops along, so that I might put them in her eyes once or twice before examining her eyes. The young lady had the prescription compounded at a pharmacy, used the drops according to directions, and presented herself for examination at my office. I found the pupils fully dilated, put the drops once or twice in her eyes, and proceeded with the examination. This completed, I asked her to return to my office in two days, when the effect of the mydriatic would have entirely disappeared. When she returned, however, I found that the pupils were still widely dilated and accommodation was still paralyzed. I at once thought that atropine might have been substituted, and asked my patient how much she had paid for the prescription. The answer was that she had paid thirty cents for the prescription, which, in view of the fact that homatropine hydrobromate cannot be purchased at less than thirty cents a grain—in fact, can hardly be purchased at that price—seemed to verify my opinion.

Calling up the druggist who had dispensed the prescription, over the telephone, he insisted that he had dispensed exactly what I had prescribed, also verifying my prescription by reading it to me over the telephone.

About twenty drops of the solution remained over, which I sent to the analytical department of a very well known manufacturing chemist, and received the following report:

"The examination of the colorless liquid received the 1st inst. showed the following:

"Evaporated to dryness and subjected to Vitali's test for atropine, a beautiful violet color is obtained, eventually disappearing, but capable of reproduction in the usual way. This reaction is considered as characteristic of atropine and its isomers. Homatropine with Vitali's test gives a yellow color.

"Known solutions containing homatropine hydrobromate and cocaine hydrochlorate do not give the violet color, while known solutions of atropine sulphate and cocaine hydrochlorate do not give the violet color. Cocaine hydrochlorate solution alone does not give the violet color."

It is now over three weeks since the drops have been used in the eyes of my patient, and they are only slowly regaining their power. Everything, except the statement of the druggist that he has not substituted, points to substitution as the cause of this long duration of the paralysis of accommodation. If substitution was practised, it is very likely that one grain of atropine was substituted for the one grain of homatropine prescribed, but that the rest of the prescription was not changed. If this is the case, then the patient had instilled into her eyes the evening before examination two drops in each eye of a solution of atropine of a strength of eight grains to the ounce, which was furthermore strengthened by the cocaine solution. The next day two drops were put in each eye six or seven times within two hours, enough to not only thoroughly paralyze, but possibly, also, tear some of the fibres of the ciliary body.

This substitution of atropine for homatropine is not at all so infrequent as it might appear, having occurred in my practice several times, once, as I remember, some years ago, in the case of a violinist, who was forced thereby to give up an engagement.

This letter is written for the purpose of drawing the attention of the profession to the fact that, if a substitution of atropine for homatropine is practised, the patient would be likely to get the atropine in larger doses than would be the case if atropine were directly prescribed. The patient, furthermore, would have the larger doses instilled in his eyes with greater frequency, in this way not only having as much paralysis of accommodation as is usual when we prescribe atropine, but a great deal more, and, in fact, a dangerous amount.

The patient may, furthermore, lose a great deal of time in consequence of the substitution, and if of advanced age may, in consequence of the increased intraocular tension which persists for a long time, become glaucomatous.

Lastly, the patient is likely to lose confidence in his oculist, who promised him a return to normal vision for the next day, whereas, in consequence of the substitu-

tion, this return to normal vision may be deferred for weeks, even if no serious harm results.

A. W. HERZOG, M. D.

SECONDARY POST-PARTUM HÆMORRHAGE.

334 EAST SEVENTY-EIGHTH STREET,
NEW YORK, *March 10, 1901.*

To the Editor of the New York Medical Journal:

SIR: On the 25th of January, 1901, at 5 P. M., I attended, in confinement, a woman of evident good health, and she gave birth to a healthy girl. The placenta came away in a few minutes on my executing Credé's method, whole and sound. There were no after-pains. The patient spent twelve days in bed, having a normal pulse and temperature—in fact, in every way in fine physical condition. I saw her as often as possible during that period, and there were no signs of any fever, nor were the lochia decomposed. Certainly I had no cause to be suspicious of any foreign substance in the uterus. On the thirteenth day after her confinement, at 11 P. M., while passing urine, she filled a pot with blood. Being called in, I stopped the hæmorrhage by injecting hot water and packing the vagina with absorbent cotton. The patient slept comfortably that night and felt well the next day. Still keeping to her bed, she had a good appetite and showed no indications of further trouble. She passed the next night comfortably also, but at 6.30 A. M., upon her awakening, due to the cry of the baby, hæmorrhage occurred again, and pretty nearly filled a zinc douche-pan with blood. As a consequence the patient became extremely weak and heart failure threatened. Stopping the hæmorrhage again, at the same time I sought for its cause; but, on exploring the uterine cavity, I found no evidence of retained placenta or decidua, but intra-uterine hæmorrhage. On my curetting the uterus, the hæmorrhage ceased, and I packed the uterus partly, and the vaginal canal wholly, with iodoform gauze. There were no signs of inflammation either on the cervix or in the vagina, but the cervix was well dilated. Upon external palpation, the uterus was flabby and enlarged. I kept the patient in bed and treated the anæmia. The pulse was scarcely perceptible to the touch and there were signs of impending death, so that I gave up hope for the life of the patient. A colleague, who was called in, injected, hypodermically, a twelfth of a grain of strychnine, together with a twentieth of a grain of digitalin, taking no cognizance of previous injections of a thirtieth of a grain of strychnine and ten minims of ether, every five minutes for nearly two hours and a half, which failed to do the work. This seemingly lethal dose of strychnine, combined with digitalin, fortunately brought the pulse up, and after that the patient improved rapidly, and completely recovered in two weeks. Our first day's treatment was by rectal injections of normal salt solution every two hours. Ergot was given every two hours, and strychnine, hypodermically, a sixtieth of a grain, for the first six hours, and every two hours afterward by the mouth, together with champagne, milk, brandy, and cracked ice. Ice was applied to the pelvic region, and hot bottles were put to the feet. The use of ergot was discontinued the next day.

I make frequent visits to this patient, and find her in a good, healthy condition. The cause of the hæmorrhages is still a question to us. The diagnosis I made of this peculiar case was that of subinvolution, but if any gentleman of the profession will give a different diagnosis, I shall be glad to learn.

P. M. MILLER, M. D.

Proceedings of Societies.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Twenty-second Annual Congress, Held (in Conjunction with the Congress of American Physicians and Surgeons) in Washington, on Tuesday, Wednesday, and Thursday, May 1, 2, and 3, 1900.

The President, Dr. SAMUEL JOHNSTON, of Baltimore, in the Chair.

(Concluded from page 525.)

Supplementary Report on a Recurrent Tonsillar Tumor.—This was the title of a paper by Dr. R. P. LINCOLN, of New York (see Vol. lxxii, page 705).

The Correction of Deviations of the Nasal Sæptum, with Special Reference to the Use of Fenestrated Comminuting Forceps.—This was the subject of a paper by Dr. JOHN O. ROE, of Rochester, N. Y. (see page 624).

Dr. A. W. DE ROALDES, of New Orleans: I feel indebted to Dr. Roe for a clearer understanding of his method of correcting deviations of the nasal sæptum. There are still some points connected with the procedure which I should like explained—for instance, the exact location of the bony and cartilaginous hinge of which he speaks, whether it is vertical, and whether on this line of fracture hinges the whole anterior part of the deviated sæptum. If that is the case, I wish to say that Professor Moure, of Bordeaux, has lately adopted some similar procedure in what he will present shortly as a new method for the treatment of sæptal deviations. In a conversation with him a few months ago, and while he was questioning me on the methods of Dr. Roe and of Dr. Asch, he said he had procured the latter's instruments. Misconstruing the *modus operandi,* he had performed several operations in which, if I understood him well, he severed the sæptum in its whole thickness, along its attachment to the floor of the nose, from the columnar cartilage to the posterior chondro-osseous articulation, his next step being to incise the sæptum high up from the columna, backward in a direction parallel to the external median line of the nose. He thus obtained a truncated conical cartilaginous partition which, when fractured at its posterior attachment, allowed a displacement *in toto* of the deviated sæptum, with the idea of obtaining union of the fracture in a modified direction, calculated to correct the deviation. Good results were thus obtained by Dr. Moure, who, having designed two instruments to facilitate his technique, was kind enough to present them to me.

Dr. JONATHAN WRIGHT, of Brooklyn: Dr. Roe has aroused so much admiration and, I must confess, a little despair in the minds of us all in describing the external deformities of the nose, that it is refreshing to be able to understand exactly what he means by operations upon the nasal sæptum. I have used with a great deal of benefit the form of forceps he has shown for breaking up the sæptum, but I have not used the form of cutting forceps which has been exhibited by Dr. Roe. In using one as large for breaking up the sæptum as the one which has been passed around, it would seem to me that we might dangerously fracture the whole sæptum. The small instrument is extremely useful for breaking up the cartilaginous portion of the sæptum. I have used the cutting forceps of Dr. Asch for making the incision, and have used the instruments of Dr. Roe for destroying the resiliency.

Dr. ROE: The blades inserted in the instrument passed around are longer than those commonly required

in the correction of sæptal deformities. Since I first described this set of instruments I have abandoned the use of the cutting forceps, and have substituted the knife to which I have called attention in my paper.

Dr. W. K. Simpson, of New York: In drawing attention to the cartilaginous sæptum, I should like to know whether this instrument will fracture the sæptum. My experience in using a blunt instrument, no matter how powerful it may be, is that you can bend the sæptum to any extent you desire, but it will immediately slip back again, so that our ability to fracture it is limited.

Dr. Roe: A good deal depends upon the thickness of the sæptum.

Dr. Simpson: How long do you leave the retention splint in?

Dr. Roe: From four to six days, until a provisional callus is thrown out sufficient to hold the sæptum rigid and maintain it permanently in place.

Dr. Emil Mayer, of New York: I did not hear all of Dr. Roe's paper, but I gather from what has been said that his method consists in making an incision with the knife through the cartilaginous sæptum, a sort of sawbuck incision, and that by means of compression forceps he comminutes the parts and inserts a packing for several days, and then discharges the patient as well. I should like to ask whether he has observed any meningeal symptoms following this crushing and rolling motion? I say this because a great many operators fail to understand the Asch operation, and, instead of using compression forceps merely as compressors and nothing else, make the mistake of using a rocking and rolling motion, and, although I have not seen any cases recorded, I have heard indirectly of two fatalities as a result of this particular rocking and rolling motion. Dr. Roe says that the difference between the incision made with the knife and that made with the scissors is that he makes an X-incision, while in the other instance the incision is rectangular. If one will follow closely what has been written on the subject and the descriptions by Asch and myself, he will see that the incision made with scissors is as nearly at right angles as possible; yet in three hundred cases of my own I do not believe a single one of them has been a right-angle incision. They are the sawbuck incisions. Regarding tubes, it is merely a question of how long compression should be made, or how long they should be worn. Perhaps I am responsible for the length of time (five weeks) that the tube should remain *in situ*. It may be possible that I shall experience a change in heart like Dr. Roe and leave my patients without tubes at the end of the third week. In one instance, where there was a tendency to perforation, I took the tube out at once, which I always do if there are indications of sloughing at the junction of the incision. This patient did well with the tube used occasionally for a few days, and at the end of the third week I discarded the tube altogether. The length of time the tube should be kept *in situ* is purely arbitrary. Regarding the packing of Dr. Roe, his method is identically that described by Dr. Asch in his first paper presented to this association. It was discarded as being very annoying to the patient and offensive also, and the tubes were substituted.

One point should be clearly understood, namely, the anatomical configuration of the sæptum itself. If we make an incision through the sæptum from above downward, we find that the portion of it on a line with the columnar cartilage broadens out; that is the normal condition of the sæptum. It is narrower near the external portion of the nose, and broader as it comes toward the skull. We have to do undoubtedly with a certain amount of thickening and enchondrosis in all deviations, hence the need of care of that portion after the tube is withdrawn.

Dr. Roe has unquestionably improved his method of operating on the cartilaginous sæptum so far that it is almost impossible to tell the difference, except in the manner of using particular instruments, between his operation and the one described by Dr. Asch.

Dr. Roe: For fear the members may be misled by the remarks of Dr. Mayer, I would say that the incision of the sæptum is beveled and made at an angle, like this (indicating), about 45°, so that we have two edges sliding by each other like two wedges, whereas, if the cutting forceps is used, it is usually impossible to make a beveled cut. If the cut through the sæptum is made at right angles, and the ends are forced by each other, the cut surfaces do not come in contact at all, but the blunt edges override each other, affording no opportunity for union of any portion of such surfaces to take place. Dr. Mayer inquires if there are specific directions for making this incision. None, except that it is to be made through the most convex portion, whether the deviation or deflection is horizontal or oblique. If the deviation is a combination of the horizontal and oblique, frequently both a vertical and a horizontal incision should be made. If the line of convexity is oblique, you, of course, make the incision obliquely to correspond with the direction of the deflection.

Dr. Mayer: What is the length of the incision?

Dr. Roe: What is suited, in your judgment, to the requirements of the case. I have employed a modification of the operation which has been described in my external operations through the skin for many years, and have been surprised to find how slight the scars were after the operations. After the removal of tumors, sometimes the scars can hardly be seen after a few months. There is an advantage to be gained by having a beveled portion, in that it may become attached to the unbroken mucous membrane on the other side. I have not made a rectangular incision in these cases. If the instrument is inserted obliquely, we always have a beveled cut.

Dr. William E. Casselberry, of Chicago: I have used both the Asch scissors and a scalpel in making the incisions for deflection of the cartilaginous sæptum. Under general anæsthesia, the scissors seem to me more precise, especially for the second incision, when hæmorrhage is free. With cocaine anæsthesia only, a scalpel is best, because it is less bulky, permitting a view of the parts incised and greater delicacy of manipulation. To operate with cocaine anæsthesia requires a patient of reasonable self-possession and fortitude, but then it is entirely feasible and presents certain advantages as regards vision, position of the patient, and the control of hæmorrhage. I have used a double-edged scalpel with a sharp but rounded instead of pointed end. It is a convenient instrument with which to practise Roe's limited incisions —that is, cuts which pass through the mucoperichondrium of one side and the cartilage, but not through the mucoperichondrium of the other side, which in certain cases of moderate bulging deflection is an improvement on the Asch incisions, for the reason that there is less liability to permanent perforation after them. With the finger in the concave nostril, one can feel such a round-ended scalpel pass through the cartilage and approach the mucoperichondrium without cutting the latter and without injuring one's finger. If the bulge is extreme or the deflections angular, I have not considered these limited incisions fully adequate.

I was particularly pleased to hear the percentages

given by Dr. Roe of cases in which the osseous portion of the sæptum was involved. I have heard Dr. Asch insist that his operation was intended only for cartilaginous deviations, and not for osseous deviations, and that he objected to fracturing the osseous portion of the sæptum as unsafe, particularly when the rolling motion of the forceps was used. My experience agrees with that of Dr. Roe as regards the large percentage of cases in which the bony parts are involved, and as to its being necessary to correct in some manner the bony deflection in order to secure a satisfactory result. I have used the forceps of Dr. Roe for compression of the sæptum, the smaller sizes being best adapted to the form of compression which he has so well described, in which the rolling motion is not used.

I should like to ask Dr. Mayer, who in a measure represents Dr. Asch, why it is necessary to make the arms of the crucial incision vertical and anteroposterior, or why it is not adequate to make both incisions slanting—that is, a saw-buck incision? I have found it difficult with the Asch forceps to make the incision exactly up and down, my incisions usually slanting more or less like a saw-buck. I should also like to ask Dr. Mayer whether he has seen any severe hæmorrhages in those cases in which he has used the tube immediately after the operation. I understand that he puts in a vulcanite tube at once, puts the patient to bed, applies ice-water cloths across the nose, and sprays with an iced alkaline solution. Having observed hæmorrhages in both ambulatory and hospital cases, I have preferred to pack both nostrils with antiseptic gauze as a first dressing, and introduce the tubes only at the end of from two to four days. I believe this precaution to be especially advisable in ambulatory cases.

Dr. J. SOLIS-COHEN, of Philadelphia: When I am called in to perform the Asch operation, I rarely leave the tubes in more than six or seven days. I use tubes with perforations for the purpose of allowing any granulations to get through and hold the tube tight in place.

Dr. SIMPSON: In connection with the good result of the Asch operation, I have found another objection in addition to those that have been mentioned, and that is, where we need retention splints, we are sometimes unable to get the tubes on the floor of the nose, and my experience in a number of cases is that, when we come to remove a tube that we have inserted, we find the bottom part of it has made a new shelf for itself, which will necessitate removal subsequently. One of the conditions of success in the Asch operation is that the splint should be applied well down on to the floor of the nose, so as to avoid the secondary shelf to which I have referred.

Dr. MAYER: I shall be pleased to answer the questions that have been asked, because I think they are part and parcel of this question, and because I believe the new method Dr. Roe has demonstrated is practically the same, with some slight modifications, as has been referred to in the discussion. As regards the point mentioned by Dr. Simpson, which he referred to a moment ago, there may be an anatomical condition of the sæptum which will absolutely prevent the tube from resting positively upon the floor of the nose. With reference to the question of packing and of hæmorrhage, and in reply to Dr. Casselberry, I wish to say that I look upon these operations as operations of magnitude; I think that an anæsthetic is requisite, and that the patients should not be allowed to go out after the operation has been performed, but rather they should go to bed for at least three days. This point has been brought out very clearly in an interesting paper by Dr. Holmes, of Cincinnati, in which he reports over a thousand turbinotomies, without a single bleeding. He did not use the suprarenal extract, and he used no packing, but simply kept his patients in bed. In two hundred cases I have reported upon, which number includes those of Dr. Asch, Dr. Simpson, and myself, as well as some other surgeons in New York, in no single instance have we had to pack for hæmorrhage.

Dr. CASSELBERRY: I believe there have been two cases of severe hæmorrhage in patients that were put to bed.

Dr. MAYER: It is simply beyond my experience, and I cannot explain it except on the ground of some unusually placed blood-vessels or hæmophilia.

I wish to correct a mistake that has been made with reference to the Adams forceps as being in any way similar to Asch's. I am very sorry I did not bring one with me, but it is like the old-fashioned nut-cracker, which simply opens and shuts like a pair of scissors.

As to the percentage of cases of deviation of the cartilaginous sæptum, it is not so great as it would seem to be. A large percentage of bony deviations require no interference whatever, and what we call the absolutely normal skull is comparatively rare.

As to why the incisions are crucial, I would say that it is just as Dr. Roe has stated, that in this particular form of operation it is a fundamental principle to make a crucial incision, for with it we make four segments whose bases are broken, so that we destroy the arch and in that way straighten the nose by making the four segments override each other.

Dr. CASSELBERRY: The question was not why the incisions were crucial, but why one arm crossed up and down directly and the other arm anteroposteriorly. In the Asch operation one arm must be vertical and the other arm horizontal.

Dr. MAYER: You cannot make a crucial incision unless you take these two directions (illustrating). You have to make the incision in accordance with the direction of the deviation.

I am aware that I am trespassing on time, but, at the risk of being a little tedious, I wish to say that much confusion has been caused by Asch himself in the presentation of the bent scissors. I think ninety-nine deviations of the cartilaginous sæptum out of a hundred can be corrected without using that instrument, and it is here that the confusion has occurred. You really need a right and a left knife with the bent scissors, and then it is applicable to only a few cases. These scissors were devised for our own use where we had so many different forms of deviations to contend with, and oftentimes the deviation was so low down on the floor of the nose that we were obliged to make the incision low down and anteriorly. As a matter of fact, the equipment of any rhinologist would be perfect without these bent scissors of Dr. Asch's, and a straight scissors can be used in practically every case.

So far as the question of perforation is concerned, we must admit the possibility of it in every case, and the secret of not having perforation occur is in carefully watching the case, removing the tube on its slightest indication, seeing the patient daily, cleansing the nose one's self, and using nosophen or some such stimulant until all is healed, when the tube is replaced.

Dr. ROE: I am glad that Dr. Casselberry agrees with me in regard to the percentage of deviations in different portions of the sæptum. Deviations of the cartilaginous portions of the sæptum alone occur only in about

twenty-five per cent. of the cases, while nearly all other deviations are of a combined character, namely, of the osteocartilaginous portion of the sæptum. Therefore, the method which will properly correct the deviation must be one that is especially adapted to that form of deviation.

In regard to the observation of Dr. Mayer with reference to the Adams forceps, I do not see wherein the Asch forceps differs in principle materially from the Adams instrument. They both have perfectly flat blades, and in the use of either instrument for breaking the osseous portion of the sæptum it is necessary to twist or use a rotary motion, the danger of which is well recognized. By the method I have described, in which a fenestrated forceps is employed, no ringing or rotary motion is required, and no disturbance of any portion of the sæptum not included in the forceps is caused, because we have two supports on one side to counteract the pressure on the opposite side.

In regard to incising the cartilaginous portion of the sæptum, I am glad to know that Dr. Solis-Cohen has also found the slanting incision of special service. In many cases the incision can be carried through the cartilage only, leaving the perichondrium and mucous membrane on the opposite side intact. When the sæptum is thick, the perichondrium can at the same time be raised for a distance to allow the border of the opposite edge to slide under. In moderate bends of the sæptum this is unnecessary, but where the bend is large it is often of special service.

In regard to packing the nostril or supporting the sæptum, it is necessary to insert the dressing on the convex side only. Incision of the cartilage is, however, mainly required, as I have pointed out in my paper, where the deflection is confined to the cartilaginous portion of the sæptum, but when it is located in the osteocartilaginous portion the fenestrated forceps will usually bring the whole sæptum to the median line.

I have found the most efficient form of support to be a piece of aluminum wound with gauze, sufficiently large to fill the nostril and to force the sæptum over to the desired position. If the nostril and the dressing are made thoroughly aseptic, it can usually be left *in situ* for three or four days. It is then removed, the parts are thoroughly cleansed, and another one is introduced. This is left in place for two or three days longer. The sæptum is then carefully watched for a few hours to see if it is self-supporting. If ossification has taken place in the fractured bone, no further support is required. If there is a tendency to a return of the deviation when ossification has taken place, it is an indication that the elasticity of the sæptum has not been entirely overcome and that the operation has not been properly done.

My experience with the use of vulcanized rubber tubes for holding the sæptum in place has not been at all satisfactory, but I have used the dressings which I have described with great satisfaction, have never seen any hæmorrhage, and have observed no perforations of the sæptum to result from their use.

From the use of the fenestrated forceps I have had only the best results, and in no case has there followed cerebral disturbance of any kind, which I am sure might have taken place in many cases had I used the Adams forceps and broken the osseous portion of the sæptum as freely as I have done in a large number of cases by the method which I have described.

The Surgery of the Turbinal Bodies, with a New Method of Operating.—Dr. J. E. Boylan, of Cincinnati, read a paper on this subject (see page 415).

Dr. Casselberry: I feel that the present reaction against the galvanocautery which found expression in a recent discussion before the New York Academy of Medicine, and which the essayist voices to some degree, is unjust toward that remedy. I have no doubt galvanocauterization is greatly abused, and that it is often inadequately or too extensively applied, but, skilfully used in suitable cases, I still find it beneficial and harmless, and I should be at a loss often to substitute other means for it.

Dr. Mayer: Just a word or two in reference to this subject. In cases where there is much hypertrophic tissue to remove, I would call your attention to the linear incision that has been suggested, making the incision first along the floor up into the body of the inferior turbinate, then turning to the right with the knife and coming right down to the bone, making a bone scar.

Dr. Boylan: In excessive hypertrophy or partial hypertrophy?

Dr. Mayer: In cases where there is enough tissue to warrant a thorough operation.

Dr. Boylan: I should like to ask Dr. Casselberry whether he has seen septic symptoms in any of his cases from the use of the cautery in the region of the middle turbinated body.

Dr. Casselberry: I have many times made a linear cauterization along the anterior inferior aspect of the middle turbinated body, and never seen sepsis resulting. But cauterization of this structure should be limited to the baggy hypertrophy which is often found at this spot.

Dr. Boylan: As regards the reduction of hypertrophy by linear incision referred to by Dr. Mayer, I would say that my paper advocates turbinotomy in the advanced and indurated or myxomatous forms which are so frequently permanently associated with interference of the respiratory functions. Soft, or partial, hypertrophy is best treated by other methods, and in such cases I find a linear incision most efficacious.

As regards the use of the galvanocautery in hypertrophy of the turbinated tissue, so warmly advocated by the last speaker, when judiciously used in proper cases, it is a very excellent method; I use it frequently myself, as, for example, in the reduction of partial hypertrophy by deep incision, the destruction of minute polypi and myxomatous tissue, etc. But in the extensive and advanced hypertrophy referred to I cannot conceive of the burning away of a large surface of tissue as a scientific or even justifiable procedure, where we are able to remove by ablation the most diseased and offending part without injuring the remaining tissue.

Angeioma Cysticum of the Nose.—Dr. Henry L. Wagner presented a paper on this subject (see page 458).

Hæmorrhage from a Circumtonsillar Abscess.—This was the title of a paper by Dr. Walter F. Chappell, of New York (see page 371).

Dr. J. E. Logan, of Kansas City: I desire to say a few words in connection with this paper. I recall a case of double quinsy which once came under my care. The patient had never had rheumatism, and after he was relieved of quinsy I proceeded to operate upon him for deviation of the nasal sæptum, and I was struck very forcibly with the profuse hæmorrhage that occurred, and which came near resulting fatally. In a few days the patient was attacked with purpura hæmorrhagica after the

quinsy had subsided, and small spots developed on the legs. In tamponing the nose it required the closest application and attention to prevent the patient from bleeding to death. After the operation upon the nose he was put under the care of a general practitioner, was relieved of his trouble, and is living to-day.

Dr. MacKenzie related a case of circumtonsillar abscess in which the bleeding point defied detection, but was finally located by means of a probe, which went into a pocket, evidently the interior of a wounded vein. After exhausting other methods of treatment, the vein was finally ligated and the hæmorrhage stopped.

The case was one of interest and brings out one or two points, the first of which is, that in cases of hæmorrhage about the throat, such as I have described, always carefully explore with a probe to see whether there is any pocket in the circumtonsillar region which represents, perhaps, a wounded vein.

We may sometimes have an anomalous large vein in this region which, when wounded by the knife of the surgeon, may give rise, if not discovered, to a fatal hæmorrhage. If the source of the hæmorrhage is not found, the patient may go on and bleed indefinitely. The second point is that, if plugging of the vein and obstructing the current do not suffice to arrest the hæmorrhage, no time should be lost in cutting down and ligating the wounded vessel.

Book Notices.

Die Entwickelung der inneren Medizin mit Hygiene und Bakteriologie im 19. Jahrhundert. Von B. Naunyn, Strassburg i. Els. Centennialvortrag in der allgemeinen Sitzung der 72. Naturforscher-Versammlung in Aachen am 17. September, 1900. Pp. 21. Jena: Gustav Fischer, 1900.

Die Entwickelung der Biologie im 19. Jahrhundert. Vortrag auf der Versammlung deutscher Naturforscher zu Aachen am 17. September, 1900. Gehalten von Oscar Hertwig, Direktor des anatomisch-biologischen Instituts der Berliner Universität. Pp. 31. Jena: Gustav Fischer, 1900.

Die pathologische Anatomie im 19. Jahrhundert und ihr Einfluss auf der äussere Medicin. Von Professor H. Chiari in Prag. Pp. 16. Jena: Gustav Fischer, 1900.

These addresses are in the nature of a review of the work of the past century in medicine, biology, and pathological anatomy, by the eminent authorities whose names appear as their authors. Professor Chiari's address is especially striking, showing the influence which pathology has had upon the development of internal medicine. The addresses of Professor Naunyn and Professor Hertwig are impressive in pointing out the wonderful advances which medicine and biology have made in the century just closed. The latter traces the development of the study of the cell of the ideas of ontogeny and phylogeny, and of the growth of the acceptance of evolution, in a most charming essay. All the addresses will well repay reading, and, Chiari's especially, thoughtful study.

Modern Medicine. By Julius L. Salinger, M. D., Demonstrator of Clinical Medicine, Jefferson Medical College, etc., etc., and Frederick J. Kalteyer, M. D., Assistant Demonstrator of Clinical Medicine, Jefferson Medical College, Hæmatologist to the Jefferson Medical College Hospital, etc., etc. Illustrated. Philadelphia and London: W. B. Saunders & Company, 1900.

The authors have here attempted a most laudable purpose. They have taken all the facts of physical diagnosis, of symptomatology, and of chemical and microscopic methods, and have placed them in one volume, so that the student or practitioner who wishes to elicit a Widal reaction, for instance, will not find it necessary to consult two or three text-books for the necessary data. In order not to make the volume too bulky, however, the authors have been compelled to condense their material, so that in some places they lose in clearness, as, again, in the discussion of the Widal reaction. We believe that, if more space had been devoted to the diagnostic methods and less to the symptomatology of disease, the reader of the book would be the gainer. And, yet, this is only a minor criticism, for the work is one of unquestioned value and embraces within its covers the generally accepted theories of diagnosis, pathology, and treatment.

The style of the authors is good, condensation is not so great as to impair clearness, and the facts narrated are those which modern medical thought indorses. The book is well illustrated, and some of the illustrations are original.

Manual of Pathology, including Bacteriology, the Technique of Post-mortems, and Methods of Pathologic Research. By W. M. Late Coplin, M. D., Professor of Pathology and Bacteriology, Jefferson Medical College, Philadelphia, etc. Third Edition, Revised and Enlarged. With Three Hundred and Thirty Illustrations and Seven Colored Plates, many of which are Original. Philadelphia: P. Blakiston's Son & Company, 1900. [Price, $3.50.]

The three years which have elapsed since the second edition of Dr. Coplin's *Pathology* have exhausted the edition and compelled the publication of a new one. Advantage has been taken of this fact to thoroughly revise it. Colored plates are found for the first time, new illustrations have been introduced, and many of the chapters have been entirely rewritten. Dr. H. F. Harris has revised the chapters on neuropathology, which embrace the most modern views and methods of technics. The same must be said of the chapter on post-mortem examinations, which is especially good.

The new edition of this work can tend only to make it even more useful than it was before; for it is a well-balanced, complete, and thoroughly modern work.

A Text-book of Pathology. By Alfred Stengel, M. D., Professor of Clinical Medicine in the University of Pennsylvania, etc., with 372 Illustrations. Third Edition, Revised. Philadelphia and London: W. B. Saunders & Company, 1900.

The third edition of Dr. Stengel's *Pathology* does not differ widely from the second edition. The book is somewhat larger, and the sections on neuropathology (by Dr. Joseph Sailer) and on pathological physiology have been extended. The same excellent qualities of thoroughness, clearness, and logic stand out distinctly as they did in former editions. It is no small tribute to a work of this kind that in less than three years as many editions of it have appeared. It is a thoroughly good work on pathology and its technics.

Pathology and Morbid Anatomy. By T. Henry Green, M. D., F. R. C. P., Physician and Special Lecturer

on Clinical Medicine at Charing Cross Hospital, etc. Revised and Enlarged by H. MONTAGUE MURRAY, M. D., F. R. C. P., Lecturer on Pathology and Morbid Anatomy at Charing Cross Hospital. Ninth American Revised from the Ninth English Edition by WALTON MARTIN, Ph. B., M. D., Assistant Demonstrator of Anatomy, College of Physicians and Surgeons, Columbia University, etc. With 4 Colored Plates and 339 Illustrations. Pp. 2-17 to 585. Philadelphia and New York: Lea Brothers & Company, 1900.

WE have previously referred to this work as one which has long been a favorite here and in England. The new edition, which we find largely amplified, will not detract from its popularity. New chapters have been added on malaria and on the diseases of the blood, and these are fully modern and are excellently illustrated. The chapter on microscopic technics might be extended to advantage, we think, and directions for post-mortem examinations would not be out of place. Yet the work stands as a worthy exposition of the present-day knowledge of pathology and its processes.

A Compend of Diseases of the Skin. By JAY F. SCHAMBERG, A. B., M. D., Professor of Diseases of the Skin, Philadelphia Polyclinic and College for Graduates in Medicine, etc. Second Edition, Revised and Enlarged. With 105 Illustrations. Pp. xv-9 to 291. Philadelphia: P. Blakiston's Son & Company, 1900. [Price, 80 cents.]

QUIZ-COMPENDS are numerous these days, but not many of them pass into a second edition within two years, as this one has. It speaks well for the author that he has been able to impress upon teachers the value of his work, which contains much that is original, especially in the way of photographs.

BOOKS, ETC., RECEIVED.

A Handbook of Materia Medica, Pharmacy, and Therapeutics. Including the Physiological Action of Drugs, the Special Therapeutics of Disease, Official and Practical Pharmacy, and Minute Directions for Prescription Writing. By Samuel O. L. Potter, A. M., M. D., M. R. C. P. Lond., formerly Professor of the Principles and Practice of Medicine in the Cooper Medical College of San Francisco, etc. Eighth Edition, Revised and Enlarged. Pp. xiii-17 to 950. Philadelphia: P. Blakiston's Son & Company, 1901. [Price, $5.]

A System of Practical Therapeutics. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc. Second Edition, Revised and largely Rewritten. Volume III. With Illustrations. Pp. 3 to 841. Philadelphia and New York: Lea Brothers & Company, 1901.

Introduction to the Differential Diagnosis of the Separate Forms of Gallstone Disease. Based upon his own Experience gained in Four Hundred and Thirty-three Laparotomies for Gallstones by Professor Hans Kehr, Halberstadt. Authorized Translation by William Wotkyns Seymour, A. B. Yale, M. D. Harvard, formerly Professor of Gynæcology in the University of Vermont, etc. With an Introduction by Professor Kehr. Pp. xv-17 to 370. Philadelphia: P. Blakiston's Son & Company, 1901. [Price, $2.50.]

Lectures on Nasal Obstruction. By A. Marmaduke Sheild. M. B. (Camb.), F. R. C. S. (Eng.), Surgeon to St. George's Hospital, London, etc. With One Colored Plate and Twenty-seven Illustrations in the Text. Pp. x-106. Philadelphia: P. Blakiston's Son & Company, 1901. [Price, $1.50.]

Laryngeal Phthisis or Consumption of the Throat. By Richard Lake, F. R. C. S., Surgeon Laryngologist, North London Hospital for Consumption, etc. With Thirty-six Illustrations, Twenty-one of which are Colored. Pp. 94. Philadelphia: P. Blakiston's Son & Company, 1901.

A Compend of Human Physiology, especially Adapted for the Use of Medical Students. By Albert P. Brubaker, A. M., M. D., Adjunct Professor of Physiology and Hygiene in the Jefferson Medical College of Philadelphia, etc. Tenth Edition, Revised and Enlarged. With Illustrations and a Table of Physiologic Contents. Pp. viii-9 to 270. Philadelphia: P. Blakiston's Son & Company, 1901. [Price, 80 cents.]

Memoranda on Poisons. By Thomas Hawkes Tanner, M. D., F. L. S. Eighth Revised Edition. By Henry Leffmann, A. M., M. D., Professor of Chemistry in the Woman's Medical College of Pennsylvania, etc. Pp. 5 to 175. Philadelphia: P. Blakiston's Son & Company, 1901. [Price, 75 cents.]

The Medical News Pocket Formulary for 1901. By E. Quin Thornton, M. D., Demonstrator of Therapeutics, Pharmacy, and Materia Medica in the Jefferson Medical College, Philadelphia. Third Edition, Revised and Enlarged. Philadelphia and New York: Lea Brothers & Company, 1901.

The International Medical Annual: A Yearbook of Treatment and Practitioner's Index. Nineteenth Year. Pp. 682. New York: E. B. Treat & Company, 1901. [Price, $3.]

A Text-book of Gynæcology. Edited by Charles A. L. Reed, A. M., M. D., Gynæcologist and Clinical Lecturer on Surgical Diseases of Women at the Cincinnati Hospital, etc. Illustrated by R. J. Hopkins. Pp. xxv-900. New York: D. Appleton & Company, 1901.

Nursing Ethics: For Hospital and Private Use. By Isabel Hampton Robb, Late Superintendent of Nurses and Principal of the Training School for Nurses, Johns Hopkins Hospital, Baltimore, etc. Pp. 9 to 273. Cleveland: J. B. Savage, 1901.

Miscellany.

Masturbational Neuroses.—*Love's Medical Mirror* for March gives an abstract of a paper on this subject read by Dr. William C. Krauss at a recent meeting of the Medical Society of the State of New York, in which it is stated that the writer has called attention to the fact that, of late, the habit of masturbation has been defended and partially encouraged by medical men and others, and to offset this teaching by showing the difficulty in treating such patients for nervous diseases was the essence of the paper. The acme of physical and mental activity has fallen from the fortieth to fiftieth year to the thirtieth to fortieth year, and anything that taxes the growing youth saps just that much mental and physical strength. It must not be surmised that every lad, once addicted to this habit, is a confirmed neurotic, for boys healthily constituted in body, mind, and morals do not tend to come under its influence to any very hurtful extent. The author warns against giving a favorable prognosis in cases of functional nervous disease with an underlying history of masturbation coupled with a neu-

rotic family history. The length of time in which these diseases generally are brought to a successful termination, if at all, will be greatly prolonged. Patients giving no history of masturbation, who yet fail to respond to treatment after a sufficient interval, should be most rigidly interrogated, and in many cases the suspicion of masturbation will be verified. It is almost useless to try any form of treatment, or to expect to obtain any definite results, in these functional neuroses if the habit is not discovered and corrected. The author says that his own opinion may differ from that of others, but from his experience he would rather treat any other form of nervous disease than a case of masturbational neurosis.

Electro-fanitis—A New Summer Complaint.—The approach of warm weather brings to mind some words in the *Indian Lancet* of November 1, 1900. That journal says:

"A new hot-weather ailment has whirled into existence. It is called 'electro-fanitis' and hails from the United States, the land of the electric fan. It is a sneezing, coughing cold in the head caused by the germ-laden breezes of the electric fan. It is almost epidemic. Unless properly cured, electro-fanitis may develop into two other diseases of the same family—tonsillitis and bronchitis. The most distressing and annoying characteristic of electro-fanitis is that it is never contracted except in hot weather, and there is nothing more distressing than a summer cold. Being caused by artificial atmospheric conditions, it is much more difficult to cure than an ordinary cold. A physician says of it: 'The principal reason why the air currents produced by electric fans so readily cause inflammation of the mucous membrane of the head is that the draughts are sudden, and easily impress the system of the patient whose vitality has already been lowered by the heat. Furthermore, these currents of air are not the fresh waves of ozone which are in circulation outdoors. The artificial breezes are nothing but impure air forced into motion.'"

The Treatment of Exophthalmic Goître with Collodion Dressings.—Dr. Allen T. Haight (*Chicago Medical Recorder,* March) reviews the literature on the symptomatology, pathology, and ætiology of exophthalmic goître, and says that since it has been shown that the majority of writers on the subject of exophthalmic goître coincide with him in believing, first, that the toxic conditions are due to a secretion or overflow of secretion of the thyreoids; and, secondly, that the toxic effect produces the exophthalmos, rapid heart, and pulse action, he is sustained both in his theory and in his practical observations, that if the goître is reduced, the thyreoid secretion is reduced, and hence also the toxæmia. He, therefore, submits his method of reducing goître by flexible collodion dressing. His attention was called to this treatment of goître three years ago, after using collodion as a valuable aid in treating two cases of Hodgkin's disease in twin brothers.

When collodion is spread upon the skin, the evaporation of its ether causes its dissolved constituents to solidify and contract and become very adhesive, thereby compressing the goître and reducing its size and secretive function, as the amount of blood supply is largely shut off. With the decrease in thyreoid secretion we obtain a corresponding decrease in toxæmia and symptoms of the disease. As the thyreoid gland lies in apposition with the upper part of the trachea and larynx and is covered by the omohyoid, sternohyoid, and sternothyreoid muscles, it is, when enlarged by dilatation of its vessels, like a water-soaked sponge, easily compressed and held so by collodion. He has employed this method of treatment in six cases of exophthalmic goître, two males and four females, of ages varying from twenty-seven to fifty-four years, with enlargement of the thyreoid in each case. He has not had an opportunity to use this treatment on that form of Graves's disease in which no enlargement of the thyreoid is observed, so he cannot state whether collodion dressing would be of benefit or not in those cases.

The author then records the case of a married woman, forty-eight years of age, in whom the goître was reduced and systemic symptoms disappeared under the topical application of collodion, accompanied by the administration four times a day of ten grains of potassium iodide and one drachm of syrup of hydriodic acid. The applications were made at intervals of three or four days. There has been no return of the disease. The author says that in each of his cases, of which he has had several, after the first application of the collodion all the symptoms were more or less decreased, the pulse rate, especially, being lowered from 10 to 15 beats a minute, and in one case 30 beats. In four cases all symptoms of the disease have disappeared. The average length of treatment was two or three months, and the period of observation from three to six months. Some dermatitis occurs. Pressure on the trachea may cause trouble at the first application, but soon subsides. The chief discomfort is interference with the movements of the head.

In making the application of collodion, the following points are to be observed: 1. The collodion must be absolutely fresh, so that the maximum degree of contraction will be obtained at each application. 2. Rapid evaporation will be secured by using from 20 to 30 pounds of air pressure, thereby increasing the compression fully one third. 3. The patient's head should be placed in an easy position, with muscles relaxed. 4. The collodion may be applied with a brush or cotton carrier and the pressure should be kept constant by repeated applications, as required, at intervals of from two to five days.

Interstitial Gingivitis, says Dr. Eugen S. Talbot in the *Chicago Medical Recorder* for March, produces four forms of bone absorption: Lacunar, or osteoclast; halisteresis; Volkmann's perforating canal; and osteomalacia, or senile absorption. Halisteresis and Volkmann's perforating canal absorption are naturally most common, since they are due directly to the inflammatory process, and are likewise more rapid in their action. Lacunar, or osteoclast, absorption is nearly always present, but is slow. Osteomalacia, or senile, absorption is a natural process and attacks every individual sooner or later. Interstitial gingivitis is recognized by puffiness and bleeding of the gums. Absorption of the alveolar process causes a recession of the gums from the necks of the teeth, thus leaving the necks exposed. On account of the transitory nature of the alveolar process, if the inflammatory process is not arrested the teeth will finally loosen and drop out. Pus infection frequently takes place. This occurs especially about the necks of the teeth, and the resulting products are taken into the stomach, producing indigestion. Treatment consists in the patient's drinking eight or more glasses of pure water each day, in brushing the gums with a stiff tooth brush three times a day, thereby causing them to bleed, and in the employment of proper mouthwashes. Tincture of iodine should be used upon the gums and alveolar process every other day until they are restored to health.

Original Communications.

ON TENONTITIS AND TENONTOTHECITIS PROLIFERA CALCAREA.*

By CARL BECK, M. D.,
NEW YORK.

The patient is a tailor, forty-two years of age, born in Russia, who immigrated twenty years ago. There is no family history. Thirteen years ago he noticed a small swelling of his great toe, which remained painless for several months. The toe became gradually reddened then, and on its plantar side an ulceration of the size of a penny formed. Soon after the patient got chills, pain also developing within the whole foot. Dr. Max Bracker, who was called in then, found a septic phlegmon which seemed to originate from the metatarsophalangeal joint of the great toe. Severe general symptoms soon supervened, and Dr. Bracker asked me to amputate on the same day. In exarticulating the great toe late in the night, I found a joint which had undergone considerable change. The bones were eroded and the joint contained a few calcareous concrements.

It then seemed to me that we had to deal with arthritis urica, which had produced ulceration of the skin above the urates, thus inviting septic infection. Little attention was given to the concretions, because the general infection, above all, was the subject of our consideration. These circumstances, together with the poor surroundings and the late hour, may serve as an excuse for my not having given more attention to the exarticulated toe.

From that time I did not see the patient again for nearly thirteen years. He then reported that after the exarticulation he did very well for two years. About eleven years ago a small and painless swelling formed on the dorsal surface of his right hand, the size of which increased gradually. Sometimes the swelling seemed to be somewhat less. At last it became considerable, but until it became painful no medical advice was sought.

On September 22, 1900, when I first saw the patient after exarticulating his great toe, I noticed a globular tumor on the dorsum of his right hand, the size of which corresponded to that of a moderately large apple (Fig. 1). Its surface was dark red, its consistence irregular, some parts of it being hard, while others appeared soft to the touch. The centre of the tumor was occupied by a large ulceration, which was surrounded by several fistulous tracts from which turbid seropus issued.

My first impression was that the tumor represented an osteosarcoma, and I was afraid that I should be compelled to insist upon speedy amputation. But I decided to consult the Röntgen rays, which proved to be a valuable means of information, since the true condition was at once precisely defined.

Fig. 1.

As will be seen from Fig. 2, which was taken under the influence of intense irradiation, the third metacarpophalangeal joint was the seat of a focus of inflammation. The first phalanx was grown together with the metacarpus in a laterally dislocated position. The cortex of the condylar side was totally destroyed, appearing as if scooped out with a gouge. By faint irradiation, the outlines of the tumor appeared well marked, as will be evident from Fig. 3. Fig. 4 shows the bones but faintly, but permits of distinct recognition of the various shades of the tumorous portions; it was taken under powerful irradiation and a short exposure. The light areas of Fig. 4 show the suppurating portions, while the dark shades correspond to the calcareous areas. These, as shown also by the subsequent opera-

*Read at the annual meeting of the Medical Society of the State of New York, Albany, January 30, 1901.

FIG. 2.

FIG. 3.

FIG. 4.

tion, were the predominating elements of the tumor. It now became evident that there was a chronic inflammatory process, probably of a tuberculous nature.

The extirpation, which I performed on September 25, 1900, at St. Mark's Hospital, showed the defect of

FIG. 5.

the bone (compare Fig. 2) filled with yellow cheesy masses, the synovia being partially destroyed at the same time. But the most surprising feature of the condition was that the extensor tendons of the digits, excepting the thumb, appeared as if cemented into one mass of mortar. In dividing this mass the knife gave a loud, grating sound.

Of the tendon of the third finger, only a few rudimentary fascicles had remained, so that it had to be sacrificed entirely. The fascicles of the second and fourth extensor tendons were kept apart by the concretions. They were, in fact, so much incrusted that only a small portion could be left. The weight of the whole amount of the calcareous mass removed proved to be eighty grammes. Fig. 5 shows a calcareous residuum four weeks after the removal of the tumor; Fig. 6, a solitary concretion which made its appearance three months after the operation, when cicatrization had seemed to be almost perfect. Two weeks later, shortly before the wound had closed entirely, a small concretion appeared again (Fig. 7).

The microscopical examination, for which I am indebted to Dr. Henry T. Brooks, showed round-cell granulations and the presence of staphylococci, but no evidence of tuberculous bacilli. There were also deposits of phosphates and carbonates of calcium. The fragments of the tendons showed granulation of the circumfascicular and interfascicular connective tissue. Hæmatoxylin colorized the degenerated tissue dark-brown violet, and picrocarmin changed it into red. Recovery was slow, and did not become perfect until nearly four months after the operation. There is still now, seventeen weeks after the operation, a slight stiffness of the fingers. The general condition is very good.

I am under the impression that the toe which I had exarticulated thirteen years before was the seat of the

FIG. 6.

same affection. The case will remain under observation, and a report will be published.

Now, what was the integral character of this disease? There was a much degenerated (cheesy) tissue in the state of necrobiosis, which seemed to have a sort

of magnetic effect, so to speak, on the dissolved calcareous salts, inducing them to amalgamate. Such petrifications are found in tuberculous (cheesy) foci of the lungs, and not infrequently in endocarditis and pericarditis, in old pleuritic bands, in uterine myomata, and in

Fig. 7.

renal epithelium. In the walls of blood-vessels, as well as in degenerated thyreoid glands, I have had an opportunity, by means of the Röntgen rays, to define the mode of petrification. (See The Value of the Röntgen Rays in Arteriosclerosis, *New York Medical Journal,* January 22, 1898; Allgemeines über den Kropf und seine Behandlung, *New Yorker medicinische Monatsschrift,* October, 1900; and *Fortschritte auf dem Gebiet der Röntgenstrahlen,* iv, 3.)

The tendons and their sheaths seem to be but seldom the seat of predilection for calcareous deposits. Still, with the increasing popularity of the Röntgen rays more light may also be thrown upon the pathology and significance of this hitherto unknown disease, for which I have suggested the name tenontitis and tenontothecitis (instead of tendinitis and tendovaginitis) prolifera calcarea.

A COMBINED INTRANASAL AND EXTRANASAL OPERATION FOR THE CORRECTION OF A CONGENITAL CONCAVE VERTICAL AND LATERAL DEFORMITY OF THE NOSE, WITH THE REPORT OF A CASE.*

By BURTON S. BOOTH, M. D.,

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On September 9, 1897, I was consulted by Miss S., then eighteen years of age, who complained of a post-nasal trouble, which upon examination proved to be due to a slight thickening of the lymphatics in the vault of the nasopharynx. Examination of the nasal fossa revealed a deviated cartilaginous sæptum; the convexity, which was high up near the dorsum, was to be seen in the right nostril. Examination of the external nose revealed the following condition: The nasal bones were non-developed and appeared to spread, especially at their lower ends, leaving a V-shaped space through which could be seen the dorsal edge of the sæptum. The latter assumed a slight curve, the convexity being to the left, thus leaving a depression on the right side of the nose over the nasal bone. This condition, together with an atrophy of the muscles and tissue, gave a curved and sharp appearance to the bridge of the nose, so that with the saddle-back deformity due to the spreading and non-development of the nasal bones, and to some extent a like condition of the ethmoidal and sphenoidal bones, the case was one in which I was not enthusiastic to recommend an operation, but, instead, advised the use of a nasal wash and dismissed her with a request that

Fig. 1.

she return again in a few weeks. From that time until February 16, 1900, I lost sight of her. On this date she consulted me again and was desirous of having an opera-

*Read before the Section in Laryngology and Rhinology of the New York Academy of Medicine, February 27, 1901.

tion to relieve the embarrassing deformity, which was a source of constant annoyance. After a thorough examination I decided that two operations would be necessary—one to correct the deviation of the sæptum, and

FIG. 2.

the other the saddle-back and pinched-like deformity of the external nose. Fig. 1 will give some idea of the appearance of the nose before the operation, although the portrait was taken long before she decided to be operated on, and the position assumed was one calculated to hide rather than to show the deformity.

On March 8, 1900, I did the intranasal operation to correct the deviation of the sæptum, as follows: After irrigating the nose, I applied a ten-per-cent. solution of cocaine by means of cotton and an applicator, rubbing it into the membrane thoroughly for about ten minutes, after which I applied a solution of adrenal capsule in the same manner for about one minute; by this time the field of operation was completely anæsthetized and the membrane appeared thoroughly blanched. A sharp-pointed bistoury was now plunged through the most prominent portion of the convex sæptum into the opposite nostril, the cutting surface of the knife directed anteriorly; after I had made a sufficiently large opening a blunt-pointed, curved bistoury was substituted to avoid injuring the tissue of the opposite nostril, and made to cut through the warped cartilaginous sæptum anteriorly. The bistoury was then reversed and passed through the warped cartilaginous sæptum posteriorly until the bony sæptum was reached. A small nasal saw, such as is used to remove spurs from the sæptum, was now substituted, and with it I divided a small portion of the bony sæptum which was included in the deviation. The operation had thus far caused but very little pain and comparatively no hæmorrhage. I now applied more cocaine and adrenal as in the beginning. In order to completely destroy the resiliency of the sæptum, and at the same time relieve the curved appearance in the bridge of the nose, I deemed it necessary to make two incisions, the first running from the bridge to the floor of the nose, crossing the anteroposterior incision, dividing the cartilaginous sæptum at the most prominent part of its convexity, the same as in the Asch operation; the second incision was made to divide that portion of the sæptum lying between the upper part of the anteroposterior incision and the bridge of the nose, just anterior to the bony sæptum. These incisions were made with the sharp-pointed bistoury. The sæptum was now grasped between the broad blades of an Adams forceps, and by a rotary movement the resiliency of the sæptum was broken up. The index finger was then introduced into the nostril containing the convexity, and the sæptum was pushed into the opposite nostril. The latter part of the operation was somewhat painful, but not enough so to interfere with or restrict in any way the procedure. In order to keep the upper part of the sæptum in the median line, it was necessary to plug the attic of the right nasal vestibule with tannic-acid gauze. The nasal splints ordinarily used were not deep enough to hold it in proper place, but by this means, together with the aid of a nasal splint, I was able to keep the sæptum in a good position until it healed. (The splint was pushed under the gauze and helped to hold it in place.)

The patient was kept in bed for forty-eight hours after the operation, at the end of which time the splint and packing were removed, the nostrils were irrigated with normal warm aseptic salt solution, after which the gauze and splint were replaced. This line of treatment was continued on alternate days for four weeks, when the parts were found to be completely healed and in good position, the curve having entirely disappeared from the bridge of the nose and its contour being very much improved in appearance, although the saddle-back deformity and pinched expression were still present.

On April 14th, under general anæsthesia, ether being employed, the following extranasal operation was per-

FIG. 3.

formed to correct the external deformity: The patient being well under the anæsthetic, and the parts having been previously prepared, an incision was made in the median line over the dorsum of the nose extending from

a point about in the centre of the glabella of the frontal bone to near the distal end of the cartilaginous sæptum. The soft parts having been cut through and pushed aside, the nasal bones were loosened from their bony attachment by means of a strong forceps, after which they were elevated, especially the right one, which was more depressed than the left. Pieces of gauze were now packed in each nostril, under the nasal bones, to hold them in place. The next step in the operation consisted in drawing into place, to fill in or relieve, as it were, the pinched-like appearance of the nose. This was accomplished by means of a curved needle armed with a piece of aseptic catgut which was made to take a circuitous course in the following manner: The needle was inserted into the deep tissue at a point corresponding with the lower border of the compressor muscle on the left side of the nose; it was directed upward and made its exit about three quarters of an inch above its entrance. It was then passed over the dorsum and made to enter the deep tissue of the right side at a point corresponding with the point of exit on the left side, passing downward in a shirring-like manner, emanating at a point opposite the point of entrance of the left side. The ends were now tied carefully, pulling the soft tissue up so as to fill in the depressions. This being done, the skin was brought into place and held there by a subcutaneous suture, silkworm-gut being used; the nose was dusted over with aristol and dressed, the patient was placed in bed and kept there twenty-four hours, at the end of which time she was allowed to get up, and the wound was dressed.

Everything looked favorable and the dressing was replaced. The wound was looked after every day for five days, when it was found that it had healed by primary union. The silkworm-gut suture was now withdrawn and a light dressing kept on for a few days, when the patient was dismissed, the result being most satisfactory, as will be noticed in Figs. 2 and 3. I may add that little or no scar resulted from the incision, thanks to the subcutaneous suture, and at the present time there exists nothing but a slight scratch, hardly discernible.

I am indebted to Dr. John O. Roe, of Rochester, for the information I obtained from his article which appeared in the *American Medical Quarterly* for June, 1899. Although I was unable to follow his method of operation, I obtained a great deal of information which was of assistance to me in the above-described operation.

I believe that the combined use of cocaine and adrenal capsule as a local anæsthetic and hæmostatic in correcting deviation of the sæptum is preferable to that of a general anæsthetic, at least in a large proportion of cases, for the following reasons:

1. There is less immediate danger from heart failure or suspension of breathing, accidents not uncommon in chloroform and ether anæsthesia, even in the hands of the most intelligent and practised administrators.

2. The hæmorrhage during the operation is *nil.* But, many will say, what occurs after the operation? I believe the danger of secondary hæmorrhage following the use of adrenal is offset by the danger of the suspension of animation following the use of a general anæsthetic. Especially is this true if every precaution is observed to guard against this accident; for instance, packing the nostrils with tannic-acid gauze is a precaution not unworthy of observance. The astringency of the tannin cannot be denied, and it certainly does insure, to a certain extent, against secondary hæmorrhage. After forty-eight hours the gauze can be removed and the splint substituted.

Citing a case in point, I may say that, on December 1, 1900, in my office, I operated upon Miss Lottie L., of Johnstown, N. Y., to correct a deviated sæptum. Cocaine and adrenal were used for their anæsthetic and hæmostatic properties. A ten-per-cent. aqueous antipyrine solution was used to paint the sæptum of the right nostril as an experimental precaution against secondary hæmorrhage. Instead of inserting a nasal splint in each nostril, as is usually done at the completion of this operation, I packed both nostrils with tannic-acid gauze and sent the patient home with directions to use ice-cloths over the nose and to keep quiet. In three hours a slight hæmorrhage occurred in the right nostril, the one in which I had used the antipyrine. The bleeding was no more severe than I have frequently seen when the operation had been done under general anæsthesia, and it ceased upon removing the packing from that nostril and injecting it with a solution of tannin. The packing in the left side was not disturbed for forty-eight hours, when it was removed, and both nostrils were washed with a salt solution. Upon examination, the sæptum was found to be in the median line. A clean nasal splint was fitted to the left nostril and the patient was sent home, with a request to return in forty-eight hours.

It will be seen from the history of this case that the packing had kept the sæptum in as good position as a splint would have done. I admit that the patient was obliged to breathe through the mouth while the packing was in place, but I also maintain that this is the case in the majority of instances in which the splint is used, because it is usually occluded by clotted blood. The danger of ear complications following the use of the packing is no greater than that following the use of the nasal splints.

3. The operator can see what he is doing at every step during the operation. This is an advantage not secured under general anæsthesia.

4. The patient can sit upright and hold his head in place during the operation—an obvious advantage.

5. No special instruments are necessary—a step toward simplifying the operation.

6. The operation can be done as well in an office as in a hospital. This not only saves time and expense, but will be preferable to a large percentage of patients.

7. The pain is insignificant, and certainly less distressing than the nausea and vomiting following the use of ether.

In conclusion, I wish to say that I am aware that there are cases in which it is necessary to use a general anæsthetic, and that I do not wish to be understood as

advocating the use of local anæsthesia to the exclusion of general anæsthesia. For example, in small children and in neurotic subjects, I believe general anæsthesia is imperative.

HOSPITAL APPOINTMENTS. ARE THEY OPEN TO WOMEN?

By MISS HELEN MacMURCHY, M. B.,
TORONTO, CANADA.

"THEY are unusually valuable, and the men get them," says Dr. Garrett Anderson, the greatly esteemed dean of the London School of Medicine for Women, in a recent article.[1]

The dean is alluding particularly to interne or resident medical assistant appointments.

But women have been practising medicine only half a century. Dr. Elizabeth Blackwell graduated in 1849, and the first woman to practise medicine in England matriculated at the University of St. Andrew's, in 1862, "without any warning to the authorities or preliminary elevation of a feminine banner, in all quietness and discreetness, asking admission to the medical classes. This first student, one of those quiet women who attain their objects without that blowing of trumpets which is supposed to accompany feminine efforts . . . was Mrs. Garrett Anderson. Work so serious and genuine as hers probably acted with good effect."[2]

Considering the short time, the great competition for these posts, and the years required for great movements to develop, is the number of appointments held by women physicians as small as it seems?

To aid in answering this question, the following list has been compiled for the Woman's Medical College, Toronto, Canada. The list shows a total of 559 medical appointments—government, municipal and hospital—held by women physicians (and also 11 appointments recently opened to competition). Of these, 215 are resident; 302 (including 114 resident) are in the United States, and 188 (including 99 resident) are in the British Empire.

ENGLAND.

London.—1. *The Royal Free Hospital.—Staff consists of 44 physicians and surgeons, of whom 12 are women, holding the following appointments: 1 medical registrar, 1 surgical registrar, 1 assistant pathologist, 1 demonstrator of pathology, 3 anæsthetists, 3 medical assistants, 2 surgical assistants, 1 ophthalmological assistant, 1 throat, nose, and ear assistant, 2 resident assistant medical officers.

2. The New Hospital for Women.—Staff consists of 41 physicians and surgeons, of whom 28 are women, holding the following appointments: 4 consulting staff, 5 physicians and surgeons for in-patients, 6 physicians and surgeons for out-patients, 6 clinical assistants, 2 ophthalmic surgeons, 3 anæsthetists, 1 pathologist, 3 resident assistant medical officers.
3. Battersea District Maternity Hospital.—2 resident medical officers.
4. Canning Town Hospital.—1 consulting surgeon, 1 consulting physician, 1 resident medical officer, 1 assistant medical officer.
5. Clapham Maternity Hospital.—2 physicians for in-patients and out-patients, 2 resident house surgeons.
6. Belgrave Hospital for Children.—Resident medical officer.
7. *Bethnal Green Workhouse and Infirmary.—2 assistant medical officers.
8. *Camberwell Infirmary.—2 assistant medical officers.
9. Centre London Throat and Ear Hospital.—Clinical assistant.
10. Chelsea Hospital for Women.—2 anæsthetists.
11. East London Hospital for Children.—Clinical assistant.
12. Evelina Hospital for Children.—3 clinical assistants.
13. Golden Square Throat Hospital.—Clinical assistants.
14. *Greenwich Infirmary.—Assistant resident medical officer.
15. North London Hospital for Consumptives.—Clinical assistant.
16. North Western Hospital, Hampstead.—Assistant resident medical officer.
17. Paddington, Victoria Orphanage.—Assistant resident medical officer.
18. Plaistow Maternity Charity.—Medical officer.
19. Royal Ophthalmic Hospital (Moorfields).—2 clinical assistants.
20. St. John's Skin Hospital.—Clinical assistant.
21. *St. Pancras Workhouse.—Resident assistant medical officer.
22. Walthamston (N. E.) General and Children's Hospital.—House surgeon.
23. West End Hospital for Nervous Diseases.—Registrar.
24. Western Ophthalmic Hospital.—Clinical assistant.
25. West Ham Workhouse and Schools.—Resident assistant medical officer.

Provincial.

1. *Birkenhead.*—Maternity Hospital.—Honorary surgeon.
2. *Birmingham.*—Midland Hospital for Women and Children.—Honorary physician, anæsthetist.
3. *City Asylum.—Resident medical officer.
4. Free Hospital for Children.—Acting physician.
5. *Brentwood.*—*Essex Co. Asylum.—Third assistant medical officer.
6. *Bristol.*—Royal Hospital for Women and Children—House surgeon.
7. *Colchester.*—E. Anglian Sanitarium for Consumption.—Resident medical officer.
8. *Gateshead on Tyne.*—*Workhouse.—Resident medical officer.

[1] *The Gentlewoman*, January 5, 1901.
[2] *Memoir of Principal Tulloch*, by Mrs. Oliphant.
*Resident staff composed of men and women physicians.

9. *Huddersfield.*—*Infirmary.—Assistant house surgeon.
10. *Hull.*—*City Asylum.—Assistant medical superintendent.
11. Victoria Hospital for Women and Children.—Assistant physician.
12. Victoria Hospital for Sick Children.—Honorary assistant physician, house surgeon.
13. *Lancaster.*—*County Asylum.—Resident assistant medical officer.
14. *Lincoln.*—*Bracebridge Asylum.—Resident medical officer.
15. *Liverpool.*—Victoria Infirmary.—Resident medical officer.
16. Samaritan Hospital.—Honorary physician.
17. *Manchester.* — Clinical Hospital for Women and Children.—Assistant physician, house surgeon.
18. *Chorlton Union Hospital.—Second resident medical officer.
19. *Merton (Surrey).*—*Merton Asylum.—Resident assistant physician.
20. *Minston (York).*—W. Riding Asylum.—Resident assistant physician.
21. *Morpeth (Northumberland).*—*Morpeth Asylum.—Resident medical officer.
22. *Newcastle.*—*Union Infirmary.—Resident medical officer.
23. *Nottingham.*—Hospital for Women.—Assistant surgeon.
24. *Oxford.*—Eye Hospital.—Senior clinical assistant, house surgeon.
25. *Rotherhithe.*—Cottage Hospital.—Medical officer.
26. *Salford.*—*Union Infirmary.—Resident medical officer.
27. *Sheffield.*—*Wadsley Asylum.—Resident medical officer.
28. Children's Hospital.—Resident medical officer.
29. *Tooting.*—*Fever Hospital.—Assistant resident medical officer.
30. *Tooting (Lower).*—Grove Hospital.—Assistant resident medical officer.
31. *Tunbridge Wells.*—Eye, Ear and Throat Hospital.—Assistant resident medical officer.
32. *Virginia Water (Surrey).*—*Holloway Sanatorium for the Insane.—Resident medical officer and pathologist.
33. *Woodford Bridge (Essex).*—*London Co. Asylum.—Assistant medical officer.
34. *York.*—The York Dispensary.—Resident medical officer.
35. *York.*—*The Retreat (Quaker Asylum).—Resident medical officer.

SCOTLAND.

1. *Bridge of Weir.*—Consumption Hospital.—Medical officer.
2. *Edinburgh.*—Hospital for Women and Children.—Physician, resident medical officer, assistant resident medical officer.
3. Deaconess Hospital.—Resident medical officer.
4. *Royal Hospital for Children.—Resident medical officer.
5. *Victoria Hospital for Consumption.—Resident physician.
6. *Dumfries.*—*Crichton Asylum.—Resident medical officer.
7. *Dundee.*—*Workhouse and Infirmary.—Resident medical officer.
8. *Royal Infirmary.—Assistant resident medical officer.
9. *Gartnavel.*—Asylum.—Staff appointment.
10. *Glasgow.*—Samaritan Hospital.—Assistant anæsthetist, 2 resident house surgeons.
11. Victoria Infirmary.—Gynæcologist.
12. Maternity Hospital (W. Branch).—Physician in charge, outdoor house surgeon.
13. Royal Hospital for Children.—Extra physician.
14. Lock Hospital.—Assistant surgeon.
15. Royal Infirmary.—House surgeon (gynæcologist).
16. *Govan (S.).*—Fever Hospital.—Resident physician.
17. *Kirkmichael (Perthshire).*—Parish.—Parish medical officer.
18. *Larbert (Stirlingshire).*—Asylum.—Resident medical officer.
19. *Leith.*—*General Hospital.—House physician, assistant house physician, outdoor resident surgeon.

Orkney Islands.

20. *Eday.*—Medical officer.
21. *Westray.*—Medical officer.
22. *Loughoyne on Hoy.*—Medical officer.

IRELAND.

1. *Belfast.*—Mater Infirmorum.—Resident physician.
2. *Cork.*—Lindville Asylum.—Resident medical officer.
3. *Dublin.*—Coombe Maternity Hospital.—Resident and assistant to the master.
4. Richmond.—Assistant medical officer, gynæcologist.

AUSTRALIA.

1. *Adelaide.*—Adelaide Hospital.—Resident medical officer.
2. *Brisbane.*—Women's Hospital.—Attending surgeon.
3. Children's Hospital.—Out-patient physician.
4. *Melbourne.*—*Melbourne Hospital.—2 resident medical officers.
5. Queen Victoria Hospital for Women.—Resident medical assistant.
6. Children's Hospital.—Resident medical assistant.
7. *Sydney (N. S. W.).*—Children's Hospital.—Resident medical officer.

SOUTH AFRICA.

Durban.—St. Aidan's Hospital.—Medical officer.

EGYPT.

1. *Alexandria.*—The Women's Infirmary.—Physician.
2. Egyptian Government.—Plague medical officer.
3. *Suez.*—Board of Quarantine.—Medical officer.

CEYLON.

Colombo.—Lady Havelock Hospital and Lock Hospital.—Medical officer.
Government of Ceylon.—Lady medical officer.

INDIA.

1. *Agra.*—Maternity Hospital.—Medical officer.
2. *Amrasti.*—Lady Dufferin Hospital.—Medical officer.
3. *Bettlah.*—Dufferin Hospital.—Medical officer.
4. *Bombay.*—Kama Hospital.—House surgeon.
5. *Calcutta.*—Victoria Dufferin Hospital.—Medical superintendent.
6. *Delhi.* — St. Stephen's Hospital. — Physician in charge, assistant physician.
7. *Jodhpur.*—Jaswant Hospital.—Medical superintendent.
8. *Lahore.*—Maternity Hospital.—Senior physician.
9. Lady Aitchison Hospital.—Medical superintendent.
10. *Lucknow.*—Kinnaird Memorial Hospital.—Resident medical officer.
11. *Ludhiana.*—Charlotte Hospital.—Assistant physician and surgeon.
12. *Madras.*—Indian Medical Service Government Maternity Hospital.—Resident medical officer.
13. Royal Victoria Hospital.—Medical superintendent.
14. *Nahan.*—Woman's Hospital.—Medical officer in charge.
15. *Nagpore.*—Dufferin Hospital.—Medical officer in charge.
16. *Patna.*—Duchess of Teck Hospital.—Medical superintendent, assistant medical officer.
17. *Rajkot.*—Women's and Children's Hospital.—Medical officer in charge.
18. *Shikarpur.*—Dufferin Hospital.—Medical officer.
19. *Trivandrum.*—Women's and Children's Hospital.—Principal medical officer.
20. *Ulwar.*—Dufferin Hospital.—Medical officer.
21. *Calcutta.*—Indian Government Hospital.—Plague medical officer.
22. *Bengal.*—Indian Government Hospital.—Plague medical officer.
23. *Poona.*—Indian Government Hospital.—Plague medical officer.

UNITED STATES OF AMERICA.

CALIFORNIA.

1. *San Bernardino.*—*State Hospital for Insane.—Assistant physician.
2. *San Francisco.*—U. S. Quarantine Station.—Assistant physician.
3. *Children's Hospital.—Attending physician, interne.
4. Florence Crittenden Hospital.—4 attending physicians.
5. †City and County Hospital.—Interne.
6. St. Winnifred's Hospital.—Interne.
7. Women's Hospital.—Interne.
8. *Stockton.*—*State Insane Asylum.—Assistant physician.
9. *Ukiah.*—*State Hospital for Insane.—Assistant physician.

COLORADO.

Denver.—†Arapahoe Co. Hospital.—Interne.
†St. Luke's Hospital.—Interne.

CONNECTICUT.

Middletown.—*Hospital for Insane.—Resident physician.

DISTRICT OF COLUMBIA.

Washington. — *Emergency Hospital. — Assistant physician.

ILLINOIS.

1. *Chicago.*—*Woman's Hospital.—Visiting surgeon, interne.
2. *Cook Co. Hospital.—2 visiting physicians, interne.
3. Women's and Children's Hospital (Mary Thompson).—Medical superintendent.
4. Provident Hospital.—Assistant physician.
5. Consumptive Hospital.—Interne.
6. Post-graduate Hospital.—Assistant physician.
7. *Kankakee.*—*Hospital for Insane.—Assistant physician.

IOWA.

1. *Independence.*—*State Asylum.—Assistant physician.
2. *Mount Pleasant.*—*State Asylum.—Assistant physician.

KANSAS.

1. *Kansas City.*—Institution for the Blind.—Assistant physician.
2. *Newton.*—†Axtell Hospital.—Assistant physician.
3. *Topeka.*—†Christ's Hospital.—Interne.

MAINE.

The Maine Insane Asylum.—Assistant physician.

MARYLAND.

1. *Baltimore.*—*Johns Hopkins Hospital.—2 internes.
2. Good Samaritan.—1 resident physician, 2 internes.

MASSACHUSETTS.

1. *Boston.*—The New England Hospital for Women and Children.—Resident staff, 9, all women; advisory staff, 4, all women; attending staff, 18—16 women, 2 men; consulting staff, 12, all men.
2. Vincent Memorial Hospital.—Visiting physician.
3. Lucretia Mott Infirmary.—Visiting physician.
4. *Danvers.*—*State Hospital for Insane.—Assistant physician.
5. *Medfield.*—*State Hospital for Insane.—Assistant physician.

†Resident staff open to competition by men and women physicians.

6. *Northampton.*—*State Hospital for Insane.—Assistant physician.
7. *Roxbury.*—Woman's Charity Club Hospital.—Medical superintendent, interne.
8. *Taunton.*—*State Hospital for Insane.—Assistant physician.
9. *Westborough.*—*State Hospital for Insane.—Assistant physician.
10. *Worcester.*—State Hospital for Insane.—Assistant physician.
11. Memorial Hospital.—Assistant physician.
12. *Isolation Hospital.—Assistant physician.

MICHIGAN.

1. *Detroit.*—Woman's Hospital.—Interne.
2. Maternity Hospital.—Interne.
3. *Traverse City.*—State Asylum.—Assistant physician.
4. *Ann Arbor.*—University Hospital.—Assistant physician.

MINNESOTA.

1. *Minneapolis.*—*N. W. Hospital.—Assistant physician.
2. Insane Hospital.—Interne.
3. City Hospital.—Bacteriologist.
4. *St. Paul.*—*City and County Hospital.—2 house physicians.

NEBRASKA.

1. *Omaha.*—†St. Joseph's Hospital.—Interne.
2. †Presbyterian Hospital.—Interne.

NEW YORK STATE.

New York City.—New York Medical College and Hospital for Women.—Medical staff, 13, all women; consulting staff, 15—5 women, 10 men.
New York Infirmary for Women and Children.—Resident staff, 4, all women; attending staff, 12, all women; consulting staff, 16—1 woman, 15 men.
†New York Infant Asylum.—Resident physician.
Staten Island Children's Hospital.—2 internes.
Laura Franklin Free Hospital for Children.—Interne.
Brooklyn Memorial Hospital.—2 internes.

1. *Albion.*—House of Refuge for Women.—Assistant physician.
2. *Bedford.*—*N. Y. State Reformatory for Women.—Assistant physician.
3. *Binghamton.*—*State Hospital for Insane.—Assistant physician.
4. *Brooklyn.*—*State Hospital for Insane.—Assistant physician.
5. *Buffalo.*—*State Hospital for Insane.—Assistant physician.
6. *Hudson.*—House of Refuge for Women.—Assistant physician.
7. *King's Park.*—*State Hospital for Insane.—Assistant physician.
8. *Middleton.*—*State Hospital for Insane.—Assistant physician.
9. *Newark.*—State Asylum for Feeble-minded Women.—Assistant physician.
10. *Ogdensburgh.*—*State Hospital for Insane.—Assistant physician.
11. *Poughkeepsie.*—*State Hospital for Insane.—Assistant physician.
12. *Rochester.*—*State Hospital for Insane.—Assistant physician.
13. City Hospital.—Assistant visiting physician (outdoor).
14. *Smyrna.*—Craig Colony for Epileptics.—Assistant physician.
15. *Syracuse.*—Hospital for Women and Children.—Assistant physician.
16. *Utica.*—*State Hospital for Insane.—Assistant physician.
17. *Ward's Island.*—*State Hospital for Insane.—Assistant physician.
18. *White Plains.*—*Bloomingdale Asylum.—Assistant physician.
19. *Willard.*—*State Hospital for the Insane.—Assistant physician.

NORTH DAKOTA.

Jamestown.—*State Asylum.—Assistant physician.

OHIO.

1. *Columbus.*—*State Hospital.—Assistant physician.
2. *Cincinnati.*—Presbyterian Hospital.—Interne.
3. *Cleveland.*—*General Hospital.—Attending physician, interne.
4. Wesleyan Hospital.—Interne.
5. *State Hospital for Insane.—Assistant physician.
6. *Toledo.*—*State Hospital for Insane.—Assistant physician.

PENNSYLVANIA.

1. *Chester.*—Chester Hospital.—2 staff physicians.
2. *Elwyn.*—Training School for Feeble-minded.—Assistant physician, gynæcologist.
3. *Harrisburg.*—*State Hospital for Insane.—First assistant physician.
4. *Norristown.*—†Charity Hospital.—Interne.
5. State Hospital for Insane.—Resident physician.
6. *Sunbury.*—Mary Packer Hospital.—Medical staff.
7. *West Chester.*—Chester Co. Hospital.—Staff physician.

1. *Philadelphia.*—The Woman's Hospital of Philadelphia.—Resident staff, 10, all women; attending staff, 22, all women; consulting staff, 16—5 women, 11 men; clinical lecturers' staff, 6—4 women, 2 men; clinicians' staff, 27, all women.
2. Hospital of the Alumnæ of the Woman's Medical College.—Resident staff, 3, all women; clinicians' staff, 17, all women; consulting staff, 10—4 women, 6 men.
3. West Philadelphia Hospital for Women.—Resident staff, 3, all women; attending staff, 11, all women; consulting staff, 11—4 women, 7 men; clinicians' staff, 13, all women.

4. Widows' Asylum.—Examining physician.
5. Lying-in Charity.—2 resident physicians, 1 assistant resident physician.
6. County Prison (Women's Department).—Resident assistant physician.
7. Hospital for Insane (Women's Department).—Resident assistant physician.
8. Home for Consumptives.—Resident assistant physician.
9. Hospital for Incurables.—Resident assistant physician.
10. †Methodist Episcopal Hospital.—Interne.
11. †Blockley.—Interne.

VIRGINIA.

Staunton.—*Lunatic Asylum.—Resident physician.

FRANCE.

Paris.—*Paris Hospitals.—Interne.

GERMANY.

Berlin.—Police Medical Department.—Medical officer for female prisoners.

RUSSIA.

The Poor Law Service.—Medical staff.
The County Medical Service.—Medical staff.
The Municipal Ambulance Service.—Medical staff
St. Petersburg.—City Hospitals.—55 staff appointments.
Thirty-six City Districts.—15 medical officers.

HOLLAND.

Amsterdam.—Municipal Physicians.—Physician to the female officials.

SWITZERLAND.

1. *Berne.*—Psychiatric Clinic.—Assistant physician.
2. *Zurich.*—Obstetrical and Gynæcological Clinic.—Fourth assistant physician.
3. Psychiatric Clinic—Second assistant physician.

COREA.

Seoul.—The Corean Government.—Physician to the imperial household.

NOTE.—Corrections and additions to this list will be very welcome.

TWO ELMS, SHERBOURNE STREET.

An Institute of Tropical Medicine has been established by the city of Hamburg, with the support of the German Empire. The director of the institute is Dr. Nocht, formerly a surgeon in the German army, a student under Professor Koch, and medical officer of the port of Hamburg during the cholera epidemic of 1892. Dr. Ollwig, who accompanied Professor Koch on his tropical expedition, will be assistant director of the institute.

A CONTRIBUTION TO THE EXPLANATION OF THE NATURE OF THE SO-CALLED PREDISPOSITION TO INFECTION WITH STAPHYLOCOCCI.*

BY F. W. GAERTNER, M. D.,
SAGINAW, MICHIGAN.

PREDISPOSITION is an expression in medical science which is used daily, but the nature of it has not yet been ascertained. Aristotle knew the sense of the word and distinguished between a predisposition which was inherited and one which was acquired. This is a classification which still exists and which always will exist. If we ask ourselves what predisposition is—the different susceptibilities of individuals for diseases—it is not very difficult to arrive at the conclusion, by experience and consideration, that predisposition to a disease is either inherited or acquired by certain changes of the whole organism, or of only single organs, favorable to the reception and cultivation of germs.

According to our knowledge of to-day, nearly every disease in which predisposition is in question results from an infection with pathogenic micro-organisms. In what way these germs immigrate into the body, whether through the respiratory or the digestive tract, or through the pores of the skin, or by direct infection of the skin, does not matter. It is sufficient to know that man is constantly exposed to this noxiousness. But how it happens that one is more or less susceptible to these noxious germs than another, we must confess that we do not know as yet sufficiently. In spite of that, this enemy of the human body, working in the dark, is well known and feared by every layman on account of its effects; in spite of that, every physician acknowledges the fact of a predisposition; we only have suppositions as to what conditions are favorable for it.

In studying the effect of subcutaneous injections of *Staphylococcus pyogenes aureus* in rabbits, I have always obtained the same results, provided I took the same quantity of a pure culture each time. Five rabbits were infected under aseptic precautions in the subcutaneous connective tissue of the back, two inches from the scapula and three fourths of an inch from the vertebræ, with the same quantity of the same culture. The wound, about half an inch long, was closed tight by one stitch. After twenty-four hours quite an inflammation was perceptible, which, by paling off, gave place to a bulging of the skin where the infection took place. This bulging, which had the consistence of soft rubber, broke on the third day *post infectionem,* after the redness had disappeared entirely. The pus which came out of the wound dried up quickly and closed it by a thick scab. But under this natural cover the original abscess spread to a phlegmon about two inches square which, after the removal of the scab by pressure, emitted a thick, whitish pus. This pro-

*Read before the third Pan-American Medical Congress, held in Havana, Cuba, on February 4, 5, 6, and 7, 1901.

cess reached its greatest extent on the twelfth day, from which time on the phlegmon did not spread any further. The pus formation was very profuse up to the above-mentioned time, but confined itself to that circumference without involving further tissues. These animals were killed on the thirtieth day *post infectionem,* and the post-mortem gave in all five cases the same result, viz., after an extensive cutaneous section of the above-described bulge, a cavity appeared filled with thick pus separated in all directions from the normal tissue by large masses of connective tissue. This natural wall of protection, a product of the inflammation, had grown together so firmly with the muscles of the skin and the fascia resting underneath that a separation of these tissues was practically impossible. All the organs were found normal. It still has to be added that, except for a slight rise in temperature in the first days *post infectionem,* no general symptoms of blood-poisoning were noticed; on the contrary, the animals showed a marked alacrity and a fine appetite. The same experiments were tried on three more rabbits with the same result. Thus I secured a series of experiments which, with equal quantities of *Staphylococcus pyogenes aureus* injected, confirmed the fact of an equal effect of the same, and I could then start to investigate the conditions which favored the development of germs in the fluids and tissues of the organism.

Acting upon the fact which is observed by every general practitioner, that anæmic and chlorotic individuals are much more easily subjected to infectious diseases than individuals with the normal quantity and quality of blood, I endeavored to prove this well-known observation by experiments. I distinguished in them between a general and a local anæmia. The artificial anæmia was obtained by bleeding from the vena jugularis externa. From every animal in the ten respective cases, one tenth of all its blood, that is, according to its weight, two or three drachms, was withdrawn. After four days these animals were infected in the above-described way with staphylococci; at the same time, four animals with the normal quantity of blood were infected with the same quantity of the same culture. The hæmoglobin of the blood of the sound animals was in proportion to that of the anæmic ones, as fifty to thirty. The anæmic animals showed in the following days a very much quicker abscess formation than the normal ones. The phlegmon spread out to the size of the hand, while the sound rabbits only had a pus cavity of the size of a walnut. The general symptoms of the animals made artificially anæmic were very different ones. High temperature up to 106° F., bristling hair, no appetite, and increased thirst were the features, so that four of them died. The six others recovered very slowly after the phlegmon ceased to grow. A post-mortem of the rabbits did not show any pyæmic metastasis in any of the organs. But implantation of the blood from the hearts of those dead animals on agar-agar gave rise to exuberant cultures of *Staphylococcus pyogenes aureus.* In contrast to this development of staphylococci was that with local anæmia. In two rabbits the main artery of the right ear was ligated, and in two others the right arteria cruralis just below Poupart's ligament. All four rabbits were infected with the same quantity of the same culture, each one of the two with the ligated right-ear arteries in both ears, and each one of the two with the ligated right crural arteries in both legs. The result was, that in the normally nourished ears and legs abscesses developed quicker than in the locally anæmic ones.

The difference in the results under these two apparently equal conditions has to be looked for in the entirely different effect of general and local anæmia. General anæmia represents in our case a general diminution of the blood, a poorer nourishing of the tissues, but a restitution of the quantity of the fluid of the blood without a simultaneous augmentation of the blood corpuscles. Thus, there existed on the fourth day after the bleeding considerable hydræmia before the regeneration of the blood corpuscles had begun, which could be learned by evidence from the hæmometer. In local anæmia we only have considerable decreased nourishing of the tissue without change in the quality of the blood. But its gradual regeneration by collateral circulation soon restores the poorly nourished tissues, and the growth of the cocci, which ceased almost entirely at the cessation of the blood supply after the ligation, continues in its normal above-described way. In general anæmia, therefore, only the qualitative alteration of the blood exerts a favorable effect on the increased growth of the cocci.

In order to prove still further that it was principally hydræmia, as a secondary state of the blood in anæmia, which produced a quicker rise of staphylococci cultures, the following experiments were made. The leading idea connected with them was the question Does the staphylococcus thrive better on or in hydræmic than in normal blood?

From two normal, sound rabbits—hæmoglobin fifty and fifty-five—I withdrew by the vena jugularis externa of each one tenth of their blood which I caught in three test-tubes and had it coagulate in an oblique position. At the same time I bled to death a rabbit which four days before I had made artificially anæmic—hæmoglobin thirty-five—the blood of which I also had coagulated in six sterilized test-tubes. All twelve I sterilized by keeping them four days in succession, two hours daily, in a thermostat at 154° F. Now, after the growth of any other germ was excluded, I applied with the same quantity of a pure culture of *Staphylococcus pyogenes aureus* a streak culture in each tube. After twenty-four hours there was in the anæmic and normal blood a very perceptible difference in the growth. The streak cultures in the hydræmic blood were spread in all directions in the characteristic way of the aureus, while the culture on the normal blood did not show any change. To be sure of this very important result, the experiment was once more repeated with the blood of the two anæmic rabbits men-

tioned above and that normal one, all three of which I bled to death. The same difference in growth of bacteria on the anæmic and the normal blood was obtained. But with these results it has not yet been proved why the hydræmic blood gives the better condition for the culture of the bacteria than does the normal one.

If we consider what a pathological state of blood hydræmia is in anæmia of the most variable origin, we have to locate it in disproportion to the red and white blood corpuscles on one side, and the water contents of the serum on the other. The latter has the task of compensating for the quantity of blood withdrawn by some artificial or pathological conditions, in taking up considerable water from the tissues. Thus the increased quantity of water in the blood serum, in comparison with the quantity of the solid ingredients of blood, causes hydræmia. It is, therefore, only left to examine whether the hydræmic serum indeed contains that agent which makes the staphylococci grow more actively in anæmia. That the other solid ingredients of the blood have no part in it, I proved with the experiment that staphylococci on a placenta sanguinis from hydræmic or normal blood hardly showed any growth, not to speak of its being a different one. In order to get a sufficient quantity of hydræmic and normal blood, I bled to death two rabbits which had been made anæmic four days before—hæmoglobin thirty—and two normal rabbits—hæmoglobin fifty. From these different quantities of blood I separated the serum with the usual technics and had it coagulated and sterilized in a number of test-tubes. On sterilization, this fact was so very conspicuous that it took fully twenty-four hours longer to coagulate the hydræmic blood serum than the normal one at a constant temperature of 158° F. A streak culture was now applied to both the hydræmic and the normal serum with a pure culture of *Staphylococcus pyogenes aureus*. A surprising difference in growth was the result. The whole oblique surface of the hydræmic serum was covered with that beautiful golden-yellow culture of *Staphylococcus pyogenes aureus*, while the staphylococci on the normal serum only showed a very small growth.

Not yet content with these results in considering whether this difference of growth also occurred in the circulating blood, I was reminded of the experiment of Wyssokowitsch, who proved that cocci injected into the blood would entirely disappear after twenty-four hours. Hence the fact that staphylococci thrive better on hydræmic serum than on the normal one, must coincide with the result of an injection of cocci into hydræmic circulating blood. These, therefore, ought not to disappear after twenty-four hours, but, multiplying, should cause symptoms which demonstrate a general infection.

For this purpose three rabbits were made anæmic by one tenth of their amount of blood each. On the fourth day after the bleeding I injected into the vena saphena magna of each one the same quantity of *Staphylococcus pyogenes aureus* culture, which was dissolved in an 0.7-per-cent. solution of sodium chloride. In order to confirm this the same quantity was injected into a normal rabbit. Eighteen hours afterward I could not find any cocci in the blood of the normal rabbit, while a streak culture on agar-agar with the blood of the anæmic animals proved a decided vitality of the cocci. Twenty-eight hours after the injection, one of the three anæmic rabbits died, and a streak culture made from its heart blood produced twenty-four hours later a large growth of staphylococci, but in the organs there have been no cocci found as yet. The second anæmic rabbit died fifty hours after the injection, and it showed in the last hours of its life the distinct symptoms of general infection, such as bristling hair, no appetite, unusual thirst, etc. Cultures of heart blood on agar-agar gave a positive result, and Gram's method showed great numbers of cocci in several glomerules and in the endothelium of the renal arteries. The third rabbit remained alive, but a very rapid and forced respiration gave the impression of an infectious pneumonia. On the sixth day after the injection I still could prove that staphylococci were in the blood, but on the eighth day they had disappeared. From now on the rabbit recovered very rapidly.* Three rabbits were kept for four days without any solid food, but they were allowed to drink all the water they wished. They lost heavily in flesh, the hæmoglobin decreased from fifty--fifty-two to thirty-eight--forty-one, but the quantity of the blood was not decreased, because of the compensating supply of water. Thus hydræmia existed. After these animals had been infected with the usual quantity of staphylococcus, a quicker and more proliferous formation of abscesses was noted than in the normal animals infected at the same time.

A further experiment, which also demonstrated the foregoing, which originated in the experiment of Kussmaul, who found that the quantity of water in the blood of animals fed with dry or seed nourishment varied perceptibly from that of animals nourished with grass food, was modified so that two rabbits were kept without food or water and were infected on the fourth day of fasting with the same quantity of staphylococcus. One of the animals from that time on only received sago and rice, the other one only grass and salad; no water was given to either of the rabbits. The success was astonishing: in the animal fed with green food an abscess developed in a very much shorter time than in the one fed with seeds. The abscess of the first-mentioned rabbit broke spontaneously on the third day, at which time the other rabbit showed only a small bulging at the place of the infection. To confirm this experiment, two rabbits were starved in the same way, infected with the same quantity of staphylococcus, and fed, one with green food, the other with seeds. To the latter, water was given in sufficient quan

*There can hardly be any doubt that, according to all these experiments, it is the hydræmia which furnishes a favorable predisposition for the infection, and it will therefore not be difficult to understand the further investigations, because the rest on the same basis.

tities; in consequence, abscesses of the same size developed in both animals.

Another proof that the hydræmia is the main cause of the quicker cultivation and multiplication of germs in the body is obtained in the following experiment: Three rabbits were made anæmic by bleeding from the vena jugularis, three other rabbits were also deprived of one tenth of their blood, and all were infected at the same time in the same place with the same culture of staphylococcus. The same infection took place with two normal rabbits. After twenty-four hours the three rabbits which had been made anæmic four days before the infection with cocci had the first signs of an abscess.* On the fifth day *post infectionem* the first rabbits showed very profuse formations of pus; the normal animals had an open abscess of the size of a hazelnut, and those infected immediately after the bleeding, phlegmons of the size of a walnut. The pus formation of the latter animals, after their blood had become hydræmic—hæmoglobin thirty-five on the fifth day—surpassed the size of the abscesses of the normal rabbits, while the rabbits which had been made anæmic four days before the infection were ahead of all and showed the most favorable ground for the cultivation of germs.

The best analogue and illustration in practice of these last experiments is puerperal fever, which does not set in in most cases until from four to nine days after the infection. There is more or less loss of blood at every confinement, and because the restoration of the quantity of blood occurs faster than the restoration of the quality, the blood naturally becomes hydræmic, and it is just then that the first symptoms of a pyæmic infection alarm the attendants.

If, finally, we recall once more the results of all our experiments and take especially into consideration the demonstration of the first and the last facts of our investigation, showing that, by anæmia consequent on bleeding and starving, the infected animals showed a quicker multiplication than the normal animals infected in the same way, we need not hesitate to conclude that the conditions which favor a disposition to infectious diseases have to be looked for in the hydræmia of anæmia.

PNEUMONIA, ITS PROPER MANAGEMENT IN CHILDREN; HYGIENIC, DRUG, AND DIETETIC DETAILS.†

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The statement is sometimes made that pneumonia can be aborted. Thus it frequently happens that a child will suddenly be attacked with high fever with a correspondingly accelerated heart's action, and an increased frequency of respirations, disturbing the normal ratio of the respiration to the pulse—which usually is 1-4—so that it becomes 1-2 or 1-3. When the latter condition exists, the onset of pneumonia may be suspected. A vigorous treatment, consisting of the application of a mustard foot bath for two or three minutes to produce copious perspiration, besides the use of one-drop doses of tincture of aconite, repeated every hour for six successive doses, and the administration of half-drachm doses of spiritus Mindereri, will aid in establishing diaphoresis, thus reducing the temperature and frequently causing a total disappearance of the symptoms. At such times the administration of small doses of calomel, from one tenth of a grain to half a grain, repeated every three hours until liquid stools are produced, will frequently eliminate by means of the bowels decomposing food, which may have been the cause of this toxæmia, resulting in the febrile symptoms previously noted.

Treatment when the Disease is Established.

Fever Treatment.—When high fever persists in a weak child with very low resisting power, such fever must be reduced. To be plainer, the child's system must be carefully watched while fever is in progress. One child will tolerate a temperature of 105° F., laugh and play, and take its food regularly, while another child in a similar pulmonary condition will show extensive cerebral irritation, somnolence, tremor, twitching of the muscles, possibly convulsions, at a temperature of perhaps only 103° or 104° F. In this latter instance, it merely shows that the poison from the pneumococcus infection has overwhelmed the nerve centres governing heat production, and in such instances, when decided nervous or cerebral symptoms present themselves, "a reduction of temperature is demanded," or we must not be surprised to see convulsions set in with probably a fatal termination.

How Shall we Reduce the Temperature in Children?—When we consider that antipyretic drugs depress the nerve centres governing heat production and increase the work of the emunctories, already loaded down by poison brought to them for elimination, it can be seen that their use is contraindicated. Those who believe in phagocytosis may be reminded that antipyretics arrest the development of leucocytosis, and thus remove one of the means of destroying the germs of the disease according to one theory, or the antitoxine generated or developed according to another. (Hobart A. Hare.)

Jacubowitsch and Muller and many others have proved conclusively that antipyrine decreases the elimination of urea by the urine. It also decreases the urinary flow, which is a very harmful effect, when we consider that it is of great importance to eliminate effete matter from the body. That antipyretics depress the heart's action is only too well known, and therefore,

*With considerably less symptoms the two normal animals followed, while in the freshly anæmic ones hardly any change at the place of the infection was to be seen.

† Read in a discussion on pneumonia at a meeting of the Eastern Medical Society, held April 12, 1901.

rather than combine them with musk or camphor or other cardiac stimulants, I have discarded them for a great many years.

In a paper read before the Post-graduate Clinical Society, on The Treatment of Hyperpyrexia in the Course of Pneumonia in Children, based on a series of cases treated by me in the babies' wards of the Post-graduate Hospital, about ten years ago, great stress was laid on the depressing effect of antipyretics in the treatment of this disease. My only success has been achieved by the use of cold in the form of the sponge bath, using alcohol and water, or frequently acetic ether, the latter to be used with great care, owing to its volatile and inflammable tendencies.

When fever persists in spite of sponging the skin with tepid water to which alcohol is added, or sponging with acetic ether, a good plan is to apply a cold compress consisting of a towel or sheet wrung out in cold water and placed next to the skin. This is to be repeated as often as every half-hour, unless special indications demand that it be used oftener.

Henoch insists on the use of cold applications in the following words: 1. The sudden application of cold externally causes a deep inspiration and consequent forcing of air through the alveoli, thus preventing atelectasis. 2. The derivative irritation of the cuticle causes hyperæmia, papules, and sometimes shedding of the epidermis. 3. The air surrounding the child should be kept moist, and to aid this a tea-kettle with steam or a spray apparatus should add moisture to the water, which constantly evaporates, owing to the heat beneath the cold application.

Hot Poultices.—The general use of hot poultices for the treatment of pneumonia, as was customary years ago, has been abandoned. The hot poultices may produce a local hyperæmia and affect in this manner the vessels of the lungs, but they help to maintain the fever, and there is always the danger of an exposure when they are removed.

The Oil-silk Jacket.—Properly made, this will be much more beneficial in the catarrhal pneumonia of children.

Elimination.—The use of calomel has already been mentioned, to cleanse the gastro-intestinal tract and to prevent constipation. In this same manner it is extremely necessary to give children large quantities of water, so that the action of the kidneys will be stimulated thereby. One of the best drugs to use as a diuretic for young children, and one that stimulates the heart's action as well, is coffee, properly sweetened and with a drop of milk added.

Antipneumococcus Serum.—This matter is still in its infancy, although it has been before the profession for several years. It is still in its experimental stage. Very interesting reports can be found in following the studies of Klemperer, of Berlin, and others. They used the products of the *Micrococcus lanceolatus* for an injection into animals, and produced immunity to infection by these same organisms. The same organisms, however, remained present in an unchanged form; in other words, they caused a development of antitoxine in the tissues, which enabled the animals to resist the toxine of the germs. When the toxine was heated to 106° F., the immunity conferred was found to be greatly increased over that induced by injections made at a lower temperature. Klemperer asserts that the development of crisis in croupous pneumonia occurs at a time "when the body has produced sufficient antitoxine to antidote the toxine." Thus he states, which is very true and seems plausible, that when a crisis occurs in the course of a pneumonia as early as the third or fourth day, it merely shows that the body has generated enough antitoxine to antidote the toxine in the system. (Hobart A. Hare, *System of Practical Therapeutics.*)

Hygienic Treatment.—When there is a pneumonia, the first thing required is pure air. This cannot be insisted upon strongly enough. It is surprising to find that the majority of rooms in which patients are lying ill with croupous pneumonia usually have the windows and doors closed and the bedside surrounded by the anxious relatives, thus depriving the patients of much of the oxygen that might otherwise have been there. I am strongly in favor of giving oxygen for the immediate relief of dyspnœa or when there is intense cyanosis or labored breathing. The cheapest and most rapid method of giving oxygen is to "exclude all visitors but the nurse, and by cautiously opening the windows, screening the patient, to prevent chilling the surface."

In that form of catarrhal pneumonia in which dyspnœa and cyanosis become very manifest, there can be no doubt that life can be saved by the alternate use of the hot and cold douche, or the hot and cold bath. The child can be stripped and lifted from its bed, and immersed in a tub of water of a temperature of 100° to 105° F. This will produce a distinct irritation of the skin without doing it any damage; after a few moments, when the child is accustomed to this high temperature, it should be placed in a tub of cold water at a temperature of 70° F. In a few seconds it can be removed from this cold water, and again immersed in the hot. These powerful alternate stimulations of the peripheral sensory nerves cause wide dilatation of the peripheral capillaries, so that the surface of the child's body, which had been marbled or possibly mottled in appearance, becomes evenly red, and sometimes distinctly hyperæmic. As soon as this cutaneous hyperæmia develops, the evidences of engorgement of the respiratory organs and of labor on the part of the heart often disappear. This form of treatment is valuable not only in catarrhal pneumonia, but when there is distinct evidence of heart failure. The child should not be permitted to remain long enough in the cold water to be chilled, or in the hot water long enough to have its temperature raised, but each bath should be given quickly, and the child while in the water

should be briskly rubbed. This is a very important point, and one on which Baruch insists. These alternate hot and cold applications will not only relieve the engorged and laboring circulatory system, but will frequently cause a violent fit of coughing by this direct stimulation, thus cleansing the bronchial tubes of secretions accumulated therein. If the child is exceedingly weak, a few drops of Hoffmann's anodyne, five to ten drops in a teaspoonful of water, may be given before each bath. The frequency of the baths should depend on their indication, although several hours should be permitted to elapse before repeating them.

Drug Treatment.—It is a good plan to try to relieve the cough by giving small doses of codeine, one tenth of a grain every two or three hours, to try to induce sleep at the same time. Rest is most valuable to restore a child's strength, and I place rest along with fresh air, and, last but not least, supporting strength with food, as the three most important indications for treatment.

Feeding.—The most important point to be remembered in the course of the treatment of a pneumonia is to feed the patient. Thus, we must remember that, unless we sustain life with food, all drug treatment, all the reduction of temperature, will prove futile. If the appetite is subnormal, and a child will refuse food, then the choice, if it is a breast-fed baby, of drawing off the breast milk with the aid of a breast pump and feeding it through a funnel with the aid of a catheter must be considered. If vomiting is provoked, or the stomach will not retain food, owing to nausea and vomiting from severe fits of coughing, then the addition of some pancreatin and soda must be considered, and the child fed *per rectum* for a short time, at intervals of three or four hours. For older children, the yolk of an egg made into an emulsion, with some starch water added and some table salt, may be injected into the rectum as a temporary means of sustaining life, if the child refuses food by the mouth. To children who will take food, seltzer and milk is very grateful; concentrated beef juice or freshly expressed steak juice or the white of a raw egg added to water as a means of quenching thirst and nourishing the body must be considered. Soups made from beef or chicken or veal or mutton, with the addition of a cereal, are very good, if frequently administered, to give strength and sustain life. The physician who strengthens his patient by the administration of food will be most successful.

The Use of Stimulants.—The use of coffee has already been mentioned as one of the most valuable adjuvants in the course of the treatment of a pneumonia in children. So also has the use of Hoffmann's anodyne been mentioned as a means of stimulating the heart's action when a bath is to be given. My general rule has been to oil the machinery of the body in both catarrhal and lobar pneumonia by giving whiskey in small but repeated doses, just as we would give it in the course of any other toxæmia—for example, in diphtheria.

The dose required depends on the individual susceptibility or on the individual tolerance of this drug. If the pulse is carefully watched for several hours while we are administering alcohol, we can at once see what effect is being produced, and tell whether to increase or decrease the quantity. To order alcoholic stimulation haphazard is wrong, and it should not be left to the judgment of the nurse, much less to the discretion of the family, but the physician must order specific doses, and then increase or decrease the dose, taking the pulse and the other symptoms as a guide.

To recapitulate: When fever begins, give one-drop doses of aconite, repeated every hour, with or without fresh spiritus Mindereri, of the latter half-teaspoonful doses every hour until a general diaphoresis is produced.

Give calomel until a liquid green stool is produced; it will not only exert a hydragogue effect, but will also stimulate the flow of bile and the action of the kidneys. This is extremely important in view of a possible complication of nephritis.

Remember that water will carry off toxic products through the gastro-intestinal tract and also stimulate the flow of urine; it is also valuable to aid in producing diaphoresis and will be very grateful while fever is high. Therefore give water *ad libitum.*

Children cough and invariably swallow their expectorated matter. It is important to remember this, and give an occasional dose of calomel or castor oil. This so-called eliminative plan of treatment must be carried out throughout the whole course of treatment.

Antipyretics of the coal-tar series are, one and all, cardiac depressants, hence it is advisable to give them, if at all, with some stimulant, such as musk or camphor. I have made it a rule not to give antipyretic drug treatment at all, but to rely entirely on the cold pack, and, if the temperature gives rise to nervous symptoms or cerebral symptoms, such as convulsions or stupor or delirium, the tub bath will be found advantageous. The tub bath is to be given tepid as a full bath, the temperature to be 90° F. and gradually cooled to 70° F. by the addition of cold water or a piece of ice. The duration of the bath will depend on the amount of shock produced, but usually the bath need not be prolonged for more than from three to five minutes. Vigorous rubbing of the body while the child is in the bath will stimulate the circulation and prevent collapse. In very young and delicate infants it is advisable to give a few drops of Hoffmann's anodyne immediately before giving the bath.

A mustard foot bath will invariably stimulate the circulation and promote diaphoresis, and in this manner lower the temperature. The mustard best to be used is pulvis sinapis nigri, known in commerce as German mustard. It is best used by sewing about an ounce into a small bag made of cheese cloth, immersing this bag a few minutes before placing the child in the tub, and adding enough water to make a full bath covering the feet and ankles to the knees. The duration of the bath is to be

about two minutes. Severe local hyperæmia will be produced thereby.

Intense dyspnœa will best be relieved by applying dry cups over the thorax, three on each side anteriorly and posteriorly, to be repeated in a few hours if relief has been afforded thereby.

Oxygen can best be obtained by proper ventilation. This should consist in excluding all persons having no active business in the management of the case, opening the windows, screening the patient from draughts, and enforcing absolute quiet. Induce sleep by Nature's methods unless severe symptoms demand treatment, then, and then only, give codeine. I regard this latter drug as safe, in small doses, one tenth of a grain, to be repeated in an hour or two if no effect has been produced. The latter dose is for a child one year old. Older children can be given more in proportion; younger children one half the dose or one twentieth of a grain.

Where a toxæmic condition exists we must stimulate. Hence I invariably give some good Tokay wine or some good whiskey properly diluted. This is given to prevent collapse and heart failure, which would mean serious trouble.

Lastly, the sheet anchor of our treatment should be to feed our patient and thus try to sustain life until this acute disease terminates. Milk, to which a small quantity of whiskey is added, will be well borne. Good soups, with or without cereals like hominy or sago or farina, will prove useful. Besides, the nutrient qualities of egg albumen should not be forgotten. The raw white of an egg, beaten with some sugar and a few drops of whiskey, will serve a good purpose. If the pulse and heart do not need stimulation, egg albumen, alone or added to milk, will prove very useful.

65 EAST NINETIETH STREET.

PERIPHERAL "ANÆSTHESIA-PARALYSIS"—REPORT OF AN UNUSUAL CASE OF BILATERAL BRACHIAL PARALYSIS OCCURRING DURING NARCOSIS (FOR APPENDICITIS).

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PARALYSIS of an arm or of the muscles supplied by one or more nerves of an arm, appearing after the administration of a general anæsthetic ("anæsthesia-paralysis"), is fortunately not common, but cases have occurred in the experience of many surgeons, and several have been reported by Büdinger (1), Kron (2), Garrigues (3), Braun (4), Angelesca (5), Decroly (6), Krumm (7), Mally (8), Plaezek (9), Vautrin (10), Nuel (11), Casse (12), Duval and Guillain (13), Erdmann (14), Hersman (15), Ingebraus (16), and others.

A thorough search of the literature reveals but four reported cases in which paralysis of both arms occurred during narcosis. Bernhardt's (17) was the first case: A woman—Laparotomy, lasting over an hour. During this time *the Trendelenburg position was employed and both arms were drawn forcibly upward and backward.* After operation there was noticed, on each side, paralysis of the infraspinatus, deltoid, biceps, brachialis anticus, supinatores longus and brevis, triceps, and pectoralis major; also hypæsthesia of the antero-external areas of both arms in the upper part. No reaction of degeneration. The patient was improving at the time of the report, two months later.

Braun (4) has reported a similar case: A woman—Resection of the pylorus. Operation lasted two hours. *Both arms were drawn strongly up above the head and tied together.* Immediately after the operation there was complete sensory and motor paralysis of both arms. Six days later, paralysis was limited to the triceps, biceps, brachialis anticus, deltoid, latissimus dorsi, supraspinatus, and infraspinatus of each side; there was also paresis in the trapezii, pectorales majores, flexors of the fingers, some extensors, interossei, and the muscles of the thenar and hypothenar eminences; the sensibility was diminished. At the time of death, fifteen weeks after operation, the symptoms had not entirely disappeared.

Mally (8) has described this interesting case: A feeble and cachectic man—Pylorectomy. *Trendelenburg position.* After recovery from narcosis there was complete paralysis of both arms. Improvement was prompt. On the fifth day the paralysis was confined to the deltoid, biceps, brachialis anticus, and supinator longus and supraspinatus of each side. Atrophy was marked by the fifteenth day. In the second month *arthritis developed in both shoulders, with resulting reflex paresis and atrophy of the deltoids.* All other muscles recovered completely in function and size.

Leszynsky (18) records the following case: Vaginal hysterectomy. *Trendelenburg position. A leg-holder was employed, the strap being fastened tightly over the left shoulder.* After operation there was paralysis of both arms, complete in the left. Three months later, paralysis persisted in the left bicipital group and supinators; there was paresis of the deltoids, the right bicipital group, and the supinators, and the left triceps, hand extensors, and shoulder rotators. Some atrophy. No objective sensory changes. Faradaic contractility lost in the affected muscles. Patient was improving at the time of the report.

Since the following case is but the fifth in literature, possesses some unique features, and impresses practical lessons, it is worthy of record:

John T., aged twenty-five years, a native of Ireland; clerk. Previous and family histories negative. No neurotic taint in patient or his family. No alcohol or other "habit." Patient is over six feet in height, of medium muscular development, and strong. On September

4, 1900, the writer operated upon him during a recurrent attack of appendicitis, removing the adherent organ through a "trap-door" (Kammerer) incision in the rectus sheath. The skin and deeper layers of the abdominal wall were entirely closed by sutures. The operation lasted a little over an hour. Chloroform was administered without the slightest trouble, by an experienced and cautious anæsthetist. There was no struggling or vomiting in the induction of the anæsthesia, and no untoward symptom during its maintenance. At no time was it necessary to exert pressure on the neck or jaw to push the latter forward, and the head was not turned from the median line. About one ounce of the anæsthetic was employed. The patient lay supine upon a flat metal and glass (cushioned) table. At first both arms were abducted by the anæsthetist and the hands drawn above the head; this was for a few minutes only. Then the right arm was held by a nurse at right angles to the body, the forearm at right angles to the arm; the left arm was continued in a position of abduction of about 130°. No extraneous pressure or undue traction was exercised. The patient was placed in bed in a natural position. On recovering from narcosis, both upper extremities were found completely paralyzed, except for extremely feeble movement in the fingers of the right hand. Loss of function in the spinati and serrati magni showed that some, at least, of the supraclavicular branches of each brachial plexus were involved. No pupillary or other signs of affection of the sympathetic communicating branches were noted, however, and the head movements were fairly good. Paralysis of the pectorales, teretes, subscapulares, and deltoidei indicated that, of the infraclavicular branches, the anterior thoracic, circumflex, and subscapular nerves were involved, as well as the longer cords. The hands and forearms were anæsthetic. There was no record of the extent of anæsthesia in the upper arms; no hyperæsthesiæ, paræsthesiæ, or pain; no R. D. Temperature had risen from 101° F. before operation to 102° F., but fell next day to 100° F., and soon reached normal. No vomiting that day.

Treatment by massage, passive movements, electricity, and strychnine sulphate (*per os*) was instituted at once. Contrary to expectation, each application of galvanism was followed by immediate marked and permanent improvement. After a few days, however, galvanism failed of result, and faradaic electricity only was continued. *September 17th.*—Wound healed *per primam.* The patient feels well; no pain or fever. Right arm much improved, left forearm muscles still almost completely paralytic. Faradaic reaction in the muscles of the left hand diminished somewhat, otherwise still nowhere any R. D. Anæsthesia in the right hand disappeared quickly; in the left hand disappearing slowly. *September 21st.*—Out of bed. Massage, faradaism, and strychnine maintained. Improvement continued steadily, and cure was complete in two months. No atrophy was appreciable.

This belongs to the second of the groups of postanæsthetic paralyses, as arranged by Mally and adopted by subsequent writers, viz.: (*a*) Central (apoplectic); (*b*) peripheral; (*c*) hysterical; (*d*) reflex. The arguments advanced by Verhoogen (19) and by Casse (12) in favor of a specific action of chloroform in the production of a toxic neuritis are refuted by experience and by the opinions of other observers. At most, the part played by the anæsthetic in the production of these paralyses consists in the reduction of the muscular tone (resistance to pressure), and in the deprivation of the patient's ability to withdraw his arm from a vicious position. Peripheral "anæsthesia-paralyses" are traumatic in origin. This traumatism may be in the nature of a stretching of the nerves, or of pressure upon them, direct or indirect (in this connection it is interesting to note a case of bilateral brachial paralysis in a hod-carrier, reported by von Rieder (20), or of both stretching and pressure. Bernhardt attributed the paralysis, when following strong abduction of the arms, to pressure on the brachial plexus between the clavicle and the transverse processes of the sixth and seventh cervical vertebræ, which view finds confirmation in the articles of Braun, Krumm, Hoedemaker (21), and Nonne (22). Budinger found the pressure exerted through arm abduction to exist between the clavicle and the first rib, as did also Kron and Krumm. Gaupp (23) emphasizes the importance of the rotation of the clavicle upon its long axis, in the production of pressure at this point. Sehrwald (24), in reporting a significant case of bilateral brachial paralysis occurring in a gymnast from swinging up a ladder hand over hand, points the analogy of that case to the paralysis occurring from superextension of the arms under narcosis. He likewise attributes it to pressure on the brachial plexus between the elevated clavicle and the first rib, but asserts that paralysis of the long thoracic nerve occurs by bruising of the plexus between the clavicle and the scalenus medius, in those cases in which the arm is superabducted (especially if the head is extended). Kron also regarded the scalenus medius as an occasional point of pressure. Pressure of the head of the humerus against the nerve trunks is considered a source of paralysis by Braun, Kron, and Bardenheuer (as sometimes demonstrated in shoulder luxations). Duval and Guillain, from their experimental and critical studies, deny the theory of pressure between the clavicle and the first rib. They attribute brachial palsies following dislocation, contusion, or abduction of the arm during narcosis, to stretching of the nerve-roots. Accordingly the paralytic symptoms vary in degree with the lesions in the latter, the fifth and sixth roots being most liable to suffer (Erb's paralysis). They also explain the less intensity of the sensory paralysis on anatomical grounds, and consider any predisposition to be anatomical rather than morbid.

None of the views above quoted seems entirely adequate to explain the case here reported. But whatever the exact anatomical explanation may be, the traumatic element is evident. The practical deductions as to the prevention of these always disagreeable and sometimes permanent sequelæ are even more obvious:

1. The care of the arms is as important a part of the anæsthetist's duty as is the administration of the narcotic. They should never be allowed to hang over the edge of the table. This position threatens the musculospiral nerves by pressure, and the entire plexus by stretching.

2. Rotation and superextension of the head should be exercised only while emergency requires it.

3. Prolonged pressure of any kind should be avoided, be it that of an assistant's hand or body, or that of a harness. When used, the shoulder strap of a leg-holder should pass over the tip of the shoulder, or over a large pad of cotton wool on the neck; or, best of all, should be held by an assistant (the anæsthetist can usually spare a hand to pull the strap up from the body from time to time). It should be remembered that this apparatus has occasionally caused paralysis in a leg, as in one of Garrigues's cases.

4. The common practice of drawing the arms alongside the head, however much it may contribute to the convenience of the anæsthetist and the comfort of the operator, is a bad one, and should not be tolerated. Remembering that in some of the cases reported (25) the arms were lying alongside the body during the operation, the safest rule to follow is to *avoid allowing either arm to remain for more than a few minutes in any one position, however innocent that position may appear to be.*

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30 WEST NINETY-SECOND STREET.

THE RELATION OF ARTERIAL CHANGES TO THE HEART.*

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IN instances in which arteriosclerosis becomes evident at an early age, the influence of heredity should not be ignored. It may be that the individual has arteries whose powers of resistance are originally below par. They are simply made up of poor material. They probably would not resist the ordinary wear and tear of life very long, even under the best conditions of habits and environment. Whenever the habits and environment are bad, the necessary breakdown comes at a premature period. It is not essential in these cases to discover any source of chronic intoxication, such as alcohol, lead, gout, or syphilis, so as to reach a plausible explanation of a result which we observe. Many times no doubt, with superficial or insufficient inquiry, we are inclined to regard continuous overwork of muscles as being the direct, efficient cause of arteriosclerosis. With a judgment more carefully formed, we are apt to find other causative factors involved. Imperfect assimilation of food, due to a too large or insufficient supply, to poor preparation of it, to irregular hours, to work undertaken too soon after the digestive process has begun, all these help to produce arteriosclerosis by changing both quantity and quality of blood in an abnormal manner. Of course renal disease may be only a secondary manifestation of arterial changes. It may be and frequently is obscurely present for a long while, and later we are obliged to admit it as an evident or probably causative factor in the case. We recognize, therefore, that beyond the poor structure of the vessels *de novo,* there may have been later unintelligent and reckless use of them, which is explanatory of their organic changes during youth or in manhood before middle age.

In the nodular form of arteriosclerosis aneurysmal dilatation is no uncommon sequence. This dilatation is apt to occur at an early period and before the spot locally weak has been strengthened by proliferative changes in the intima. In regard to senile changes, it must be emphasized, so as to avoid confusion, how relatively rare cases of cardiac hypertrophy are as compared with those which follow the diffuse form. This fact Councilman insisted upon in his able paper read before the Association of American Physicians in 1891.

He has also shown that the liver and kidneys may be atrophied with this same senile form of arterial degeneration. The diffuse form of arteriosclerosis is frequently found among middle-aged men and particularly those who are strong and vigorous. It is in this form that we encounter usually cardiac hypertrophy. Accompanying the hypertrophy we do not find fibrous myocarditis, as a rule, unless the coronary arteries are involved. If the

*Supplementary to a discussion before the Section in General Medicine of the New York Academy of Medicine, Tuesday evening, April 16, 1901.

latter condition prevails, it is quite common to note a sclerosed and incompetent state of the aortic valves. Under these circumstances the kidneys are also more or less contracted and hard in consequence of interstitial changes. The main essential change at this period, in the small arteries, is that of thickening owing to hyaline formation in the muscular coat. Later the muscular fibres of the media may become atrophied and even show fatty degeneration of cells. The capillaries, notably those of the glomeruli, become thickened from hyaline degeneration. In those instances in which the pulmonary artery is sclerosed we must also expect to find a certain degree of cardiac hypertrophy.

In many cases this condition extends generally to the veins. In mitral stenosis it is especially to be remarked that we have a sclerotic state of the pulmonary veins. The new tissue there deposited may undergo hyaline degeneration and calcification. The peripheral veins may become sclerosed without the arteries becoming involved in a similar change. High tension may exist very often in the arteries without any marked arterial changes. In these cases the tension is variable and sometimes disappears altogether, showing that it must depend upon accidental or passing conditions. Of course it may recur more or less frequently, depending upon the presence or return of the dynamic changes which may affect or produce it. When, however, high tension exists in a continuous, persistent manner, usually speaking, it is directly connected with the existence of arteriosclerosis. The slow, slanting pulse tracing is very indicative of high tension. In these tracings we find the line of ascent and descent not unlike, and there is notable absence of the dicrotic wave. During the interval between the pulse beats the artery remains full and firm to the touch, and it is very difficult at times partially to obliterate it by pressure. Here there may be confusion owing to the recurrent wave, which we should eliminate if possible, and particularly so because it is present with and characteristic of the pulse of low tension which is met with in the early stages of typhoid fever.

Clinically, I find some of the cases of cardiac insufficiency following hypertrophy due to arterial changes most interesting. Occasionally they are difficult of precise diagnosis, especially when they first present themselves to us and without an accurate previous history. They are often confounded with chronic valvular disease, and this is particularly the case where there is a pronounced blowing systolic murmur at the apex.

In the treatment of these cases, while it is often manifestly indicated for a while to give heart tonics and stimulants, such as strychnine, digitalis, and strophanthus, it is also wise to administer in moderate doses iodide of potassium, and for long periods with occasional interruptions. This we do to modify the sclerosed arteries and to influence favorably any degree of spasm which may be present locally or generally from time to time, and even in cases in which there is no reason to suspect the presence of syphilis. In some instances of the most threatening heart failure in hypertrophic dilatation, I am confident of having saved life by local or general bloodletting. A few leeches to the præcordia will now and then work wonders where drugs are temporarily of no avail. Owing to the greater mental apprehension connected with venesection, it seems preferable in very nervous patients to avoid it, if at all practicable.

42 West Thirty-seventh Street.

Therapeutical Notes.

A Diaphoretic Powder.—The *Gazette hebdomadaire de médecine et de chirurgie* for March 28th ascribes the following, from *Nouveaux rémèdes*, to Von Graefe:

℞ Powdered camphor..from $\frac{3}{10}$ths of a grain to 1½ grains;
Powdered opium.... " $\frac{3}{10}$ths of a grain to ½ a grain;
Potassium nitrate.... " 3 grains to 4½ grains;
Sugar..... 112 grains.

M. For one powder. One powder to be taken in a cup of tea at bedtime.

The Treatment of Gonorrhœa by Hot Saline Solution.—Dr. Woodruff, according to the *Medical Press and Circular* for April 10th, recommends the use of injections of saline solution, as hot as can be borne, every two or three hours, and even, if possible, every hour. Dr. Woodruff finds no necessity, under this treatment, for the administration of medicines, by the mouth, and states that the average duration of the disease in a number of soldiers thus treated was ten or twelve days only.

An Inhalation for Bronchial or Pulmonary Affections.—*Journal des praticiens* for March 16th gives the following:

℞ Menthol..... 1 part;
Eucalyptol..... 1 "
Essence of thyme..... 5 parts;
Essence of lavender..... 5 "
Tincture of tolu..... 10 "
Alcohol.....100 "

M. A teaspoonful to be added to a pint of hot water and the steam inhaled.

The "Normal Salt Solution."—There is some variation in the formulæ given by different writers. Dr. Charles A. L. Reed, in his new *Text-book of Gynæcology*, remarks that Locke has suggested the following formula and reported favorably upon it:

℞ Calcium chloride.....3¾ grains;
Potassium chloride.....1½ grains;
Sodium chloride.....2½ drachms;
Sterilized, distilled, or tap water,
enough to make.....1 quart.

M. The solution may be injected subcutaneously, into the intestine, or into a vein.

For Toothache.—*Gazette hebdomadaire de médecine et de chirurgie* for April 4th ascribes the following to Guillaumin:

℞ Crystallized carbolic acid,
Menthol,
Cocaine hydrochloride,
Chloral,
Guaiacol,
} equal parts.

Triturate in a mortar. A pasty liquid is thus obtained, easy of employment, and both caustic and anæsthetic. The caustic action may be augmented by increasing the carbolic acid.

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BRITISH APPRECIATION OF OUR MILITARY HOSPITALS.

THOSE of us who remember the superb military hospitals of the civil war know that at that time the rest of the world could teach us nothing concerning the care of sick and wounded soldiers, but might, on the other hand, have copied our methods to its advantage—and did so, for that matter. We hardly expected, however, that the present excellence of our army medical service would soon be so thoroughly appreciated as it has been by the *British Medical Journal's* correspondent with the China expeditionary force, as shown in a letter from him published in that journal for April 13th. That he made his observations with no prejudiced eyes is plain from the following passage in his letter: "I am not one of those whose habit it is to see only faults in our own departments and virtues in others, but the picture of some of the equipment I saw in the American hospital in the 'Temple of Agriculture' is still before my eyes, and I reflect that, if any local community is anxious to start a museum, they could make an excellent beginning with one of our ancient pattern velvet-lined capital cases, with its old wooden-handled instruments."

The correspondent's remarks are founded mainly on what he saw one afternoon in the American hospital in the Temple of Agriculture in Peking, but he makes the general statement that "medical arrangements in the American army possess a far higher degree of importance than in our own." He goes on to say, not only that the hospitals are given the best sites available, as is asssumed to be the case in the British army, but the amount of skilled labor supplied for employment under the direction of the chief medical officer is as unstinted as the funds placed at his disposal, and he quotes "combatant" officers as saying good-humoredly: "It's no use trying to get a nail knocked in anywhere else until the hospital is finished." He does not approve of our rations as compared with those of the British soldier, but we will let him go on in his own words, as follows: "His (the American soldier's) diet on active service contains luxuries and delicacies the names of which are scarcely known in our Commissariat Department—personally, I think our Commissariat are to be congratulated, for the diet of our soldiers is, in my opinion, superior in nearly every way to that of the American army and more suited to the requirements of a campaign—but it is not till the American soldier goes to hospital that he is really in a position to appreciate how much his government loves him. I do not think it would be a serious exaggeration to say that the American Hospital in Peking could hold its own in every respect with most London hospitals. Bedsteads, bedside tables, and chairs brought from America, a 'diet kitchen' at the end of the ward, with an ample cooking range and a highly trained cook in a white apron and cap, whose life's business is cooking and who is not expected to do anything else. He is not an enlisted soldier, and he may not know one end of a rifle from another, but he can turn out any known delicacy that ever tempted the appetite of a worn-out patient. I lay stress on this, as indeed anyone would who saw those business-like 'diet kitchens' and cooks with a lavish supply of all the apparatus, materials, and paraphernalia that a *chef* could desire. The difficulty of supplying really good food to the sick on active service is a great one, but the American Government, by simply recognizing this fact and by making an extra outlay to meet the difficulty, in a large measure overcomes it."

The excellent training and efficiency of the men of the Hospital Corps excited the correspondent's admiration. "When," he says, "the work at Wei-Hai-Wei in the naval hospital became heavier than could be dealt with by the staff of the hospital, five of these Hospital Corps men were lent from the hospital ship *Maine,* and, to quote the words of a surgeon under whom they worked, 'everyone was astounded at their wonderful training.'" The high pay of these men is to him the explanation of their great efficiency, but his opinion is that "this expenditure is economy in the long run," and, while he found the hospital supplies "not less than lavish," he saw nothing that could fairly be called excessive. Indeed, he cannot believe, he declares, that the general superiority of the American over the British army medical service is due to anything else than the freer expenditure by the American Government. We hope Congress will take this

view of the matter and never again be niggardly in furnishing an adequate force of medical officers and abundant supplies for the comfort and recovery of the sick and wounded. For its size, our little band of regulars is the finest army in the world. We are much mistaken if the people will knowingly allow it to be crippled by anything that can be avoided; least of all will they tolerate anything but the best that can be had in the way of care for the "boys in blue" when they are sick or wounded. Nothing should more strengthen Surgeon-General Sternberg's hands than this appreciative British picture of the operation of his service.

A NEW JOURNAL OF PREVENTIVE MEDICINE.

It is to England that we have long been accustomed to look for solid progress in sanitary science, and from that country there now comes a publication destined, we believe, to accomplish much in furthering our advances in preventive medicine. We have reference to the new *Journal of Hygiene,* a quarterly, the first number of which, dated January, 1901, has apparently been somewhat delayed in its appearance, as is apt to be the case with new periodicals of such a high class, for it is only within the last three weeks that it has reached us. It is a fine example of the scientific journal of the present day, ranking, we should say, with our own *Journal of Experimental Medicine.* The field to be covered by the new English journal, as defined in the introduction, includes physics, chemistry, physiology, pathology, bacteriology, parasitology, and epidemiology in so far as they relate to hygiene and preventive medicine.

The new journal is edited by Dr. George H. F. Nuttall, Dr. John S. Haldane, and Dr. Arthur Newsholme, and issued by the University Press, Cambridge. Dr. Nuttall, as few if any of our readers need to be told, was until lately an associate in hygiene in the Johns Hopkins University. By his accession to the faculty of the University of Cambridge, in which he is now lecturer in bacteriology and preventive medicine, Great Britain has gained what we have lost—his personal, word-of-mouth teaching—but his writings will still reach us freely, largely, it is to be expected, in the pages of his new journal. Dr. Haldane is lecturer in physiology in the University of Oxford. Dr. Newsholme is the medical officer of health of Brighton, and no doubt he will see to the substantiation of the following sentence in the introduction: "With a view to increasing the general usefulness of the *Journal of Hygiene,* we propose not to limit the contributions entirely to reports of original observations and experiments, but to accept and encourage discussions of administrative and practical questions the importance of which is apt to be overlooked in scientific journals." In the list of collaborators we are pleased to note the names of a very large proportion representing the United States and Canada (one country from the medical profession's point of view)—no fewer than twenty-nine in a total of seventy-two.

THE SING SING "TUBERCULOSIS FACTORY."

This is what Mr. Charlton T. Lewis, speaking for the executive committee of the Prison Association of New York, of which he is the chairman, very properly calls the State prison at Sing Sing. He describes the prison as "shrouded in a chilling veil of dampness," and its cells as having never been penetrated by the purifying sunlight. Rating the air space for each inmate in the best modern prisons at a thousand cubic feet, he tells us that in the Sing Sing prison it amounts to only a hundred and fifty under the best of conditions, and with the "doubling up" frequently required by its over-populated state to not more than seventy-five—in other words, to less than a tenth of what it ought to be. The community would call it cruel to inoculate a convict with tuberculous disease; yet that is what the great and wealthy State of New York is constantly doing, and has been doing for over seventy years, by condemning men and women to years of confinement in so insanitary an abode as this prison. Some of them endure it, to be sure, but those of them who have the slightest susceptibility to pulmonary consumption are well-nigh sure to contract it—more than that, to spread it broadcast through the community after their release.

Mr. Lewis speaks none too pointedly of the incongruity of establishing State institutions for the care of consumptives and endeavoring to limit the spread of consumption by punishing persons for spitting in public conveyances, while at the same time the State maintains this hot-bed of infection in Sing Sing. It has been shown over and over again that no amount of money expended on the Sing Sing buildings could remedy their terrible destructiveness to health and life. There is but one thing to be done, and that is to raze them to the ground and build a new prison elsewhere, for the very ground itself must be tainted, to say nothing of the poisonous odors consequent on the "backing up" of sewage. Perhaps the ground may in time be reclaimed by

some germicidal agency having the potency of fire, and thus made suitable for business or dwelling houses; but meantime another prison must be provided.

The right of society to confine criminals, whether for punitive or for correctional purposes, cannot be gainsaid. It is none the less true, however, that cruel and unusual punishments are unconstitutional as well as repugnant to the public conscience. Many of the crimes for which persons are incarcerated at Sing Sing are not capital, as Mr. Lewis urges; yet the State virtually treats their perpetrators as if they were when it immures them in such an out-of-date dungeon. Sing Sing prison is an anachronism; it must go.

"DEMI-VIRGINITY."

THE *Journal de médecine de Paris* for December 9, 1900, comments on a murder trial in which a distinguished French medico-legal expert, having examined the hands of three accused persons to ascertain whether they were capable of having caused the lesions that resulted in death by strangulation, let fall the extraordinary statement that "he had also minutely examined M. L——, a demi-virgin of a kind (*demi-vierge en quelque sorte*) at the time of her first arrest, but who was no longer such when imprisoned for the second time." Well may our contemporary exclaim: "Our *confrère* of Nîmes should please inform us what are the signs which establish in legal medicine the state of demi-virginity. It would have appeared to us," continues the *Journal,* "already very difficult to affirm the existence of complete virginity, especially before a court of justice; but we have made progress, since virginal membranes may be measured by halves, quarters, and wholes." Our contemporary regards this matter as an evidence of the influence of literature upon science. There is literature and literature. But, then, this happened in France.

THE PHYSIOLOGICAL ACTION OF WINE.

ACCORDING to the *Chemist and Druggist* for April 6th, M. Roos has reported to the Paris Academy of Sciences his experiments made upon six pairs of guinea-pigs, four pairs of which were given wine daily, while the others were provided with the usual food only. M. Roos finds that in regard to endurance, weight, strength, number of offspring, and longevity, the tests were altogether in favor of the wine-fed animals. We cannot help feeling that those who are ardent in their crusade against the evil effects of alcoholism make a grave error in including light wines under their ban. We believe light white and red wines of the claret and hock order, if pure and unfortified, to be harmless in all cases, save perhaps a few isolated individuals, beneficial in very many, and practically indispensable in some, especially when taken with meals. The general use of such wines as a dinner drink, if they can be provided as cheaply as on the continent of Europe, and of as light a character—all the domestic wines produced at present are, either naturally or in consequence of sophistication, too alcoholic and "heady"—should, in our opinion, rather be hailed as an auxiliary to the cause of temperance, than included in the crusade against alcoholism.

CRYOSCOPY IN THE PROGNOSIS OF TYPHOID FEVER.

OBSERVATIONS in cryoscopy as an aid in diagnosis and prognosis have been not a few of late, but we do not recall a more serviceable short article on the subject than we find in the form of an editorial in the March number of the *Medical Age,* of Detroit, a journal, by the way, in which we always expect to find something exceptionally good. The writer in this instance summarizes Waldvogel's researches in twenty-four cases of typhoid fever. It appears that the normal freezing-point of the serum is 0.56°. The highest points observed by Waldvogel, 1.68° and 1.28°, were in two convalescents; the lowest, 0.65°, 0.63°, and 0.54°, in three fatal cases. The rise of the freezing-point was at first attributed by Waldvogel to uræmia, but further investigation led him to infer that in this he was incorrect, and he now looks upon the rise as an accompaniment of the production of an antitoxine. The inference is that, if the rise fails to occur, the organism is unequal to the production of the antidotal principle, and consequently a fatal issue is very much to be feared.

THE PATHOLOGICAL INSTITUTE OF NEW YORK STATE HOSPITALS.

WE are sorry to learn by an article that appeared in the *Evening Post* for April 20th that there are persons who are still seeking to make it appear that the director of the institute, Dr. Ira Van Gieson, is diverting its work from what they are pleased to lay down as its chief if not only legitimate field, and are agitating, therefore, for his removal. We have heretofore deprecated this sort of detraction, and expressed our confidence in Dr. Van Gieson's judgment as to what the institute was most called upon to do. Physicians in general take the same view of the matter, and we still hope that the opposition to the institute's scientific work may soon be silenced.

THE OXYTOCIC ACTION OF LUMBAR INJECTIONS OF COCAINE.

NOT the least interesting point connected with the endomeningeal use of cocaine is that of its alleged action on the uterus. Doléris, of Paris (*Klinisch-therapeutische Wochenschrift,* 1901, No. 8; *Wiener medicinische Blätter,* March 14th), asserts that, apart from full-term

parturition or the justifiable induction of premature labor, it is inadmissible, since it is prone to set up uterine contractions.

THE QUININE TREATMENT OF TYPHOID FEVER.

EVIDENTLY quinine as an antipyretic has not yet been wholly overslaughed by the new synthetics. In the January number of *Therapie der Gegenwart (Centralblatt für innere Medicin,* March 30th) W. Erb sets forth its advantages, and in the February number C. Binz assures us that he has seen no reason to recede from his advocacy of the quinine treatment of typhoid fever, now of more than thirty years' standing. Erb thinks that it not only mitigates the disease, but also shortens its duration.

"HEAD-KNOCKING" IN CHILDREN FROM A MEDICO-LEGAL POINT OF VIEW.

THE phenomenon of "head-knocking" in rickety children, which appears to be more common in England than in the United States, consists in the child's knocking its head, apparently with a good deal of satisfaction, with considerable force against the floor or some hard object. No explanation appears to be forthcoming of this peculiar phenomenon. Dr. Aldrich (*Annals of Gynæcology and Pædiatry,* March) reports such a case in a child thirteen months old, which occurred under his own observation in the Cleveland General Hospital. The child was neglected and cachectic, and its face, head, and neck were covered with contusions. The doubt entertained by the physicians of the truth of the mother's statement that the injuries were self-inflicted was dispelled in hospital by the child's beating its head against the cradle rail, and when this was prevented, by its battering its head with its hands. Dr. Aldrich very pertinently points out that "had the child been dead or too ill to longer carry out its self-chastisement before death, no jury could have been convinced that those who were her caretakers were not responsible for the bruises and death." More light on this subject is clearly desirable.

THE HOSPITALS OF JAPAN.

WE are indebted to Dr. Edward C. Register, one of the editors of the *Charlotte Medical Journal,* for a copy, in pamphlet form, of an article of his, entitled The Hospitals of Japan, which was published in the December number of that journal. Dr. Register notes the great prevalence of tuberculous disease in Japan, and accounts for it by the habits of the people, especially in continually exposing themselves to cold and dampness in their dwelling houses. It seems that there are only ten hospitals in all Japan, and the Imperial University Hospital in Tokyo is as large as all the nine others together.

News Items.

Society Meetings for the Coming Week:

TUESDAY, *April 30th:* Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, *May 1st:* New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY, *May 2d:* New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, *May 3d:* Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, *May 4th:* Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending April 20, 1901:

DISEASES.	Week end'g Apr. 13		Week end'g Apr. 20	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	29	14	22	13
Scarlet Fever	619	50	729	37
Cerebro-spinal meningitis	0	7	0	4
Measles	348	10	280	10
Diphtheria and croup	285	47	272	45
Small-pox	44	11	38	10
Tuberculosis	253	173	248	185

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from April 13 to April 20, 1901:

AMES, ROGER P., Acting Assistant Surgeon, is granted leave of absence for two months, with permission to go beyond sea.

EBER, ALBERT H., Captain and Assistant Surgeon, upon the expiration of his leave of absence, will proceed from St. St. Clair, Michigan, to San Francisco, for transportation to Manila.

KILBOURNE, HENRY S., Major and Surgeon, is detailed as a member of the board appointed to meet at the United States General Hospital, Presidio of San Francisco, for the examination of candidates for admission to the Medical Corps of the Army, *vice* BENJAMIN F. POPE, Lieutenant-Colonel and Deputy Surgeon-General, relieved.

MADARA, JAMES W., Captain and Assistant Surgeon, United States Volunteers, will proceed to San Francisco, for transportation to Manila.

MEARNS, EDGAR A., Major and Surgeon. The sick leave granted him is extended six months.

POINTDEXTER, JEFFERSON D., Captain and Assistant Surgeon, having been examined for promotion and found physically disqualified for the duties of a major and surgeon, by reason of disability incident to the service, his retirement from active service as a major is announced.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for Two Weeks ending April 20, 1901:

ALFRED, A., Passed Assistant Surgeon. Ordered to duty with the Marine Brigade, Cavite, Philippine Islands.

ANDERSON, F., Surgeon. Ordered to the Naval Dispensary.

ARNOLD, F. W., Surgeon. Ordered from the *New Orleans* to Olongapo Station, Philippine Islands.

BLACKWOOD, N. J., Passed Assistant Surgeon. Detached

from the Naval Hospital, Philadelphia, and ordered to the *Alliance.*

CURL, H. C., Assistant Surgeon. Detached from the *Castine* and ordered to the Naval Station, Cavite, Philippine Islands.

GARDNER, J. E., Surgeon. Detached from the Marine Recruiting Rendezvous, Boston, and ordered to the Naval Hospital, Cavite, Philippine Islands.

GROW, E. J., Assistant Surgeon. Detached from the *Glacier* and ordered to the *Isla de Luzon.*

MORRIS, L., Passed Assistant Surgeon. Detached from the Naval Academy, Annapolis, and ordered to the Naval Hospital, Philadelphia.

PECK, A. E., Assistant Surgeon. Ordered to the *Pensacola.*

STEPP, J., Assistant Surgeon. Detached from duty with the First Regiment of Marines and ordered to the *Castine.*

STONE, E. P., Surgeon. Detached from the Naval Dispensary, Washington, and ordered to the *Dolphin.*

URIE, J. F., Surgeon. Detached from the *Dolphin* and ordered to the Marine Recruiting Rendezvous, Boston.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending April 18, 1901:

BALLARD, J. C., Acting Assistant Surgeon. The leave of absence granted him by the Bureau letter of February 4th, is amended to read, six days from April 23d.

BERRY, T. D., Assistant Surgeon. Granted leave of absence for thirty days from May 2d.

BLUE, RUPERT, Passed Assistant Surgeon. Directed to proceed to San Francisco and report to Surgeon J. H. WHITE for special temporary duty.

CORPUT, G. H., Assistant Surgeon. Directed to proceed to San Francisco and report to Surgeon J. H. WHITE for special temporary duty.

FOSTER, M. H., Assistant Surgeon. Two days of the leave of absence granted him by the Bureau letter of March 11th is revoked.

GEDDINGS, H. D., Passed Assistant Surgeon. Directed to proceed to Buffalo for special temporary duty in connection with the installation of the Marine-Hospital Service exhibit at the Pan-American Exposition.

GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Granted leave of absence for seven days.

HALL, L. P., Hospital Steward. Directed to proceed to Boston and report to the Medical Officer in command for duty and assignment to quarters.

MCGINNIS, R. H., Acting Assistant Surgeon. Directed to proceed to St. Augustine, Florida, for special temporary duty.

MOORE, DUNLOP, Assistant Surgeon. Relieved from duty at Port Townsend Quarantine, and directed to proceed to San Francisco and report to Surgeon J. H. WHITE for special temporary duty.

PARKER, H. B., Assistant Surgeon. Directed to proceed to San Francisco and report to Surgeon J. H. WHITE for special temporary duty.

RICHARDSON, S. W., Hospital Steward. Directed to proceed to Buffalo and report to Passed Assistant Surgeon H. D. GEDDINGS for special temporary duty.

VAUGHAN, G. T., Surgeon. Reassigned to duty in the Marine-Hospital Bureau.

Appointment.

LOUIS P. HALL, of New York, appointed junior hospital steward in the United States Marine-Hospital Service.

The Annual Meeting of the British Medical Association this year will be held at Cheltenham from Tuesday to Friday, July 30th to August 2d, inclusive.

New Addition to the Rush Medical College.—Work has been begun on a seven-story brick addition to the Rush Medical College, in Chicago. The edifice is expected to be finished for the fall term. The estimated cost is $100,000.

Dr. Kinyoun, Quarantine Officer at San Francisco, Transferred.—Dr. John J. Kinyoun, of the U. S. Marine-Hospital Service, has been transferred from San Francisco to St. Paul, Minn., and Dr. Carmichael, Federal quarantine officer at Honolulu, has been appointed his successor on the Pacific coast. The change will take effect on May 1st.

A Practical Course in Bacteriology will be given at the University and Bellevue Medical College on alternate days beginning on Monday, April 29th, and concluding on May 29th. The courses will be under the direction of Dr. W. H. Park, professor of bacteriology and hygiene, assisted by Dr. Robert J. Wilson, Dr. H. H. Brooks, and Dr. R. H. Bebb, assistants in bacteriology.

An International Central Bureau for Combating Tuberculosis has been formed at the instance of the central committee of the German association for tuberculosis sanitariums, as a consequence of the correspondence carried on with foreign organizations in connection with the tuberculosis congress. The headquarters of the bureau have been established at 2 Wilhelmplatz, Berlin W., Germany.

Christian Scientists must not Practise in Georgia.—A judge of the Superior Court of Georgia recently denied the application for a charter for "The Atlanta Institute of Christian Science" on the ground that Christian Scientists cannot practise their treatment of diseases in Georgia without having been regularly graduated in medicine or having passed an examination before the medical examining board like other physicians. Judge Lumpkin holds that, according to the decision of a case in the Supreme Court of Nebraska, Christian Science is the practice of medicine.

A Compromise with Wisconsin Osteopaths.—The contest over the passage of an osteopathist bill has been settled by compromise. At a meeting of the representatives of the osteopaths and the regular physicians and members of the Committee on Public Health at Madison an agreement was reached that the medical bill shall be amended so that one of the members of the board shall be an osteopath and shall be appointed within thirty days of the passage of the bill. All osteopaths who are regular graduates of reputable colleges and who have practised in the State prior to March 1, 1901, shall be granted a license. All others shall take an examination before the board in all branches of medicine except materia medica, therapeutics, and surgery. All persons licensed must be graduates of reputable colleges of osteopathy. After 1903 only osteopathic colleges that conform with the same studies now taught in medical colleges shall be recognized by the board. Four-year courses shall be required.

San Francisco's Chinatown Cleansed.—Acting upon the authority of the State Board of Health and the Board of Health of San Francisco, an army of disinfectors and sanitary agents recently invaded Chinatown, under the personal direction of Dr. White, of the U. S. Marine-Hospital Corps, and proceeded to give the dens and dives the first thorough cleaning they have perhaps ever had. The filth and squalor of some of the underground dens was beyond description, but every nook and corner of Chinatown was fumigated and disinfected until there was not the remotest possibility of a disease germ remaining. In future Chinatown will have to live in strict accordance with the sanitary laws. There will be no

more throwing of offal into the streets and alleys, but everything will be carefully kept in iron casks and burned on certain days. There will also be a detention hospital and a morgue established in Chinatown, as well as a dispensary. The State Board of Health has an appropriation of $25,000 to expend in the work, and the Board of Health of San Francisco will cooperate with the State authorities and also expend a considerable sum in addition.

Changes of Address.—Dr. John Aspell, to No. 105 Madison Avenue, New York; Dr. M. Chertler, to No. 50 St. Mark's Place, New York; Dr. J. A. Hofheimer, to No. 123 West One Hundred and Twenty-sixth Street, New York; Dr. W. J. Pulley, to No. 945 Madison Avenue, New York; Dr. Charles Cook Ransom, to No. 66 West Forty-ninth Street, New York.

The Medical Association of Dutchess (N. Y.) County has been organized with the following officers: President, Dr. I. D. LeRoy; vice-president, Dr. E. Barnes; secretary, Dr. J. A. Atwood, and treasurer, Dr. M. T. Pultz.

The St. Louis District Medical Society held its fifth semi-annual meeting on April 11th. Dr. F. J. Tainter was re-elected president and Dr. J. C. Murphy chosen permanent secretary. The next meeting will be held in St. Charles.

The Society of Medical Jurisprudence held its eighteenth annual dinner at the Waldorf-Astoria, New York, on April 20th. Among the speakers were Father Thomas J. Ducey, Dr. William M. Polk, Charles W. Dayton, E. B. Hinsdale, Theodore Sutro, Frank Ferguson, the president, and Justice William J. Gaynor.

The Cumberland County (Pa.) Medical Society.—The annual meeting of the Cumberland County (Pa.) Medical Society was held in Bridgeton on April 11th, and these officers elected: President, Dr. L. L. Hand; vice-president, Dr. G. E. Day; secretary, Dr. J. C. Appelgate, and treasurer, Dr. Joseph Tomlinson.

The Bartholomew County (Ind.) Medical Society.—The following officers have been elected by the Bartholomew County (Ind.) Medical Society: President, Dr. Georg O. Cosby; vice-president, Dr. Elmer U. Wood; secretary and treasurer, Dr. J. L. Morris; board of censors, Dr. R. E. Holder, Dr. A. P. Roope and Dr. George T. MacCoy.

The Medical Society of the State of North Carolina will meet in Durham on May 21st, 22d and 23d, under the presidency of Dr. Julian M. Baker, of Tarboro. The oration will be delivered by Dr. Earle Grady, of Tryon. The essay will be read by Dr. R. S. Primrose, of Newbern. Dr. A. G. Carr, of Durham, is chairman of the committee of arrangements.

The Alabama Medical Association, at its session in Selma, on April 18th, elected the following officers for the ensuing year: Dr. E. L. Marechal, Mobile, president; Dr. W. T. Bride, Madison, senior vice-president; Dr. M. B. Cameron, Sumpterville, junior vice-president; Dr. G. P. Waller, Montgomery, secretary; Dr. H. G. Perry, Greensboro, treasurer, and Dr. E. B. Ward, Selma, orator.

The Milwaukee (Wis.) Medical Society held its semi-monthly meeting on April 9th. The feature of the evening was a paper by Dr. Paul Thorndyke, of Boston, on Prostatic Surgery, which was discussed by Dr. A. J. Burgess, Dr. Solon Marks, Dr. H. A. Sifton, Dr. Ralph Chandler and Dr. O. C. Thienhaus. Dr. W. C. Bennett and Dr. H. V. Wurdemann also read papers.

The Section on Surgery of the New York Academy of Medicine will meet at the Academy on May 2d. Dr. Howard Lilienthal will present a paper on The Clinical Aspects of Acute Intestinal Obstruction, and special divisions of the subject will be discussed by Dr. B. Farquhar Curtis, Dr. George E. Brewer, Dr. Charles L. Gibson, Dr. Morris Manges, Dr. Henry Koplik and others.

The Louisiana State Medical Society.—The twenty-second annual meeting of the Louisiana State Medical Society was held at the medical department of Tulane University, New Orleans, on April 18th, 19th and 20th. Dr. F. W. Parham is the president and Dr. Herman B. Gessner recording secretary. Dr. Isidore Dyer is chairman of the committee of arrangements.

The New York State Eclectic Medical Society has elected the following officers: President, Dr. F. P. Sinclair, of Lysander, N. Y.; first vice-president, Dr. T. W. Powers, of New York; second vice-president, Dr. Henry Stoesser, of Brooklyn; third vice-president, Dr. E. H. King, of Saratoga; recording secretary, Dr. S. A. Hardy, of New York; corresponding secretary, Dr. G. W. Boscowitz, of New York; treasurer, Dr. L. E. Horton, of Avoca.

The Lebanon County (Pa.) Medical Society.—At the meeting of the Lebanon County (Pa.) Medical Society recently the following officers were elected: President, Dr. John Light, Schaefferstown; vice-presidents, Dr. W. R. Roedel, Lebanon, and Dr. H. W. Gass, Mt. Etna; secretary, Dr. C. M. Strickler, Lebanon, re-elected; treasurer, Dr. C. L. Miller, Lebanon; censor, Dr. H. H. Roedel, Lebanon, and medical and surgical reporter, Dr. S. P. Heilman, Heilman Dale.

The State Medical Association of South Carolina met recently at Florence. The following officers were elected: President, Dr. T. G. Croft, Aiken; first vice-president, Dr. C. B. Earle, Greenville; second vice-president, Dr. W. P. Timmerman, Edgefield; third vice-president, Dr. J. T. Darwin, Blacksburg; corresponding secretary, Dr. William Weston, Columbia; recording secretary, Dr. T. P. Whaley, Charleston; treasurer, Dr. B. E. Baker, Charleston.

The Florida Medical Association elected the following officers at its recent meeting in Jacksonville: President, Dr. J. A. Wakefield, of Jacksonville; first vice-president, Dr. M. D. Blocker, of Chattahoochie; second vice-president, Dr. George E. Welch, of Palatka. The secretary, Dr. J. D. Fernandez, and the librarian, Dr. E. N. Trill, hold over for another year. Tampa was selected as the next place of meeting.

The Annual Dinner of the Harlem Medical Association was held on April 17th at the Hotel Majestic, New York. Twenty-four tables were clustered around the speakers' table, at which were seated a hundred physicians, their wives and invited guests. A vaudeville per-

formance and informal dance followed the dinner. The speakers were Dr. Louis J. Ladinski, Dr. John A. Wyeth, Dr. Montrose R. Richard, Dr. Emil Mayer and the Rev. George R. Van De Water.

The New York County Medical Society.—Dr. George B. Fowler, president of the County Medical Society, announced at the stated meeting of that organization, on April 22d, that the committee of seven appointed to investigate the influence of prostitution on the public health was not yet ready to present its report. Those who read papers at the meeting were Dr. A. Ernest Gallant, Dr. Thomas S. Southworth and Dr. John H. Branth. The members of the society have been invited to take part in the proceedings of the American Congress on Tuberculosis, to be held in the Grand Central Palace on May 15th and 16th.

The National Association for the Study of Epilepsy and the Care and Treatment of Epileptics will meet in Washington, D. C., May 14th and 15th next. Many papers of value from European and American students, and full reports of the progress that is being made in the care and treatment of epileptics in this country, are promised for this meeting. The president of the association is Hon. William P. Letchworth, LL. D., Portage, N. Y.; first vice-president, Dr. Frederick Peterson, New York City; secretary, Dr. William P. Spratling, Craig Colony, Sonyea, N. Y. The officers will, upon request, furnish further information of the coming meeting.

The Cuyahoga (O.) Medical Society.—The annual meeting of the Cuyahoga County Medical Society was held on April 4th at Cleveland, O. The annual election of officers resulted in the choice of Dr. C. A. Hamann as president, Dr. C. C. Stuart and Dr. L. S. Chadwick vice-presidents, Dr. Frederick C. Herrick secretary, and Dr. C. G. Foote treasurer. Dr. C. J. Aldrich, the retiring president of the society, presented his address, which was a valuable paper on the diagnosis of meningitis or inflammation of the brain. A number of interesting cases were presented, one of them being a case of spina bifida, presented by Dr. L. B. Tuckerman; another a case of tabes arthropathy, presented by Dr. W. G. Stern.

The Convention of the Ohio State Medical Society.—Preparations are already being made at Cincinnati for the convention of the Ohio State Medical Society, which meets in May. The entertainment committee has made arrangements for the 500 or 600 medical men who are expected to attend. The following compose the committee: Dr. Louis Schwab, Dr. Giles Mitchell, Dr. John L. Cleveland, Dr. Ken Dunham, and Dr. W. D. Haines. The convention will be held in the Scottish Rite Cathedral May 9th to 12th. One of the most important matters taken up will be a general sanitary measure to be presented to the convention by Dr. Byron Stanton, a member of the State board of health.

The American Medical Association Meeting.—From the large number of persons who have already signified their intention of going to St. Paul to attend the meeting of the American Medical Association, June 4th to 7th, there is every reason to believe that arrangements can be made for a special train from New York. Those who desire to avail themselves of this opportunity should at once hand in their names to, or seek further particulars from, the secretary of the New York State Medical Association, Dr. Frederick Holme Wiggin, 55 West Thirty-sixth Street, New York. The local committee of arrangements at St. Paul has announced that arrangements have been completed to run a special train through to the Yellowstone Park after the adjournment of the meeting. Full particulars regarding this excursion may be obtained from the chairman of the committee, Dr. John F. Fulton, St. Paul.

The Society for the Prevention of Consumption.—At a complimentary dinner tendered to Dr. Wm. G. Bissell, city bacteriologist in Buffalo, N. Y., on April 10th, there was organized the Society for the Prevention of Consumption. Only suggestions of its methods of work were made at the dinner, but it was decided that its principal function was to be the spreading broadcast of information concerning the disease. Dr. Benjamin G. Long, who first made the suggestion, was made chairman of a committee appointed to effect an organization. Associated with him on the committee are Dr. Bissell, Dr. Briggs, Dr. Gumaer, Dr. Thompson, Dr. Smith and Dr. Scott. Dr. Bissell was made secretary of the committee. The mayor of Buffalo will be asked to join the committee and assist in the work.

The American Academy of Medicine.—The twenty-sixth annual meeting will be held at the Hotel Aberdeen, St. Paul, Minn., on Saturday, June 1, 1901, at 11 A. M., the open session beginning at 12 M. and continuing through Monday, June 3d. The principal features of the meeting will be a symposium on Institutionalism, and another on Reciprocity in Medical Licensure. Series of valuable papers on both topics have been promised, as well as interesting papers on some other subjects. The President's Address, by Dr. S. D. Risley, of Philadelphia, will be delivered on Saturday evening, June 1st, and the annual social session held on Monday evening, June 3d. Members of the profession are always welcomed to the open sessions of the Academy. The secretary, Dr. Charles McIntire, Easton, Pa., will, on request, be pleased to send the programme, when issued, and blank applications for fellowship, etc.

Association of American Medical Colleges.—The next regular meeting of this association will be held at the Hotel Ryan, St. Paul, Minn., Monday, June 3, 1901. It will consist of two sessions, an educational session and a business session. The educational session will be opened at 2 P. M. by the president's address, followed by several papers of medical pedagogic interest. To this session all persons interested in medical education are respectfully invited. The representatives and associates of the Association of Southern Medical Colleges have received a special invitation. The members of the Confederation of State Examining and Licensing Boards are also invited. There will also be an exhibition of work done in medical colleges. At 8 P. M. the business session will be held, at which the amendments to the constitution proposed by several colleges will be considered. The report of the judicial council, the election of members and the election of officers for the succeeding year will close the programme.

The Tri-State Medical Society, composed of members of the profession from Iowa, Illinois and Missouri, closed one of the most important conventions of its history at Keokuk recently. The principal feature of the convention was the inauguration of a movement for the

enactment of strict marriage laws, and also to prevent the marriage of habitual criminals. This action was advocated in the address of the retiring president, Dr. Henry Hatch, of Quincy, Ill., and was endorsed by the convention. A committee, composed of Dr. J. C. Murphy, of St. Louis; Dr. D. C. Brockman, of Ottumwa, and Dr. Frank P. Norbury, of Galesburg, was appointed to present this matter at the next session of the legislatures of their respective States. The next convention will be held in Chicago. The following are the newly elected officers: President, Dr. J. C. Murphy, of St. Louis; first vice-president, Dr. Bayard Holmes, of Chicago; second vice-president, Dr. Ellet Orin Sisson, of Keokuk; treasurer, Dr. J. F. Percy, of Galesburg; secretary, Dr. W. B. Laforce, of Ottumwa; committee on credentials, Dr. Henry Hatch, of Quincy, Ill.; Dr. T. H. Throckmorton, of Charleston, Ia., and Dr. John Preston, of Kansas City.

The Medical Association of the District of Columbia.—At the recent election of the Medical Association of the District of Columbia the following officers were chosen: President, Dr. H. L. E. Johnson; vice-presidents, Dr. G. C. Ober and Dr. William H. Fox; secretary, Dr. Monti Griffith; treasurer, Dr. Frank Leech. A standing committee was also elected, comprising Dr. McLean, Dr. Mayfield, Dr. Marbury, Dr. Acker, Dr. D. O. Leech, Dr. McLaughlin, Dr. Holden, and Dr. J. T. Howard. Dr. J. T. Thomas, Dr. E. L. Morgan, and Dr. Shands were appointed to serve on the board of censors. The following were named as delegates to the meeting of the American Association: Dr. H. L. E. Johnson, Dr. S. S. Adams, Dr. Glazebrook, Dr. Acker, Dr. Ober, Dr. G. L. Magruder, Dr. Cober, Dr. Griffith, Dr. Capehart, Dr. Chapell, Dr. W. C. Woodward, Dr. Yarrow, Dr. D. O. Leech, Dr. Jenner, Dr. Cooke, Dr. Shands, Dr. W. N. Fisher, Dr. Heiberger, Dr. McLean, Dr. Howard, Dr. W. H. Fox, Dr. Marbury, Dr. Wellington, Dr. Morgan, Dr. Prentice, Dr. Wallace, Dr. Johnson, Dr. Wall, Dr. Miller, Dr. Key, Dr. Robinson, Dr. Thomas, Dr. E. L. Morgan, Dr. T. C. Smith, Dr. Hicklin, Dr. Hall, Dr. Wall, Dr. Brown, and others. Dr. G. Wythe Cooke was designated to confer with the American Medical Association on State organization. Dr. H. L. E. Johnson was appointed to represent the District Medical Association at the annual conference of the committee on national legislation of the American Medical Association.

Foreign Obituary Notes.—Dr. Josef Fodor, professor of hygiene at the University of Budapest, is dead at the age of fifty-eight. He was a Knight of the Order of the Iron Crown.——Dr. George Dobbert, director of the Evangelical Sanatorium for Diseases of the Lungs at Pitkajärvi, Finland, died on March 5th at the age of sixty-four.——Dr. Julian Weinberg, the oldest physician of Warsaw, Poland, is dead at the age of eighty-six.

Foreign News Notes.—No passports will be issued to lepers by either Germany, Russia, or Roumania, an agreement to that effect having been entered into by the countries named.——Dr. Otto Ahnelt has been appointed city physician of Carlsbad.——A pharmacist of Budapest who dispensed "pastillæ corrosivi" when "pastillæ piscaræ" were ordered, causing the death of the patient, was sentenced to one year's imprisonment, the forfeiture of his license to practice pharmacy, and was fined 28,000 kroners. The court of appeals reduced the term of imprisonment by two months and remitted that part of the sentence forfeiting the license, on the ground that the error was due to carelessness, and not to ignorance. The physician was not punished.

Foreign University News.—Dr. August Wasserman, a member of the Institute for Infectious Diseases, has become a *privat-docent* at the University of Berlin.——Professor Garré, a member of the privy medical council, has accepted a call to occupy the chair at Rostock vacated by Professor von Eiselsberg, who has gone to Vienna.——Dr. Shieck, formerly *privat-docent* in ophthalmology at Halle, has accepted a similar position at Göttingen.——An appropriation of 200,000 roubles has been made by the minister of war for the erection of new buildings for the departments of physiology, pathology, histology, and pharmacology at the Military Medical Academy at St. Petersburg.——Dr. Marwedd, *privat-docent* in surgery, and Dr. Nissl, *privat-docent* in psychiatry, at Heidelberg, have been made extraordinary professors.——Dr. J. Fibiger has been made professor of pathological anatomy at Copenhagen.

News of European Medical Societies.—The Fifth International Physiological Congress will be held from the 17th to the 23d of September at Turin, Italy, under the presidency of Professor Angelo Mosso. Those only are eligible for membership in the congress who belong to or are recommended for membership by some one of the national physiological associations.——The Second International Congress of Insurance Surgeons will be convened at Amsterdam on September 23d. The general secretary of the congress is Dr. Poel, 2 Rue Marie, Brussels, to whose energetic initiative the holding of the congress is due.——The Association of German Naturalists and Physicians will hold its seventy-third annual meeting at Hamburg from the 22d to the 28th of September. An unusually interesting programme is promised. Dr. Abel has been selected to act as secretary of the general committee.——The French Surgical Congress will take place at Paris from October 21st to 26th.——The fourth Italian Congress of Pædiatrics will be held at Florence from the 15th to the 20th of October, and the following themes have been already announced: Primary Infantile Atrophy, by Dr. Fede and Dr. Berti; Sepsis of the Respiratory Organs in Early Childhood, by Dr. Mya and Dr. Mensi; and Acute Infection of the Digestive Organs, by Dr. Concetti and Dr. Guaita.

Small-pox.—The number of sufferers from this disease in and around New York city hardly seems on the decrease. Many cases are reported from Jersey City, Bloomfield, N. J.; several places in Tennessee, Beloit and other cities in Wisconsin and Michigan; Sharon and other points in Pennsylvania, and at Topeka, Kans., where cases have developed in the Topeka Insane Asylum, which contains over 1,000 inmates. Many of the employés of the institution are resigning.

"The Sleeping Sickness" and Malaria; a Portuguese Medical Expedition.—According to the *British Medical Journal* for April 6th, a commission has been appointed by the Portuguese government to study the sleeping sickness in the province of Angola. This commission, which will at the same time include among its scientific researches an inquiry into the ætiology and the transmission of malaria, will be composed of the following members: Dr. Annibal Bettencourt, Dr. Ayres José Kopke Correa Pinto, Dr. José Gomes Rezande, Jr., Dr. Joao Braz Gouveia, and Dr. Annibal Celestino Correa Mendes.

Typhoid.—According to the newspaper reports, the typhoid fever epidemic at New Haven, Conn., reached alarming proportions during the past week. A total of 300 cases were reported, and it was believed the list would reach 1,000 before the epidemic is checked. At least a part of the city water supply is believed to be contaminated, and the water from Lake Dawson, in Bethany, has been shut out from the city pipes. Requests for trained nurses were sent to all parts of New England and to New York, but not enough nurses to begin to fill the demand can be obtained. Nearly all the doctors in Connecticut have been pressed into service.

A Committee of the Medical Board of the City Hospital Objects to Charter Provision.—Edward S. Peck, C. L. Gibson, Charles C. Ransom, Robert H. M. Dawbarn, Alfred N. Strouse and Nathaniel Bowditch Potter, members of a committee appointed by the Medical Board of the City Hospital to take action in regard to the amended city charter so far as it affects Bellevue and its allied hospitals, have presented their report. The committee objects to the proposed changes, giving its reasons for doing so.

Hospital Buildings and Endowments.—The bill of Senator Hennessy appropriating from the treasury of New York city $300,000 for a hospital in the borough of the Bronx has been passed at Albany.——A bill has passed the New York Assembly providing for an appropriation of $100,000 for the quarantine stations at Hoffman and Swinburne islands.——The bill of Mr. Kelsey appropriating $188,000 for the Craig Colony of Epileptics has passed the Assembly of New York State.——Commissioner Sexton, of the Department of Health of this city has been authorized to expend without public letting $10,000 for a small-pox pavilion in connection with the Riverside Hospital on North Brother Island.——The Health Department of New York city has decided to establish an emergency hospital and ambulance service at Coney Island, which has been without any attention in that direction since 1898. The emergency hospital will be fitted up in the old building formerly used as a police station.——At a meeting of the Academy of Medicine, Dr. W. A. Holden, one of the assistant physicians of the department for diseases of the eye at the Vanderbilt Clinic, spoke in favor of the establishment of a hospital for the treatment of contagious diseases of the eye.——J. Pierpont Morgan has purchased and presented to the Loomis Sanitarium for Consumptives at Liberty, N. Y., the entire plant of the Liberty Electric Light and Power Company. The cost is said to have been $40,000. Dr. J. E. Stubbert, the physician in charge of the sanitarium, and professor of pulmonary diseases at the New York Post-graduate Medical School, was elected president of the new company, and has taken charge of the plant.——The Lackawanna (Pa.) Hospital Corporation has offered to give to the State of Pennsylvania its property for a miners' hospital. It is worth $200,000, and is free from all debt. It is argued that as the State has already provided at its own expense two miners' hospitals in the anthracite region, one at Ashland, in Schuylkill county, and one at Hazleton, in Luzerne county, it ought to have one in the northern districts. A bill to make the Lackawanna Hospital a State institution is now before the legislature.——The Maryland Medical College, of Baltimore, Md., has bought two three-story dwellings at Calhoun and Fayette streets, which it will convert into an up-to-date hospital, to be conducted in connection with the college. The purchas price is said to have been in the neighborhood of $14,00(About $5,000 will be spent in improvements, and th erection of an annex is also contemplated.——Th Georgia Eclectic Medical Association, in session in At lanta recently, decided on the erection of a $15,000 ec lectic hospital, to be located on their grounds. Work i to be begun at once.——The St. Joseph's Hospital As sociation of Denver, Col., has bought two lots adjoinin the hospital, on which an extension to the present build ing is to be erected.——The Virginia Coal and Cok Company is preparing to build a large hospital at St nega, Ky., similar to the large State institutions bui in the mining regions of the north. Work will begin o the hospital May 1st.——A new contagious diseases hos pital will be built at Ottawa, Ill., to cost about $40,00(——A group of new contagious hospitals is to be erecte at Brookline, Mass., at a cost of $86,500.——Design for new hospital buildings for the German Genera Benevolent Society of San Francisco have been invite from architects. The limit of time is August 1st. Ove $250,000 will be expended on the buildings, and prize will be awarded for the four designs which shall be con sidered best—first, $2,000; second, $1,000; third, $75(and fourth, $500.

Births, Marriages, and Deaths.

Married.

BRITTIN—PAINTER.—In Auburn, Illinois, on Tuesda April 9th, Dr. William A. Brittin and Miss Anna Huntin ton Painter.

BYRD—BARRON.—In East St. Louis, Missouri, on Wedne day, April 10th, Dr. Ritchie L. Byrd, of De Soto, Missour and Miss Gertrude Barron.

CANTON—WILKINSON.—In Washington, on Wednesda April 10th, Dr. George E. Canton, of Jersey City, and Mis Elizabeth G. Wilkinson.

COLE—COOPER.—In Albany, on Wednesday, April 17t Dr. Charles Gray Cole, of Binghamton, N. Y., and Miss Ann J. Cooper.

EMERY—HAYES.—In Middletown, N. Y., on Wednesda April 17th, Dr. William Gordon Emery and Miss Jenn Madeline Hayes.

GUEST—BLANCHAUD.—In Montreal, Canada, on Wedne day, April 17th, Dr. Middleton Sims Guest, of Philadelphi and Miss Marie Ida S. Blanchaud.

O'GORMAN—MCQUAID.—In Brooklyn, on Monday, Ap 15th, Dr. M. William O'Gorman and Miss Sarah Julia M Quaid.

REATH—PANCOAST.—In Philadelphia, on Thursday, Ap 18th, Dr. Benjamin B. Reath and Miss Florence Pancoast.

ROSENTHAL—MILLER.—In Cincinnati, on Wednesda April 10th, Dr. C. H. Rosenthal and Miss Ida Miller.

TASCHEREAU—O'RYAN.—In Bedford Park, N. Y., Thursday, April 18th, Dr. Gustave A. Taschereau, of S Ferdinand, Nova Scotia, and Miss May Matilda O'Ryan.

WIESE—KOENIG.—In St. Louis, on Wednesday, Ap 17th, Dr. William Wiese and Miss Bertha Koenig.

Died.

ADAMS.—In Portland, Maine, on Sunday, April 14th, D Cephas G. Adams, in the seventieth year of his age.

BROCKWAY.—In Brattleborough, Vermont, on Sunda April 21st, Dr. Frederick J. Brockway, of New York, in t fortieth year of his age.

DANA.—In Tunkhannock, Pennsylvania, on Wednesda April 17th, Dr. Charles W. Dana, in the forty-fifth year his age.

GRAHAM.—In Pittsburgh, on Sunday, April 14th, D Thomas Phillips Graham, in the sixty-first year of his age

HERMANSE.—In Brooklyn, on Tuesday, April 16th, D Alerio Hermanse, in the sixty-seventh year of his age.

MCCLELLAND.—In Denver, on Friday, April 12th, Dr. Wi iam F. McClelland, in the eightieth year of his age.

Pith of Current Literature.

Medical News, April 20, 1901.

A Historical Sketch of the Department of Medicine and Surgery of the University of Michigan. Special Article.

Some Errors in the Examination of Urine. By Dr. Louis Heitzmann.—Although the presence of albumin is undoubtedly of some significance in every case, it does not necessarily follow that a lesion of the kidney must exist at the same time, since the presence of pus corpuscles, no matter from what cause, is sufficient to give a positive reaction. The author points out, therefore, that no diagnosis of nephritis should be made without the aid of the microscope. He believes that the most reliable test for albumin is heat and acetic acid. As to the statement that, although true casts are most commonly found in pathological lesions of the kidney, they may be seen in individuals in whom the kidneys are perfectly normal, the author asserts that, if this is correct, we do not as yet know what casts really are. He believes, however, that the difficulty lies in not distinguishing between true and false casts. Hyaline, epithelial, blood, granular, fatty, and waxy casts, are the only true casts, the first three being found in acute, the others in subacute and chronic inflammations. The author comments upon those reports of urine examinations which state that no albumin is present, that pus corpuscles, red blood corpuscles, and epithelia are absent, but that hyaline and granular casts are found in varying numbers, and in which, therefore, a diagnosis of parenchymatous nephritis is given. He shows that, from the very nature of true casts, it is perfectly plain that they can never be found in urine without some other evidences of inflammation, such as pus corpuscles, red blood corpuscles, and epithelia. In regard to the use of the centrifuge, he believes that since it presents no advantage over the old method of allowing the urine to stand for six or twelve hours, it should not be used, with the sole exception of examining for tubercle bacilli, which latter are more easily found in centrifugated urine. He points out, finally, that as casts are almost invariably absent in interstitial nephritis, the diagnosis should not necessarily depend on their presence, and he asserts that pus corpuscles, red blood corpuscles, and kidney epithelia are sufficient for a diagnosis.

Acute Traumatic Malignancy. By Dr. William B. Coley.—A series of illustrative cases, concluding an article commenced in the preceding issue.

Epistaxis. By Dr. Charles N. Cox.—Unless bleeding has actually ceased when the patient is seen, the bleeding nostril should be cleansed, when, in a large proportion of cases, the source of the bleeding can be seen, and it only remains to put some sort of a tampon over the leak in such a manner as to be retained in place and to make firm pressure. For the more severe forms of bleeding, local styptics are of no avail, and should not be relied on when we have at our command the more rational means of mechanical pressure. Should it become necessary to resort to guesswork and plug the whole nostril, the author prefers to use long strips of sterile or iodoform gauze, about one half or three quarters of an inch in width. It will seldom be found necessary to introduce posterior plugs, and they should be avoided, if possible. The author protests against the use of Monsell's solution of the subsulphate of iron as a styptic, on account of the hard plaster-like coagula it forms. An application to the bleeding point of the solid stick or of a fifty-per-cent. solution of silver nitrate, may be used as an adjuvant to mechanical pressure, or alone if it controls the hæmorrhage. As a spray to the bleeding surface he recommends:

℞ Extract of suprarenal capsule... 20 grains;
Glycerin..... 1 drachm;
Water..... 3 drachms.

M. Macerate for half an hour, filter and then boil the solution for a few minutes to sterilize it.

Medical Record, April 20, 1901.

The Toxæmia of Pregnancy; its Diagnosis and Treatment. By Dr. S. Marx.—The author's belief is that the toxæmia of pregnancy is a complex condition depending on more than one factor. Many women go to term with albuminuria, without symptoms referable to toxæmia. When such symptoms arise, they are not caused by the albumin present, but by faulty excretion of urea. In the most desperate and malignant cases there is found neither albumin nor casts. Urea is always found to be markedly diminished in the so-called true toxæmias. The author makes a strong plea for a regular and methodical course of urea-estimation in all cases of toxæmias of pregnancy, or urinæmias. He also makes a strong plea for a regular and methodical course of urea-estimation in all cases of toxæmia. He believes that progressive diminution of urea excretion, with or without albuminuria, is the sole indication for the induction of premature labor, which is especially indicated when conscientious medical treatment fails.

Faith Cures and the Law. By Dr. John B. Huber.

Report of Three Cases of Malignant Endocarditis, One Following Measles, another Typhoid Fever in a Child and Simulating Splenic Lymphatic Leucæmia, and another Terminating in Recovery. By Dr. Albert E. Roussel.—In regard to the relation existing between simple and malignant endocarditis, the author accepts the modern view that the difference between the two forms depends upon the virulence of the micro-organisms or their toxines. The micro-organisms are almost always found in the vegetations on the valves in the infectious form, but are also frequently found in the so-called simple variety, and the same micro-organisms are found in both. When they act as irritants, inflammation results, and the case is one of simple endocarditis; but inflammation plus necrosis is septic endocarditis.

Strangulated Hernia in Infants; Description of a hitherto Unrecognized Cause and Seat of Strangulation. By Dr. Alexis V. Moschcowitz.—The two cases are interesting, not only on account of the age of the infants (three and four months respectively), but also on account of the hitherto unrecognized location of the constriction, low down in the scrotum at a considerable distance from the external inguinal ring.

Journal of the American Medical Association, April 20, 1901.

Jules Lemaire, the First to Recognize the True Nature of Wound Infection and Inflammation and the First to Use Carbolic Acid in Medicine and Surgery. By Dr. Howard A. Kelly.

Tracheloplasty. By Dr. Henry Parker Newman.

The Physiologic Care of Colds. By Dr. Charles H. Shepard.—The author states that the condition called a cold is one of repletion, and often results from imperfect elimination, or an inactive condition of the excretory

organs. There can be no more prolific cause of colds than highly seasoned foods, as well as frequent eating. To make a radical cure of a cold, the author advises the patient to abstain entirely from food for at least twenty-four hours. If the bowels are at all inactive, it is desirable that they should be thoroughly flushed with warm water. The patient should drink freely of water and take a brisk walk in the open air, and then a Turkish bath. Chronic cases need more persevering treatment, but each day will show progress, and only perseverance is needed to triumph ultimately over the morbid action. The practice of administering quinine to break up a cold is condemned by the author, because it debilitates the nervous system and weakens the condition of the heart. A simple "cold in the head" may be successfully treated by drawing hot water into the nostrils and then blowing it out, repeating the process several times until the nose is thoroughly cleansed. For those in fair health the author recommends the practice of cold bathing in the morning, particularly if a warm shower precedes the cold, or a short stay in a warm room precedes the cold plunge.

Atrophy of the Mucous Membrane of the Stomach. By Dr. Freeman F. Ward.—The author reports five cases of this affection. He emphasizes the point that the impression that the absence of free hydrochloric acid is a sign of malignant disease, is an erroneous one. In the cases cited, absence of free hydrochloric acid was marked, and, despite this fact, there were no symptoms whatever of malignant disease. His experience corresponds with that of Einhorn, that, as a general rule, in cases of atrophy of the mucous membrane of the stomach, there exists a condition of chronic diarrhœa. He lays stress upon the importance of making careful examinations and analyses of all the secretions, including the gastric juice of patients suffering from chronic disturbances of the stomach and bowels.

Some Notes on Two Cases of Voluntary Laryngeal Whistling. By Dr. G. Hudson Makuen.—In one of these cases the aryepiglottic folds were used as the lips of the mouth are used in whistling, and, so far as the author could determine, no other parts of the larynx were employed. In another case, quoted by the author, the ventricular bands were approximated and puckered up, leaving an elliptical opening in the centre through which the vocal cords could be seen with their thin edges vibrating, thus producing the whistling.

Some Anomalies of the Ear Due to Errors in Development. By Dr. George C. Stout.—The author finds that, as a rule, supernumerary auricles are pre-auricular, usually unilateral, and can be removed without unpleasant sequelæ.

Care and Use of Instruments. By Dr. Allen De Vilbiss.—The author believes that the surgeon should attend to his own instruments, and he asserts that the idea is absurd that a person can possess the skill necessary to remove a spur from the sæptum nasi in a workmanlike manner, and not be able to acquire the proper use of his hand to prepare his instruments for their work. He asserts that no person should be allowed to practise surgery without having first learned a mechanical trade.

Surgical Diagnosis of Abdominal Tumors. By Dr. W. H. Earles.

A Contribution to the Study of Mountain Fever. By Dr. R. Harvey Reed.—Some of the particulars in which there is a marked difference between typhoid and mountain fever are: (1) In the reaction with Widal's test, a large majority of cases show a positive reaction in typhoid fever, while the reverse is the case in mountain fever; (2) the mortality of typhoid is much greater; (3) the average duration of the disease is greater in typhoid fever; (4) the cause of mountain fever does not seem to lie in the presence of the Eberth and Gaffky bacillus; (5) the rise and fall of temperature in mountain fever is more abrupt than that of typhoid fever; (6) tympanites is nearly always present in typhoid and seldom present in mountain fever; (7) epistaxis is common in typhoid, but rare in mountain fever; (8) intestinal hæmorrhage is also common in typhoid and rare in mountain fever; (9) the eruption in typhoid fever is usually confined to the abdomen, is not raised, and disappears readily on pressure, returning promptly when the pressure is relieved, while the eruption in mountain fever covers almost the entire body, is raised, has a shotty feel under the finger, and does not disappear on pressure.

A Study in the Hæmatology of Neurasthenia. By Dr. Charles Howard Lodor.

Intubation of the Larynx, with Personal Reminiscences. By Dr. F. E. Waxham.

Some Points in the Diagnosis of Gall-stones. By Dr. James B. Herrick.

The Present Status of Spinal Surgery. By Dr. Samuel Lloyd.

Philadelphia Medical Journal, April 20, 1901.

The Localization of Brain Tumors, Especially with Reference to the Parietal and Prefrontal Regions. By Dr. Charles K. Mills.—The author reports an interesting series of cases which demonstrate that the diagnosis of the existence of a brain tumor can sometimes be made, even in the absence of most of the general symptoms, such as optic neuritis, headache, vertigo, and vomiting, chiefly by the close study of localizing and invasion symptoms. Emotional states, even hysterical stigmata, are sometimes present in cases of brain tumor, and must not be given too much weight in diagnosis. Tumors of the posteroparietal region, and especially of the superior parietal lobule, give, as their most important localizing symptoms, disorders of cutaneous and muscular sensibility, and especially astereognosis; other symptoms often present in such cases are the result of compression or invasion of adjoining regions. Tumors and other lesions implicating the angular gyrus and the regions adjoining, give, as their main localizing symptoms, word-deafness and word-blindness, with the usually accompanying speech-disturbances, lateral homonymous hemianopsias and disorders of cutaneous and muscular sensibility, including astereognosis. Tumors of the prefrontal region chiefly give psychical symptoms of a special character; when the tumor is situated on the left side, motor agraphia and motor aphasia are usually present, because of the compression or invasion of the second frontal and of the third frontal convolutions; paralysis and other motor symptoms are often present late, because of encroachments upon the motor region.

Non-surgical Treatment of Fibroid Tumors of the Uterus. By Dr. Augustin H. Goelet.—The author places electricity foremost among non-surgical measures for fibroid tumors of the uterus. Both the galvanic and the faradaic currents, and even static electricity, may be employed with benefit. Upon the electrolytic action of the galvanic current the author relies mainly to reduce the size of the growth and to cause its dissipation. When it fails to accomplish this result, it is a material aid in

relieving the symptoms, particularly the pain produced by pressure and congestion. It also stimulates the absorption of exudates, and removes many of the adhesions, this latter result being accomplished by shrinkage of the mass, from contact with adjacent structures to which it has become adherent, and consequent stretching and giving way of the adhesions. He has found ergot, administered internally, to be a valuable auxiliary in some instances, and the iodide and bromide of potassium to be useful sedatives.

Acromegaly, with Report of Two Cases. By Dr. W. G. Shallcross.

A Clinical Note on Infantile Scorbutus. By Dr. Wm. M. Mastin.—The author refers to the impression that seems to prevail among the members of the profession, that scurvy in the first years of child life is a very rare affection, and, on the other hand, that rheumatism in infancy is quite common. He points out that the reverse is true, and the cases adduced demonstrate that errors in the diagnosis of infantile scurvy are not confined alone to rheumatic affections, but may extend to the domain of surgical disorders—tuberculous bone lesions, sprains, and contusions; to the nervous system—disease of the cord; and that they even include hereditary syphilis.

Susceptibility to Disease and Physical Development in College Women. By Arthur MacDonald.—A statistical article of moderate interest.

Operative Treatment for Prostatic Hypertrophy. By Dr. Ramon Guitéras.—The author looks forward to prostatectomy as the operation for the radical treatment of prostatic hypertrophy in the future. In a general way, he says that very old men with prostates not very large, but causing considerable urethral impediment, are cases for Bottini's operation, while younger men with large prostates as felt through the rectum, with good kidneys and bladder, are fit subjects for enucleation.

Boston Medical and Surgical Journal, April 18, 1901.

The Opinion Evidence of Medical Experts. By John D. McLaughlin.—The author briefly sketches some features of foreign law in its attitude toward the testimony of medical experts, and, while he would not be understood as advocating the modelling of our own law according to the same plan, he points out that the real keynote and underlying principle of Continental countries, in this respect, is that the expert should be the partisan of neither side; that he should be as dispassionate and just as the judge; and that, in fact as well as in theory, he should be the assistant of the court. This principle, if we are to hope that at some future time the medical expert shall enjoy all the respect and credence that is his right and the right of science, must be followed in some form or other. And if we are to reform our procedure in this regard, relief must be sought finally, asserts the author, in the body of the Roman jurisprudence.

The Umillian Murder. By Dr. Herbert B. Perry.

Leucocytosis and Typhoidal Perforation. From the Medical Clinics of the Montreal General and Royal Victoria Hospitals. By Colin K. Russell, B. A.—The cases cited by the author lead to the following conclusions: (1) That in perforation it is the general rule to have a leucocytosis, but the degree may vary within wide limits; (2) that the leucocytes, while appearing, as a rule, early, may not be at all marked until general peritonitis and collapse have supervened; (3) that there may be an utter absence of leucocytosis with marked perforation and peritonitis, in fact, that the cells may be lower than normal; (4) that with typical signs of perforation and a definite leucocytosis there may be no such complication present, and an operation may be performed unnecessarily; (5) that a marked degree of leucocytosis may occur in complications other than perforation—for example, bronchitis, cholecystitis, etc.; (6) that with pain and tenderness in the abdomen, coming on suddenly during an attack of typhoid fever (and in the absence of evidence of cholecystitis or other definite complication), and a distinct leucocytosis, even without other signs of perforation, an exploratory operation is justifiable, even advisable, thereby obviating the dangers of a fatal issue from too great a delay.

Upon what Sort of Information shall a Medical Examiner Hold a View? By Dr. H. M. Cullo.—The author gives a case in which the question indicated in the title arose, and after a brief review of the literature and reference to precedents, concludes, in the words of Dr. Amory, that it is better "to err in cases of doubt upon the side of too much rather than too little investigation," and that the exact procedure in all cases cannot be laid down.

Contusion of the Abdomen; No External Wound; Rupture of the Descending Colon; Fæcal Abscess; Drainage; Suture of Ruptured Gut; Recovery. By Dr. Charles L. Scudder.—The particular interest in this case lies in the fact that the rupture of the bowel was not attended by such symptoms as would ordinarily lead one to suppose that a serious injury had been received. The very important sign that was misinterpreted was that of vomiting. This symptom, instead of being explained by the patient's statement that he had eaten something indigestible before he was injured, should have suggested a lesion of the bowel, or at least serious involvement of the peritonæum. The author points out that a single vomiting of the stomach-contents after an abdominal contusion is of no special importance. Continuous, unexpected vomiting without any apparent reason is significant of an intestinal lesion. This is true despite the absence of other signs of peritoneal involvement.

Lancet, April 13, 1901.

The Topographical Anatomy of the Abdominal Viscera in Man. By Dr. C. Addison.—The third and last of the Hunterian lectures upon this subject. Among the points of interest brought out in this article are the following: A small recurrent branch of the appendicular artery is often found in the ileocæcal fold of the peritonæum, so that the term "bloodless fold," as used by Treves, is incorrect. The internal or proper retrocolic pouch was well defined in eight cases (20 per cent). It often contains the root of the appendix. The sigmoid flexure of the colon over the left psoas muscle has a very short mesentery. The commonest variation of the mesosigmoid is the obliteration of its outer limb. In the forty cases these conditions occurred with the following frequency: 1. Presence of both limbs, 27 cases, or 67 per cent. 2. Complete absence of the outer limb, 11 cases, or 27.5 per cent. 3. Abnormal cases in the presence of a descending mesocolon, 2 cases. The positions of the vermiform appendix fall into four groups: 1. Wholly within the pelvic cavity, 6 cases, or 15 per cent. 2. Free, hanging more or less over the pelvic brim, 16 cases, or 40 per cent. 3. Wholly in the iliac fossa, 14 cases, or 35 per cent. 4. Irregular cases, 4, or 10 per cent. (In 8 cases, or 20 per cent., the appendix was either recurved into a retrocolic pouch or was firmly fixed behind the

peritonæum.) The lowest point of the cæcum is situated, as a rule, in the right lateral line about half an inch below the level of the anterior superior iliac spine. There are two chief varieties in the shape of the transverse colon: 1. The loop represents a permanence or exaggeration of the primitive bend of the colon at this place. 2. Complete absence of the downward hepatic loop, the transverse colon passing directly across the abdomen. For practical purposes a point in the left lateral line at the level of the anterior superior spine may be taken to correspond to some part of the lumen of the sigmoid flexure at the place where it somewhat abruptly becomes freely movable. The right kidney, apparently in the absence of laxity of its enveloping connective tissue, is very much independent of pressure from the liver above or from the stomach below. A high position of the spleen seems to be associated with a highly placed stomach, but the reverse does not hold. There is no relationship between the level of the spleen and the left kidney. In 29 cases (72.5 per cent.) the upper pole of the right kidney was lower than that of the left kidney; in 3 cases it was at the same level, and in 8 cases (20 per cent.) it was higher.

On the Importance of Early Diagnosis and Treatment in Surgical Diseases of the Abdomen. By W. Rose, M. B.

Postpartum Hæmorrhage. By E. S. Bishop, F.R.C.S.—In this article the author sketches very lucidly and thrillingly the course of a supposititious case of postpartum hæmorrhage, from its beginning to its fatal termination, describing the various measures taken by the attendant physician. All authorities agree that two definite ends are aimed at: Contraction of the uterus, and local coagulation of the blood. After reviewing briefly the various procedures, mechanical and therapeutical, advised in text-books, the author strongly urges the following in every case: 1. Elevation of the foot of the bed, and further elevation of the legs, in this way controlling the venous loss of blood. 2. Compression of the abdominal aorta, thus shutting off five sixths of the uterine blood supply. The closed fist is applied with its ulnar surface resting upon the aorta as it lies over the left side of the vertebral column, and just sufficient pressure is exerted obliquely backward and toward the right so as to enable it to compress that vessel against the unyielding surface beneath. The aortic pulsation soon becomes strong and vigorous, the bleeding stops, and the uterus can be cleared out, and any lacerations in the genital cavæ reunited. 3. Traction on the cervix, which kinks and closes the uterine vessels. This last procedure is only to be made use of while clearing out the uterus, repairing tears, etc.

The pressure on the abdominal aorta is the important point, and is to be continued until the blood pressure has become full and strong and the uterus has contracted, *i. e.*, recovered its muscular force. On removing the hand, should the hæmorrhage begin again, it can be again checked in the same way. The foot of the bed should be kept elevated for twenty-four or forty-eight hours, so as to favor the concentration of the amount of blood remaining in the patient.

Remarks on Enlargement of the Inguinal Glands Chiefly in Connection with the Diagnosis of Primary Syphilis. By A. Cooper, M. R. C. S.—Although multiple indolent glands form one of the most important features of primary syphilis, it must be remembered that they are not in themselves proof of it, and that an apparently typical condition of the groins is sometimes due to other causes, more especially in persons whose glands are unusually susceptible. Among such causes may be mentioned severe gonorrhœa, urethral irritation from too strong injections or other injury, irregular herpes, severe balanoposthitis, and tuberculosis. The diagnosis will depend on the history, on the absence of an indurated primary lesion, and on careful watching throughout the incubation period of syphilis. Too much is sometimes expected in the way of glandular enlargement as well as of induration of the primary lesion of syphilis. Different persons vary greatly as regards susceptibility to glandular enlargement. Tuberculous subjects seem to be most liable to have the lymphatic glands affected on slight provocation. A man who is apparently healthy and without any history of venereal or other disease to account for it, may, knowingly or not, have a degree of indolent enlargement of the inguinal glands, which of itself is indistinguishable clinically from that which is found in some cases of primary syphilis.

Remarks on the Holmgren Test. By Dr. F. W. Edridge-Green.—The author holds that the Holmgren wool test for color-blindness is inefficient, that a great number of normally sighted persons are rejected and three divisions of the dangerously color-blind nearly always escape detection by it. He cites numerous authorities who confirm him, and urges that a fresh inquiry be made into the subject. A lantern test could be constructed which would detect all cases.

The Chemistry of Nerve Degeneration. By Dr. F. W. Mott and Dr. W. D. Halliburton.—The authors have previously shown that in general paralysis of the insane the marked degeneration that occurs in the brain is accompanied by the passing of the products of degeneration into the cerebrospinal fluid. Of these nucleoproteid and choline are those which can be most readily detected. They now find that choline can also be detected in the blood in disseminated sclerosis, combined sclerosis, alcoholic neuritis and beri-beri. The tests employed are two: (1) A chemical test—namely, the obtaining of the characteristic octahedral crystals of the platinum double salt from the alcoholic extract of the blood; and (2) a physiological test—namely, the lowering of blood pressure produced by a saline solution of the residue of the alcoholic extract.

It is possible that such tests may be of diagnostic value in distinguishing between organic and so-called functional diseases of the nervous system.

British Medical Journal, April 13, 1901.

Some Cases Illustrating the Surgery of the Large Intestine. By C. A. Morton, F. R. C. S.—The author reports the following cases: 1. Ventrofixation of the sigmoid flexure for prolapse of the rectum in an adult. The fixation sutures were passed through the mesosigmoid, and not through the intestinal wall itself. The patient did very well, but of late there has been a slight return of the prolapse. 2. A case in which a malignant tumor of the cæcum simulated movable kidney; excision of the cæcum and glands in the mesentery; no recurrence two years after the operation. 3. A case of intestinal obstruction from malignant growth in the colon; colotomy and fixation of the tumor outside the peritonæum; subsequent removal of tumor. The patient died one year and nine months after the removal of the primary growth.

Cholecystectomy; Partial Hepatectomy and Pylorectomy; Recovery. By B. C. Stevens, M. B.—The author reports a case of cholelithiasis occurring in a woman

ged fifty-four years and associated with malignant disase involving the liver, gall-bladder, and pylorus, and omplicated by an abscess in the abdominal wall. At he operation two large stones were removed from the all-bladder, and then the gall-bladder, the margin of the ver, and the pylorus, all of which were carcinomatous, ere removed. Two months after the operation the paient was progressing favorably and gaining strength. 'he case is of interest in several respects: 1. In the assoiation of abscess and cancer, both being dependent on e irritation of gall-stones. 2. In the occurrence of a stulous tract between the gall-bladder and the stomach. . In showing how difficult it is sometimes to make an exct diagnosis before abdominal section. 4. In demontrating how the surgeon must be prepared for any emerency in operating for gall-stones. When cancer attacks e gall-bladder it is usually secondary to gall-stones, nd less frequently to extension of cancer from adjoing organs. When the gall-bladder becomes attached to ny hollow viscus, a fistula may form, and fistulæ in conection with the bile passages are in fact not uncommon.

A Case of Sarcoma of the Brain Removed by Operaion; Subsequent Operation for Removal of a Second umor; Recovery. By Dr. J. M. Clarke and Dr. R. G. '. Lansdown.—The features of interest in this case were e presence of symptoms unmistakably pointing to an ntracranial neoplasm, and with one exception being enrely "general" symptoms. The only positive indication or localization of the growth was an alteration in the ercussion note over an area in the parieto-occipital reion of the skull, and the recognition of this sign led to e trephine opening being made directly over the umor. At the first operation a firm rounded growth, bout an inch and three quarters in diameter and half an ch in thickness, and distinctly encapsuled, was easily elled out. About six weeks later signs of a second umor in the same region appeared, and another operaon resulted in the removal of a very large tumor. This ould not be removed as a whole, but was divided into two r three large pieces which weighed altogether six ounces nd a quarter. No recurrence up to January 30, 1901, ad taken place, the operation relieved the patient of his mptoms, the hemiplegia which resulted from the last eration cleared up, and the mental condition was near- normal, but the sight, greatly impaired at the time of eration, improved very little. Microscopical examinaon showed the tumors to be typical sarcomata.

Case of Cavernous Angeioma of the Orbit. By A. . Whitehead, M. B.—The author reports a case of this re affection occurring in a man aged fifty-one years. he right eye was pushed forward by a rounded elastic umor, the proptosis being so extreme that the lids could ot be closed, and ulceration of the cornea had already t in. At the operation the external canthus and exterl rectus were cut, thus exposing the tumor, which was moved *en masse*. Recovery was uneventful, and vision pidly improved. Slowness of growth and absence of ain are among the most characteristic signs of the affecon. The mobility of the eye is usually preserved. his case is unusual in the size of the growth, the amount fibrous tissue present, and the preservation of the eye, th practically no deformity and with restoration of most normal vision.

The Saline Treatment of Dysentery. By W. J. chanan, M. B.—In the *British Medical Journal* for ebruary 10, 1900, the author published a note on the sults of treatment of dysentery by salines, based on 5 cases, with only 6 deaths. The present note deals with the results of 300 more cases which have been treated with salines, with only 3 deaths, thus making a total of 855 cases with 9 deaths, or a mortality of about 1 per cent. The saline treatment is advocated for acute cases only; it is not safe for chronic or relapsing cases with ulceration of the colon. The following mixture was used:

℞ Sodii sulphatis. . . . . 1 drachm;
Aquæ fœniculi, ad. . . . . 1 ounce.

This was given four, six, or eight times a day as required, and continued until every trace of blood and mucus had disappeared from the stools.

The Resistance of the Larval Mosquito to Cold. Notes on the Habits and Life-history of Mosquitoes in Aberdeenshire. By M. J. Wright, M. B.—There is no proof of the generally accepted view that the adult mosquito is able to survive the rigors of winter in a state of hibernation, and when warm weather comes turns active and lays eggs, thus providing for the perpetuation of the species. From the observations of the author on the extreme prolongation of the larval stage and the power of the larvæ to withstand low temperatures it seems reasonable to infer that it is really the larvæ that provide for the continuation of the species through winter in northern countries. It is during winter that one may hope to do most toward exterminating mosquitoes. In kerosene oil we have a most efficient larvicide, but it should be applied continuously, not intermittently. Suspend a vessel full of oil over the water, and arrange for its discharge a drop at a time.

A Case of Recurrent Alcoholic Peripheral Neuritis. By Dr. L. H. Jones.—The author reports the case of a woman who had severe alcoholic peripheral neuritis from taking whiskey in moderate quantity. She recovered almost completely, but eleven years later, being compelled to undertake domestic duties of the most arduous nature, she again had recourse to stimulants, taking three glasses of Burgundy a day. This was sufficient to cause a recurrence of the neuritis, with typical wrist-drop and all the other attendant symptoms. The author holds that alcohol is responsible for much that has occurred in the recent outbreak of peripheral neuritis in Manchester, and that in a great measure the arsenic has acted on systems saturated with alcohol much as a candle-end would on a smouldering fire.

A Case of Neuritis Affecting the Optic and Cervical Nerves, Complicated by Carcinoma of the Breast. By J. R. Benson, F. R. C. S.

Case of Foreign Body in the Bronchus; Tracheotomy; Recovery. By F. B. J. Baldwin.

A Note on Acute Dilatation of the Heart. By H. O. Nicholson, M. B.

A Note on the Treatment of Genu Valgum. By E. M. Little, F. R. C. S.

A Polypoid Excrescence of the Tonsil. By Dr. E. S. Yonge.

Indépendance médicale, April 3, 1901.

Recurrent Ulcer of the Stomach.—M. Hayem says that we know nothing of the causes of ulcer of the stomach. Under the influence of some alimentary vice, a hyperpeptic or glandular gastritis develops, with the production of free hydrochloric acid and increased fermentation. In a recurrence, the scars and former adhesions play an important rôle, providing a permanent focus of disturbance which accounts for the hæmorrhages. Under the influence of increased peristalsis at times, or some

traumatism, adhesions rupture, the gastric contents are poured into the peritoneal cavity, and peritonitis results. The ulcer may undergo malignant degeneration. Chronic ulcer of the stomach is a grave disease, exposing its victim to death by hæmorrhage or from perforation, and it is very difficult to treat. Surgical measures are useless unless the ulcer is located upon the curvatures or the anterior or posterior surface of the stomach. Medical measures, liquid diet and intestinal lavage, must then be resorted to. If the hæmorrhages become abundant, gastro-enterostomy must be performed.

Gazette hebdomadaire de médecine et de chirurgie, April 4, 1901.

Treatment of Spina Bifida by Excision.—M. Broca reports two cases of successful excision of spina bifida. He thinks that the operation is indicated only when the tumor is well protected by normal skin, for only in such instances can the operation be successfully carried out.

Presse médicale, April 3, 1901.

Kernig's Sign in Cerebrospinal Meningitis.—M. A. Chauffard highly commends Kernig's sign as confirmatory of the diagnosis of cerebrospinal meningitis. He regards its elicitation as due to muscular hypertonicity. He defines it as a single or multi-regional contraction, especially striking in the muscular groups which are most functionally active in health, and appearing particularly in attitudes which normally come into play. These attitudes or positions become painful and irreducible pathologically. Kernig's sign is not the only one which can be thus elicited in meningitis, but it is the most complete one and is therefore easy to recognize as a semeiological type.

Wiener medicinische Blätter, March 28, 1901.

Treatment of Pernicious Anæmia.—Dr. Alfred Stengel says that the treatment of pernicious anæmia is divisible into three parts, the specific treatment, treatment directed toward changing the general circulation, and, lastly, treatment of disturbed intestinal conditions which may be the source of the disease. Iron must be given, in the form either of Blaud's pills or of an albuminate of iron. Arsenic is also of great hæmatopoietic value in this disease and should be given in the form of Fowler's solution. If the blood does not improve as the dose is increased, the drug may be given subcutaneously, but gastro-intestinal disturbances and consequent loss of weight must be carefully guarded against. (*To be continued.*)

Wiener klinische Rundschau, March 31, 1901.

Intraperitoneal Rupture of the Bladder.—Dr. Krabbel reviews the symptoms and diagnosis between extraperitoneal and intraperitoneal rupture of the bladder, and reports a case which was successfully operated upon.

Contributions to Surgery of the Kidney. By Dr. Josef Preindlsberger. (*Conclusion.*)

Wiener klinische Wochenschrift, March 28, 1901.

Pathology and Theory of Migraine.—Dr. M. Sihle tries to show a pathological resemblance between migraine and epilepsy. The sequelæ of the two ailments are similar. Both are followed by general weakness; both may be followed by vomiting; and sleep may cause all symptoms of both to disappear. Headache is a sequel of the aura in both diseases, and unilateral paralysis, or even a psychosis, may appear in either disease.

Three Cases of Cataract Following Stroke by Lightning.—Dr. Josef Preindlsberger reports these cases briefly.

Primitive Sight-organs. By Dr. Theodor Beer. (*Conclusion.*)

Riforma medica, February 23 and 25, 1901.

Concerning some Strange Phenomena in Typhoid Fever. By Dr. Umberto Baccarani.—The author discusses the following topics: Delirium and insomnia in the prodromal period; early intestinal hæmorrhages; the palmoplantar sign; the pulsus paradoxus; splenic cough; sialorrhœa; urethritis; desquamation; pruritus, and constipation. He takes as his text the histories of seven typhoid fever patients who had been under his observation during the preceding year, and who presented noteworthy peculiarities in the course of the disease. The average duration of the febrile period was eighteen days, instead of the classic four weeks. There is no doubt that typhoid fever has become less virulent during the last few years, but the cause of this attenuation is not perfectly clear. Perhaps it is due to the improved sanitary conditions, or to the more rational treatment.

Delirium and insomnia are very rare symptoms in the prodromal period of typhoid. The author observed them in one of the cases here reported. These cases may be mistaken for neurasthenia, etc.; but the temperature is a safe guide. Precocious hæmorrhages were observed by the author in one case. The intestinal hæmorrhages in this case appeared five days before any other symptoms of the disease came on. This occurrence has no special prognostic importance, as the case went on in a mild way and ended favorably. The palmoplantar sign, first described in 1897 by Filipovicz, consists of a yellow discoloration of the regions named, and is said to be constant in typhoid. The author found it present in all his cases. The pulsus paradoxus may be observed in typhoid fever, as was evidenced by one of the cases reported by the author. He found that this phenomenon was more clearly evident in the evening, after the fatigues of the day, and was less marked in the morning. This symptom was an indication of a myocardial insufficiency, but was not, in itself, a bad prognostic sign. It might occur in the convalescence.

February 26 and 27, 1901.

Miliary Tuberculosis; Meningitis of Tuberculous or of Typhoid Origin? By Dr. Colla Vittorio.—The difficulty of distinguishing between generalized tuberculous and typhoid infections is admitted by all clinicians. The Widal test is of some assistance, but the author believes that the bacteriologic examination of fæces is of greater positive value. In the present article, the author reports a case in which he used the method of Elsner and Piorkowski in examining the fæces of the patient. He concludes that this method of diagnosis is the most satisfactory in doubtful cases.

February 28, 1901.

A Contribution to the Casuistics of the Complications of Diplococcus Pneumoniæ. By Dr. Giovanni

Geronzi and Dr. Rudio Ricci.—The authors report two cases of pneumonia which were accompanied by noteworthy complications. In the first case a meningitis supervened, although the course of the disease had been mild and regular previously. At the autopsy, the heart was found absolutely intact, although meningitis due to diplococci in many cases affects the endocardium. In the second case, the pneumonia was complicated by a septicopyæmia due to the diplococcus. This case illustrates the necessity of making a doubtful prognosis in lobar pneumonia. The localization of the pneumonic process was tardy in both cases.

March 1, 2, 4, and 5, 1901.

Primary Hypertrophies of the Spleen. By Dr Guido Banti.—The author's conclusions are as follows: There is a group of primary diseases characterized by enlargement of the spleen and by a disturbance of the functional activity of this organ. The first of these is splenic leucæmia, in which the alterations in the morphology of the blood corpuscles are due to changes in the spleen's functions. The other two diseases accompanied by primary hypertrophy of the spleen (primary splenomegalia) are characterized by the development of toxines which are thrown into the circulation by the spleen. These poisons have always a powerful effect on the red blood cells. In splenomegalia with icterus there is a true hæmolytic action. In splenic anæmia and in splenomegalia with cirrhosis the hypertrophy of the spleen is accompanied by an anæmia, the exact mechanism of which as yet has escaped detection. The spleen also develops certain substances that, passing through the liver, sometimes cause fatty degeneration, and sometimes cirrhotic changes, or both. Although the changes in the white cells and the jaundice are observed only in certain types of splenomegalia, the anæmia and the effects on the liver are common to all forms of splenic hypertrophy. It is doubtful, however, whether the cirrhotic changes are common to all forms, or only to certain types.

March 6 and 7, 1901.

The Operative Treatment of Congenital Dislocations of the Hip. By Dr. A. Codivilla.—An experience with seventy-six cases of congenital dislocation of the hip observed in the Orthopædic Institute of Rizzoli, in Bologna, enables the author to formulate the following conclusions concerning the operative treatment of this affection: The bloodless method of reduction is successful, as a rule, in children between the ages of three and twelve years. In exceptional cases this method succeeds in children of from thirteen to seventeen years. The reposition is maintained and the functional results are good in fifty-three per cent of the cases. In the others the luxation recurs, although less marked than at first. In order to avoid recurrence, the limb must be kept in abduction and internal rotation for a long time (four or five months). Osteotomy may be required if the rotation is extreme, in order to reestablish the normal relations of the two ends of the femur. If the recurrence is due to capsular adhesions, or to an absolute defect of the femoral head, a bloody operation will be required. The best incision for this purpose is the antero-external, along the fascia lata. After the operation the incision must be closed immediately, and not kept open with a drain.

Klinitchesky Journal, December, 1900.

(Jubilee Number in Honor of Professor A. A. Ostroumoff, on the Occasion of the Twenty-fifth Anniversary of his Academic Activity.)

Anthrax Pustule in Man. By Dr. L. L. Levshine.—The author records his observations during the past nineteen years on the subject of anthrax, which disease is not uncommon in Khazan. In speaking of the treatment of the pustule he says that he makes a practice of removing the local infective focus, making the incision in the skin two centimetres round the carbuncle, and subsequently cauterizing the wound with Pacquelin's cautery or with solid zinc chloride, and applying an antiseptic dressing. The application of heat not only destroys the microbes encountered by the cautery, but also those bacilli that are found in the parts adjacent to the cauterized tissue. The value of carbolic-acid injections is rather doubtful, as it has been shown that at the moment when the disease is fully developed all the bacilli may have disappeared from the pustule and its environment. It is wrong to use incisions alone without cauterization, for incisions admit air into the tissue and thus make the development of spores possible. Besides, it is important to keep the blood vessels and lymphatics intact, so as to prevent the entrance of bacilli. Absolute rest is indicated because it lessens the movement of the lymph throughout the body and thus antagonizes the spreading of the infection. About 66 per cent. of the author's patients, in whom the pustules had been excised, recovered.

Functional and Organic Changes in the Heart in the Presence of Coronary Embolism. By Dr. A. Vogt.

A Percussion-sign in Dilatation of the Stomach. By Dr. V. D. Schervinsky.—The author describes a new physical sign which he has obtained in some cases of dilatation of the stomach, and which he has not found mentioned in any text-book. It is interesting to note that the author began his observations on the subject after reading an article by Abrams in the New York *Medical Record* for September 8, 1900, in which dyspnœa and pseudo-angina pectoris were spoken of as symptoms of displacement of the heart. In this article Abrams calls attention to the dependence of these cardiac symptoms on dilatation of the stomach and also to the presence of a dull sound on percussion on the left side between the spine and the internal border of the scapula. The area of dulness may be as large as a silver dollar or extend over the whole surface between the spine and the scapula, and this dulness disappears when the patient bends forward. Bronchial breathing is heard over this area. The author cannot confirm the statements of Abrams. In fact, he does not believe that a dilatation of the stomach, pushing up the heart, can compress the left lung to such an extent as to cause dulness behind, unless there is unusual mobility of the heart.

He finds, however, that in dilatation of the stomach a band of dulness from four to five centimetres in width is found in the region of the ninth, tenth and eleventh ribs behind, over which diminished breathing may be heard. The dulness disappears when the patient leans forward, and the sound is absent when dilatation is accompanied by gastroptosis. The dulness is probably due partly to the displacement of the spleen and partly to a condensation of the air in the lower border of the left lung by the stomach, which raises the vault of the diaphragm. Ferber called attention to this symptom a number of years ago, but it has been forgotten.

Clinical Observations on the Action of a Weak Infusion of Canadian Hemp. By Dr. L. E. Golubinine.—The author reports five cases of heart disease in which apocynum was used. He concludes that Canadian hemp is a very valuable remedy in disturbances of cardiac compensation. It is of great service in severe cases in which other remedies fail. It lessens the frequency of the pulse, and this effect lasts as long as its use is continued, while in some less advanced cases the pulse remains slow, even after the remedy is discontinued. The arrhythmia of the pulse is considerably lessened, except in cases with advanced myocarditis. The blood pressure is raised and the excretion of urine markedly increased in patients with dropsy. Albuminuria disappears after the use of apocynum, if dependent upon congestion. The frequency of the respirations is diminished. Five minims of the fluid extract, three or four times a day, is sufficient to produce these effects, and unfavorable effects are almost never present, except slight irritation of the stomach, which disappears if the remedy is interrupted for a day or two, and which may be prevented by giving the fluid extract in combination with the tincture of Indian hemp.

An Attempt at a Biological Theory of the Phenomena of Infection. By Dr. F. A. Grinevsky.—The author devotes a lengthy article to a review of the subject of infection and sums up his conclusions in a table of diseases classified as to their causes.

Tuberculous Pleura-peritonitis. By Dr. P. I. Elistratoff.

Disturbances in Metabolism in Bright's Disease. By Dr. M. A. Kabanoff.

A Case of Gastric Achylia. By Dr. A. P. Langavoi.

The Symptoms and Treatment of Mercurial Angina. By Dr. A. I. Liantz.—Very little has been written concerning mercurial affections of the throat. The author reports the histories of four cases in which there were well-marked affections of the pharynx and tonsils as the result of mercurialism. This affection generally occupies a limited area upon the tonsils and arches of the palate, occasionally penetrating into the lacunæ or extending to the uvula. As a rule, the disease is unilateral, but both sides are sometimes affected. In most cases the gums, cheeks, and tongue remain free from mercurial symptoms. There is pain on swallowing, which is sometimes very acute and spreads to the ear. The submaxillary glands are swollen and painful. Occasionally, the case begins acutely with diffuse redness of the palate and pharynx, fever, vertigo, headache, nausea, etc. Objectively, the disease is characterized by erosions or flat ulcers, covered by grayish-white deposits and surrounded by red and swollen mucous membrane. The ulcers tend to spread laterally and but rarely become deep or leave scars. These lesions may appear at the beginning of a course of treatment with mercury, or even after the drug has been discontinued. The treatment consists in the use of hydrogen peroxide and, in the severer cases, in the application of iodoform emulsion, silver nitrate, or chromic-acid solutions.

The Rôle of the Excretory Organs in Typhoid Fever. By Dr. D. V. Nikitine.

Relapses of Facial Paralysis in Cases with Pre-existing Migraine. By Dr. G. I. Rossolimo.—The author reports a case of recurring facial paralysis in a woman, twenty-eight years of age, who had been suffering from severe migraines on the left side of the head since puberty. The first attack of paralysis appeared on the left side after an attack of migraine which lasted a week. The paralysis disappeared under appropriate treatment in five months. About two years later, a second attack of migraine on the right side was followed by facial paralysis on the same side. The third attack was a repetition of the second, and appeared six months later. There had been no rheumatism and no infectious disease. The fourth attack consisted of migraine and paralysis on the left side. The ætiology of the paralysis is not clear, but there is probably some connection between the hemicrania and the paralysis of the seventh cranial nerve.

Œdema in Diabetes Mellitus. By Dr. N. G. Titoff.—Œdema may occur in diabetes mellitus: (1) As the result of anæmia, and is then to be treated with preparations of iron; (2) due to weakness of the heart's action, to be treated by rest and stimulants; (3) due to self-intoxication—distinct from that causing coma—to be treated by diet and diaphoretics; (4) due to cachexia, to be treated by improvement in the general condition.

The Hot Springs in Brusa and Jaloff. By Dr. V. P. Tschepotzeff.—A description of these ancient hot springs in Asia Minor, with analyses of the water in both places. These mineral springs may be classed partly as indifferent, partly as sulphurous, and resemble the waters at Aix-les-Bains, Gastein, Toeplitz-Schoenau and Wildbad. Both watering places are not far from Constantinople and have begun to enjoy considerable popularity of late.

The Rôle of the Clinic in Modern Pathology. By Dr. V. A. Vorobjeff.

Scottish Medical and Surgical Journal, February, 1901.

The Relation of Dentistry to Medical Education. By Dr. W. H. Williamson.—A presidential address.

Pulmonary Phthisis and its Treatment. By Dr. A. James (*continued*).—The prognosis in phthisis can be best considered under the following heads. 1. Conditions of heredity. Double heredity is worse than single, the younger members of a family are more likely to suffer from bad heredity than the elder, and the members of a family resembling the weaker parent are more prone to a similar weakness. 2. Conditions which have led to the development of the disease. The more unfavorable the circumstances have been, the better chance has proper treatment of procuring an arrest in the phthisis, and the greater the possibility of permanently improving the circumstances, the greater the possibility of permanent recovery. 3. General condition of the patient. The better this is, the better the prognosis, and under this head the most important feature is fever. 4. Condition of the lungs. An early involvement of both apices indicates a rapid course. In the very chronic examples of phthisis, the limitation of the disease to one lung is characteristic. 5. Complications. These add enormously to the gravity of the disease, and notable amongst them are tuberculous laryngitis and enteritis.

In the treatment of phthisis the idea is to put the patient, as it were, back in civilization; to put him in surroundings where humanity is sparse, where air is pure, where freedom of movement, of body, and of lungs is as absolute as possible, and where sunlight is abundant. For many patients these conditions are difficult to obtain, and in such cases the author is strongly in favor

of sanatorium treatment as opposed to "home" treatment. The sanatorium simply offers in convenient combination all facilities for treatment. The author closes by reviewing the hygienic, dietetic, and medicinal treatment of phthisis. As regards baths, the systematic application of cold is of great use. If the cough is really troublesome, an intralaryngeal injection of menthol in parolein (twenty-per-cent. solution and one half drachm to be injected) should always be tried. In all cases of hæmoptysis the condition of the bowels should be looked into, and any constipation at once relieved. For the fever, we must trust to absolute rest, open air, and feeding. Cod-liver oil should always be given, wherever possible, combined with a few drops of the liquor arsenici hydrochlorici.

A Short Note on Bilharzia Hæmatobia, and Notes of Three Cases. By D. Wallace, F. R. C. S. Ed.—The habitat of the *Bilharzia hæmatobia* in the human subject is chiefly the portal vein and its branches. That an intermediate host is probable is acknowledged, but as yet none has been discovered, although the general opinion is that it is a mollusc of some kind. The ova are mainly found in the urine. Hæmaturia is the salient symptom in those who are infected by the parasite, and the condition is commonly termed bloodwater or bloodgravel. A sequel or concomitant of the affection is occasionally a renal or vesical calculus. How the parasite gains access to the human body is not known. The author has seen three cases of the affection, in all of which the ova were readily seen when a blood-clot was examined for them. When the urine was clear no ova were to be observed. In the majority of cases the disease gradually disappears of itself. It is not the rule for others than adolescents and young adults to suffer.

The Bacillus Coli Communis in Relation to Cystitis. By Dr. K. M. Douglas.—The conclusions reached by the author are as follows: 1. The *Bacillus coli communis* is met with in the great bulk of cases of cystitis, and, in many, is the determining cause of the disease. 2. In certain cases, the organism is abundantly present during long periods in the bladder, under favoring conditions, but without causing cystitis. 3. Certain of the facts lend support to the view that often the bacillus is a supplanter of other forms rather than the irritating cause of the disease. 4. The marked polymorphism and varying pathogenicity of the organism would account for the conflicting opinions held regarding its identity and its rôle in cystitis, and the confusion of nomenclature until recently prevailing. 5. No one culture reaction enables the organism to be with certainty recognized, but cultivation on several media is needful.

A Curious Case of Disordered Cerebral Circulation. By P. G. Borrowman, M. B.—The author reports the case of a boy, aged nine years, who was in the habit of standing on his head for quite long periods of time. After the last occasion of his doing so, he developed headache and nausea, and went to bed. During the following six weeks he slept almost constantly night and day. Nothing could be made out on physical examination beyond dilatation of the pupils and weakness of the heart's action. Tincture of digitalis was ordered, and within a month he was apparently perfectly well.

A Case of Pseudohypertrophic Muscular Paralysis. By G. Rose, M. B.—The author gives a most careful and thorough report of a case of this affection. The article is accompanied by a series of most excellent photographs showing most graphically the patient's manner of rising from the recumbent to the standing position. Sections of the affected muscles showed the connective tissue between the muscle fibres to be very much increased and highly nucleated. There were also large deposits of fat between the muscle fibres, but the latter appeared to be comparatively healthy.

A Clinical Note on a Case of Eclampsia at the Sixth Month—Recovery—Successful Labor at Full Time. By Dr. M. Dewar.

Book Notices.

Text-book of Physiology. Edited by E. A. Schäfer, LL. D., F. R. S., Professor of Physiology, University of Edinburgh. Volume Second. Pp. xxiv-1365. Edinburgh and London: Young J. Pentland. New York: The Macmillan Company, 1900.

The first volume of this important work, written by a number of English physiologists under the editorship of Professor Schäfer, appeared two years ago and was reviewed in this journal at that time. As the second volume completes the work, it is now easier to form an estimate of the undertaking as a whole. As was explained in the former review, the book is not a text-book in the ordinary sense of the word, but rather a handbook. It is written on the same general plan as Hermann's *Handbuch der Physiologie,* which was published twenty years ago; since the publication of that work nothing similar has appeared in any language, and it is very probable that for many years to come this text-book will be looked upon as the great storehouse of information on physiology, just as Hermann's *Handbuch* has been for the last two decades. Hence the work may be regarded as the expression of the ideas of the leading English investigators as to the present scope of physiology. Viewing it from this standpoint, we must confess that the first feeling is one of disappointment. No effort seems to have been made to secure completeness. The subjects of generation and reproduction, for example, are omitted entirely "because they are studied almost entirely by morphological methods," an argument which would apply almost equally well to a considerable part of the sections on the sympathetic and central nervous systems. Even if it is granted that it is desirable to make a distinction between "general physiology" and what may be called the "conventional physiology" (a distinction which would be regretted by many), there are surely many facts connected with fertilization and with the nutrition of the embryo which the physiologists can ill afford to surrender entirely to other workers. No one will regret the incorporation of a chapter on the physiology of the electrical organs of fishes, especially as it is written in a very interesting way by such an authority as Gotch, but there are other subjects in comparative physiology which are equally entitled to a consideration in such a work as this. All that is said about the physiology of sleep is contained in a line or two in a footnote dealing with the processes of nerve cells, *i. e.,* with facts (or theories) reached by purely morphological methods; the interesting and important experiments of Mosso, Howell, and Kohlschütter are entirely ignored. With the exception of a short paragraph on the electrical response, nothing is said about the physiology of unstriped muscle.

The want of completeness which characterizes the work as a whole is also very conspicuous in some of the different chapters; some of the writers have used their opportunity largely to record their own work and to de-

velop their own views, rather than to give a uniform discussion of the subject as a whole. This attitude gives a decidedly provincial, or rather insular, stamp to parts of the work. Regarded as an exposition of modern physiology, this text-book is hardly the equal of the *American Text-book of Physiology,* although the latter is intended to be simply a text-book for medical students, while the former is written for advanced students and specialists.

While, as is natural in dealing with such an extensive work as this, the defective parts are the first to attract attention, closer examination shows that the treatment of many subjects is worthy of only the highest praise; in fact, it is probable that some chapters will become classic in English physiology. In any case it is a work which no one who desires to be informed on recent work in physiology can afford to be without.

Only specialists in the various fields of physiology could give just and really valuable criticisms of the various chapters, but the following sketch may give a general idea of the subjects treated in this volume. The first chapter deals with the mechanism of the circulation of the blood and is written by Leonard Hill; the subject is treated in the usual way, and the article calls for but little comment. The work of Hales receives somewhat fuller recognition than is usually the case in such articles, and special attention is called to the effects of posture upon the blood pressure and to the cerebral circulation—subjects with which the name of Hill is so closely associated. The second chapter, on the contraction of the cardiac muscle, by Gaskell, is one of the most interesting parts of the volume. It is nearly twenty years since Gaskell began to call attention to the importance of the cardiac muscle in the origination of the heart-beat, but it is only recently that his views have become generally accepted, especially on the Continent, and their importance recognized alike by physiologists and physicians. Hence it is especially interesting to have at this time a lucid account of the development of his views and their relation to the earlier theories of the heart-beat. Unfortunately, however, the chapter contains little but the discussion of this phase of the subject; the treatment of the nutrition of the heart, and especially the recent work on the mammalian heart, receive very inadequate consideration.

Animal mechanics is discussed by Haycraft, while the muscular and nervous mechanisms of the respiratory movements, and of the digestive, urinary, and generative apparatus are described by Starling. The treatment of these subjects is excellent throughout; the advances, however, in our knowledge of these topics in the last few years have not been very great in comparison with those in some other fields of physiology. The recent work on the innervation of the bronchial muscles and of the genito-urinary apparatus and of the movements of the œsophagus and stomach as revealed by the Röntgen rays is introduced.

The mechanical, thermal, and electrical properties of striped (including the cardiac) muscle are discussed in rather technical language by Burdon Sanderson. We are referred to the first volume for a discussion of the chemical changes accompanying muscular contraction; yet, on examination, we find but a single page devoted to this subject, although this deficiency is met to some extent by a rather full discussion of proteid metabolism. The recent experiments on the relation of various kinds of foods to muscular work and fatigue are scarcely mentioned.

There is little to be said in criticism of the remaining chapters of the book; they have been written by men eminent for their researches and for their breadth of view and knowledge. The physiology of the nerves and of the electrical organs is discussed by Gotch, and that of the nerve cells by Schäfer. The chapter by Langley on the sympathetic and other related systems of nerves is the best account of the anatomy and physiology of these systems which has yet appeared; the same may be said of Schäfer's article on the cerebral cortex and of Sherrington's chapters on the spinal cord and the parts below the cerebral cortex and on cutaneous sensations and the muscular sense. These sections will interest the anatomists and neurologists quite as much as the physiologists. The articles on the special senses have been written by Rivers (vision), M'Kendrick and Gray (hearing), and Haycraft (taste and smell). M'Kendrick and Gray also contribute a chapter on vocal sounds.

The book is exceptionally well printed and bound. There is an index of subjects and one of authors; a few errors are noted in the latter, as was also the case with the first volume. Thus, Howell's name appears in one place as "Howell" and in another as "Howells"; two authors of the same name (*e. g.,* Stewart) are not always distinguished by their initials in either index or text. Such small oversights are to be regretted, as it is not probable that a new edition of such a large work will be issued for many years.

Air, Water, and Food from a Sanitary Standpoint. By Ellen H. Richards and Alpheus G. Woodman, Instructors in Sanitary Chemistry, Massachusetts Institute of Technology. First Edition. First Thousand. Pp. 226. New York: John Wiley & Sons, 1900.

In this volume the authors consider these three vital necessities of human life in their sanitary and hygienic relations. The impurities existing in water supplies, the atmosphere, and the ordinary foods are pointed out, and the many methods of analysis and determination of these noxious elements are given in detail. These features form the scientific part of the book, which does not overshadow, however, the practical points. The chapter on ventilation, for instance, is an exceedingly practical piece of writing, as is that on food adulteration.

At the present time, when hygienic and sanitary considerations are influencing so powerfully the life of the people and the thought of the physician, a work of this kind, carefully digested as it is, and full of valuable hints and suggestions, cannot fail to be of value. In temperate, conservative works of this nature the profession will find much of didactic worth.

A Manual of Personal Hygiene. Edited by Walter L. Pyle, A. M., M. D., Assistant Surgeon to Wills Eye Hospital, Philadelphia, etc. Illustrated. Philadelphia: W. B. Saunders & Company, 1900. [Price, $1.50.]

This little work aims to promote right living, based on physiological principles; and it is very safe to say that, if the principles enunciated were observed by mankind in general, the medical man's income would be materially lessened.

The book consists of separate essays on the hygiene of the various parts of the body. Dr. Charles G. Stockton writes on the digestive apparatus, Dr. George H. Fox on the skin and its appendages, and Dr. E. Fletcher Ingals on the vocal and respiratory apparatus. The ear is considered by Dr. B. Alexander Randall, the eye by

the editor himself, the brain and nervous system by Dr. J. W. Courtney, and physical exercise by Dr. G. N. Stewart.

The work contains such a mass of detail that a review of the contents is scarcely possible. The book is a safe one to put into the hands of the laity, for it is scientifically sound, and it is a good guide for the practitioner who wishes properly to instruct his patients in the manner in which they should live. It abounds in sound advice and good principles.

A Medico-legal Manual. By WILLIAM W. KEYSOR, Lecturer on Medical Jurisprudence in the Omaha Medical College, etc. Pp. 316. Omaha: Burkley Printing Company, 1901.

THIS little work should be a welcome addition to the library of every physician liable—and which one of us is not, at times?—to be called to give evidence professionally in a court of law. It differs from the ordinary text-books on medical jurisprudence in the fact that it essays to teach the physician the principles of law involved in such questions as those upon which he may be called upon to give evidence, rather than to teach him those facts of medical science which usually fill the pages of the latter class of treatise and which he should be able to learn from ordinary text-books. In other words, it is a book written by a lawyer for physicians, rather than a book written by a physician for lawyers. Both kinds of works are necessary to uncover the Janus-like countenance of legal medicine.

This work is divided into thirty-two chapters, and deals clearly but concisely with such subjects as evidence, life insurance, insanity, delirium and dreaming, what constitutes a mind in law, identification of persons, marriage and divorce, fruits of cohabitation, etc. It does not conflict, but rather takes a collateral place, with Mr. Taylor's excellent little manual, *The Law in its Relation to Physicians.* This latter work teaches the physician what is the attitude of the law to him under certain contingencies; the present work is designed to point out to him what is the proper attitude for him to assume toward the law in cases in which he is called upon to bring his scientific knowledge to its aid.

Ueber das Intubationstrauma, von Dr. JOHANN VON BÓKAY, A. O. Universitätsprofessor, etc., Buda Pesth. (Sonderabdruck aus der *Deutschen Zeitschrift für Chirurgie,* 58. Band.) Leipsic, 1901.

THIS book of 109 pages, with 7 plates—a reprint of the author's contribution to the fifty-eighth volume of the *Deutsche Zeitschrift für Chirurgie*—is of peculiar interest to Americans. It is difficult to find a page in it that does not refer to Joseph O'Dwyer's immortal achievement. Its several chapters treat of (1) the traumatism caused by the introduction of the tube, (2) that which results from its retention in the larynx, (3) that which is caused by extubation (to which is attached a discussion of the hoarseness following intubation), and (4) the cicatricial strictures and obstructions of the larynx after intubation. Even those who have much experience on these points will find additional information in the famous author's practical and literary studies. The book is dedicated to the "president of the New York Academy of Medicine in that memorable meeting (June 2, 1887) in which O'Dwyer and his collaborators, Francis Huber, Dillon Brown, W. P. Northrup, I. H. Hance, and A. Caillé, first made intubation thoroughly known."

A Reference Handbook of the Medical Sciences, embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By various writers. A New Edition, completely Revised and Rewritten. Edited by ALBERT H. BUCK, M. D., New York. Volume I. Illustrated by Numerous Chromolithographs and Four Hundred and Ninety-eight Fine Half-tone and Wood Engravings. Pp. x-799. New York: William Wood & Company.

THIS work is far too well known and too highly esteemed to require description or criticism at this day, but it cannot but be a source of satisfaction that the advance in medical knowledge should be kept pace with in this work by a thorough revision and a new edition rather than, as was done in 1894, by the publication of a supplementary volume. Such addenda are never satisfactory, for obvious reasons. From an examination of the first volume of the rejuvenated work it is evident that the reconstruction is to be thorough, and nobody can examine the volume without being struck by its completeness and very great value. It is encyclopædic in the best sense.

The Microscopist's Vade-mecum. A Handbook of the Methods of Microscopic Anatomy. By ARTHUR BOLLES LEE. Fifth Edition. Pp. xiv-532. Philadelphia: P. Blakiston's Son & Company, 1900. [Price, $4.]

IT is probable that no one interested in microscopy is without a volume of Lee's book in his library. In a few years it achieved such a reputation as a unique exposition of the principles and methods of histological work that successive editions have been speedily absorbed. In the present edition the author has omitted many of the antiquated and now useless methods, and has taken occasion to amplify the theory of the principles involved.

There is nothing in the whole realm of microscopical work that is not included in Lee's book, from the killing of the protozoa to the most minute description of modern neuropathological methods. The bibliographies attached to the various sections enhance the value of the individual chapters, rendering reference easy. In fact, no one interested in microscopical technics can afford to be without this indispensable work. It is a veritable *vade-mecum.*

BOOKS, ETC., RECEIVED.

International Clinics: A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pædiatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by Henry W. Cattell, A. D., M. D. Volume I. Pp. viii-312. Eleventh Series, 1901. Philadelphia: J. B. Lippincott Company, 1901.

Human Placentation. An Account of the Changes in the Uterine Mucosa and in the Attached Fœtal Structures during Pregnancy. By J. Clarence Webster, B. A., M. D. (Edin.), F. R. C. P. E., F. R. S. E., Professor of Obstetrics and Gynæcology in Rush Medical College, etc. Pp. 126. With 233 Illustrations. Chicago: W. T. Keener & Company, 1901.

An Index of Symptoms as a Clew to Diagnosis. By Ralph Winnington Leftwich, M. D., Late Assistant Physician to the East London Children's Hospital. Second

Edition. Pp. xvi-267. New York: William Wood & Company, 1901.

Chronic Urethritis of Gonococcic Origin. By J. de Keersmaecker, Chief of Service, Diseases of the Urinary Organs at the Centraalklinik of Antwerp, and J. Verhoogen, Agrégé at the University of Brussels, etc. Translated and Edited, with Notes, by Ludwig Weiss, M. D., Attending Physician to the Genito-urinary and Skin Service, German Poliklinik, etc. Pp. xiv-263. New York: William Wood & Company, 1901.

First Aid to the Injured Ambulance Drill. By H. Drinkwater, M. D. Pp. 104. New York: Macmillan Company, 1901.

Hygiene and Public Health. By Louis Parkes, M. D., D. P. H. (Lond.), Lecturer on Public Health at St. George's Hospital Medical School, etc., and Henry Kenwood, M. B., D. P. H., F. C. S., Assistant Professor of Public Health at University College, London, etc. Pp. xix-732. With Illustrations. London: H. K. Lewis. Philadelphia: P. Blakiston's Son & Company, 1901. [Price, $3.]

3,500 Questions on Medical Subjects, arranged for Self-examination. With the Proper References to Standard Works in which the Correct Replies will be Found. Third Edition, Enlarged. With Questions of the State Examining Boards of New York, Pennsylvania, and Illinois. Pp. viii-9 to 229. Philadelphia: P. Blakiston's Son & Company, 1901.

Tuberculosis as a Disease of the Masses, and how to Combat it. Prize Essay by S. A. Knopf, M. D. Pp. 86. New York: M. Firestack, 1901.

La tuberculose et la médication créosotée. Par le Docteur Samuel Bernheim. Pp. 311. Paris: A. Maloine, 1901.

La cryoscopie des urines. Application a l'étude des affections du cœur et des reins. Par H. Claude, Ancien interne, etc., et V. Balthazard, Interne des hôpitaux de Paris. Avec 21 figures dans le texte. Pp. 5 to 94. Paris: J. B. Baillière et fils, 1901.

La mécanothérapie. Application du mouvement à la cure des maladies. Par le Docteur L. R. Regnier, Chef du Laboratoire d'Électrothérapie et de Radiographie à l'Hôpital de la Charité. Avec 6 figures dans le texte. Paris: J. B. Baillière et fils, 1901.

Royat. Indications thérapeutiques méthodiquement classées. Pp. 5 to 96. Paris: J. B. Baillière et fils, 1901.

The Circulation in the Nervous System. By Herman Gasser, M. D. Pp. 5 to 156. Platteville, Wis.: The Journal Publishing Company, 1901.

Leitfaden der Therapie der inneren Krankheiten mit besonderer Berücksichtigung der therapeutischen Begründung und Technik. Ein Handbuch für praktische Aerzte. Von Dr. J. Lipowski. Pp. xxii-236. Berlin: Julius Springer, 1901.

Transactions of the American Climatological Association. For the Year 1900. Volume XVI.

Transactions of the American Dermatological Association at its Twenty-fourth Annual Meeting, held in Washington on May 1, 2, and 3, 1900, in Connection with the Fifth Triennial Session of the Congress of American Physicians and Surgeons.

Transactions of the Obstetrical Society of London. For the Year 1900. Volume XLII.

Sixteenth Annual Report of the Bureau of Animal Industry. For the Year 1899.

Transactions of the Society of Anæsthetists. Volume III.

Twenty-fifth Annual Report of the Managers and Officers of the New Jersey State Hospital. For the Year ending October 31, 1900.

The Seventh Annual Report of the Board of Managers of the Craig Colony for Epileptics, at Sonyea, N. Y.

Fifteenth Report of the Lunacy Commission to His Excellency the Governor of Maryland. December 1, 1900.

Annual Report of the New York Eye and Ear Infirmary. January, 1901. Volume IX.

Transactions of the Alumnæ Association of the Woman's Medical College of Pennsylvania. 1900.

Third Annual Report of the Hospital for Scarlet Fever and Diphtheria Patients, 1901.

Annual Report of the Mount Sinai Hospital of the City of New York. January, 1901.

Twenty-eighth Annual Report of the New York County Visiting Committee for Bellevue Hospital and other Public Institutions. October 11, 1900.

Miscellany.

A Chinese Xiphopagus.—Dr. Edouard Chapot-Prévost, of Rio de Janeiro (*Gazette médicale de Paris*, March 23, 1901), communicated recently to the Paris Academy of Medicine an account of Liou-Tang-Sen and Liou-Seng-Sen, twins born in China in January, 1887, connected by a sternal band, being the eleventh known living instance. They were being exhibited by the Barnum-Bailey syndicate at Vienna. The father was eighteen years of age, and the mother twenty, at the time of marriage. There was no instance of twins in the family of either parent. The pregnancy took place in a level country, but slightly elevated above the sea, not mountainous as has been the case in most other instances of the kind. The father was the only attendant at the accouchement, which was easy, notwithstanding the nature of the case and the fact that the mother was a primipara. The first presentation was cranial, the second a foot presentation. There was only one cord and one placenta. Each child was slightly under the average size at birth. The mother had no miscarriage and no other pregnancies. She died three years after their birth.

The children were breast nourished for two years and a half. They began to talk at a year and a half, but did not begin to walk till three years of age. They are very intelligent. They can lie indifferently on either side. They had small-pox at four years of age, one sickening one day before the other; this one alone bears any small-pox marks. In disposition they are mirthful, very fond of each other, and not quarrelsome. As to locomotion, when Liou-Seng-Sen is on the right and Liou-Tang-Sen on the left, they can walk forward side by side, in a manner somewhat similar to that of two men forming what is known as a "two-handed seat" for carrying the wounded. In this position they can walk easily, and even run and leap. When they change position, however, so that Liou-Tang-Sen is on the right and Liou-Seng-Sen on the left, they cannot walk regularly, but are obliged to make one foot follow the other in the same direction for the movement of progression. In the first case, both walk forward; in the second, sideways, one going from left to right, and the other from right to left. Liou-Tang-Sen is $53\frac{1}{5}$th inches tall and Liou-Seng-Sen $52\frac{3}{5}$th inches. Each was sixty pounds when last weighed. All their functions are independent. In each, the urine is vari-

able both as to time and quantity. One may sleep while the other is awake. One is sometimes hungry when the other is not. On one occasion, whiskey was given to one of them only, when both became intoxicated, the one that had not taken the whiskey being more drunk than the other.

They are united in front by a fleshy band, seven centimetres and a half long and three centimetres broad, which is situated in both of them at the lower border of the sternum. The x-rays show that the band has no bony part; but the peritonæum of each is to be seen within it.

Paralysis in Typhoid Fever.—Dr. James Carslaw (*Glasgow Medical Journal,* March) recently reported to the Glasgow Pathological and Clinical Society two cases of paralysis in typhoid fever; the first he regards as a true complication of typhoid fever, due to the effect of the toxines of the *Bacillus typhosus* on the nervous tissues; the second he regards rather as a coincidence—an attack of hemiplegia in the course of typhoid, which might have occurred in connection with any feverish illness, or even without any other symptoms. The author says:

"Apart from the nervous symptoms, such as headache, sleeplessness, and delirium, that occur in enteric fever, as in some of the other specific infectious fevers, there are many definite affections of the nervous system that may develop either during the fever or in the course of convalescence. In this respect enteric resembles epidemic influenza more than any other of the specific fevers. There may be mental symptoms, leading on to some form of insanity, or neurasthenic conditions may supervene. But there may also be definite system disease of the brain or of the spinal cord, or some inflammatory affection of the peripheral nerves. Cases of hemiplegia have been recorded by Murchison and others, and, though they may sometimes be due to embolism, it is said that hemiplegia may occur from arterial thrombosis, just as such thrombosis may occur in a limb and lead to gangrene. Disseminated sclerosis, disseminated myelitis, and anterior poliomyelitis have all been found as sequelæ, but the paralysis of enteric fever is probably most frequently due to a neuritis. This may be a slight affection, and in this form is probably not very infrequent, perhaps limited to the feet, and giving rise to the so-called 'tender toes of typhoid'; or it may be very extensive—affecting all the limbs, and associated with marked atrophy in addition to motor and sensory disturbances."

The first case, that of a young man twenty years of age, showed asymmetrical peripheral neuritis of both upper limbs. He had three weeks of grave fever with constant delirium and unconsciousness, and about a week later there developed severe pain in the right arm and especially at the shoulder, with numbness in the fingers, followed in two days by practically complete paralysis of the arm. Two weeks later the left arm followed suit. There was no history of venereal disease or rheumatism. The patient was temperate and had always enjoyed good health. Nothing abnormal in face, eyes, or tongue: knee-jerks slightly exaggerated. The right deltoid was much more wasted than the left, while the right biceps was in good condition and the left much wasted. There was pain on handling the affected muscles. The forearm muscles, especially the extensors, were very weak, and there was drop-wrist. There was an area on the right hand and forearm, including the right thumb and first two fingers, the outer half of the palm of the hand, the outer half of the back of the hand and for a distance of about two thirds up the back of the forearm on its radial aspect, where there was marked anæsthesia of tactile impressions. In the same area there was analgesia, loss of thermal sensibility, and absence of muscle sense, while this region was quite dry and cold, the other hand and the remainder of the right hand being flushed and perspiring. Tactile sensibility was good elsewhere, and there was, particularly in the left hand and arm, hyperalgesia to such an extent as to render it somewhat difficult to make a detailed electrical examination. There was some tremor of the limbs, and the muscles were unusually sensitive to direct stimulation. A biceps-jerk was easily elicited on the right side, but otherwise the reflexes of the arms were absent. There was some swelling of the hands, which might be partly mechanical in connection with the wrist-drop, though it might be related to the vasomotor disturbance evidenced by the flushing and perspiring. In regard to the electrical reactions, the reaction of degeneration was present in all the muscles of both shoulders and arms, though the increased sensitiveness of the patient made it difficult to state the results in figures. The method of treatment adopted was the application of the faradaic current to the muscles that responded to it, but the galvanic current to those that responded only to it. Considerable improvement had taken place.

Luxation of the Testicle.—M. Parizeau (*Union médicale du Canada,* February, 1901) records a curious case of luxation of the testicle. The patient, a man sixty-four years of age, was working at an excavation when he was buried in a mass of débris. On being released, he was almost asphyxiated, and the subject of many contusions. On recovering from a semi-comatose condition, he complained of intolerable pains on the left side of the thorax, which were only partly relieved by the discovery and treatment of three fractured ribs. He suffered much from shock, being pale, with a rapid and feeble pulse, frequent and painful respiration and repeated and prolonged vomiting far into the night. Active stimulation had ameliorated his condition by morning, when he was first seen by Dr. Parizeau. About a fortnight later, the patient drew the doctor's attention to a soft, regularly oval, almost painless swelling on the inferior surface of the penis, the skin about which was ecchymosed and to which, taking it for a hæmatoma, he at once applied a moist compressing dressing. The scrotum appeared to be normal. After the swelling had subsided, examination convinced the author that this swelling was a dislocated testicle, of the absence of which from its proper place he soon satisfied himself. At the earnest solicitation of the patient he incised the scrotum obliquely toward the root of the penis, and releasing the imprisoned testicle from the cicatricial mass by which it was retained, replaced the errant gland and fixed it *in situ.* A perfect recovery was made without any accident, and after the expiration of many months there had been no atrophy.

There had been, the author said, up to that date two cases of luxation of the testicle recorded: in the first, by Hess, the testicle had lodged in the opposite side of the scrotum, having passed through the sæptum: in the other, by Bruns, it had been found underneath the skin of the pubes.

Leprosy on the Canary Islands.—The existence of about 200 lepers on the island of Teneriffe, Canary Islands, has been officially reported at Washington by United States Consul Berliner. He says that there are three distinct classes of leprosy on Teneriffe Island, namely, lepra arabum, lepra elephantiasis, and lepra

tuberculosis. The disease diverges into two main varieties, the spotted and the nodular. The report is based on personal investigation and assistance of physicians, and says: "As being contagious, it is generally discredited here, but, in my opinion, it is very infectious. In former years Spain had established a colony at Grand Canary for lepers. They were housed there, but had perfect liberty to wander about with the restriction that they must sleep at the houses built for them. In course of time this law became a dead letter, and gradually they spread over the different islands. At Santa Cruz de Teneriffe, the capital, there are (from personal knowledge) 22 lepers, 15 of whom are men, and there are also some children of these unfortunates. Officially it is not recognized that leprosy exists on these islands." United States Consular Agent Swanson, on Grand Canary Island, in an accompanying report, says that leprosy there is decidedly decreasing. There are fifty patients in the lepers' hospital at Las Palmas. A few families infected with the disease live in their own homes.

The Treatment of Dry Labor.—Dr. Atlee (*American Journal of Obstetrics,* March) says that before recalling the various means we can employ for the relief of this condition, he would say with Lusk, that with increasing experience his own practice has grown more and more conservative, and his belief is that true wisdom requires us to abstain from even trivial operations *so long as Nature is able to do her work without our assistance.*

Should the os dilate very slowly or not at all, and the woman be suffering great pain, she must be relieved by some means, for this element of pain is much to be dreaded, as, when long continued, it is a powerful nerve depressant. "When combined with starvation and deprivation of sleep, it greatly impairs a woman's powers to resist the perils of the puerperal period." In this condition a prolonged warm bath, an enema of twenty grains of chloral in six ounces of warm milk, or a hypodermic of one quarter of a grain of morphine, will often act like a charm; and, again, the relief will be only very temporary, lasting perhaps half an hour. We then resort to mechanical means to assist the dilatation of the os, by means of trying to keep the woman on her feet. When the pains are very severe and almost continuous, as they so frequently are in this condition, it will be impossible for her to do so; Barnes's water-bags may then be tried, as they both dilate the os and increase the efficiency of the pains. However easy it may be to advise their use, in the case here recorded great difficulty would have been encountered in introducing them into the os so high up and behind the vertex. That it could be done by dexterity and perseverance Dr. Atlee does not doubt. He would have placed the patient in the knee-chest position and gently pushed the presenting part out of the way, and at the same time facilitated the operation by the use of Sims's speculum.

After the complete dilatation of the os the forceps is the safest and surest means at our disposal; for, by the use of ergot under these circumstances, with the uterus probably in a state of tetanic contraction, applied closely to the child, we should only increase the retraction, while not increasing the contracting or expulsive efforts. The forceps, in the form of the narrow-bladed Taylor's instrument, has been suggested even before the os is dilated and the head engaged, but, except in the hands of the most skilful accoucheur, to apply it to the movable head is a very difficult and hazardous undertaking. With the os dilated and the head engaged, the application of the forceps nowise differs from its use under any other indications, and should be performed *secundum artem.*

Congenital Dislocation of the Patella.—At a meeting of the Section in Orthopædic Surgery of the New York Academy of Medicine, held on March 15th, the chairman, Dr. George R. Elliott, showed a man, twenty years old, with dislocation of the right patella. His relatives had told him that it was first noticed two days after his birth; he had worn apparatus at various times, but nothing since 1888. The patella slipped into place on extension, but on flexion slid over the external condyle of the femur, even if force was applied to hold it; there was two inches of atrophy of the right thigh; a slight degree of knock-knee existed. All that the patient complained of was a sense of weakness and uncertainty in the leg. The man wished to know if the condition could be remedied without leaving him with a stiff knee. He preferred his condition of slight disability to a stiff leg.

A Case of Fracture of the Seventh Vertebra.—At a meeting of the New York Neurological Society, held on April 2d, Dr. Edward D. Fisher reported the case and presented the specimen. The patient was an acrobat, twenty years of age, who, while turning a somersault from the shoulders of a companion, had fallen a distance of about five feet, and struck on his head. He was instantly paralyzed. When he was seen by the speaker, that evening, there was complete anæsthesia extending from below the nipple to the armpit, and on the inner side of the arm and forearm, and taking in the ring and little fingers. There was complete loss of motion, and there was paralysis of the bladder and rectum. The reflexes, superficial and deep, were completely lost. Permission could not be obtained for an operation until three days later, and in the meantime there had been a temperature range of 104° to 105° F. The operation was done by Dr. B. Farquhar Curtis under cocaine anæsthesia, and the laminæ of the fifth, sixth, and seventh vertebræ were removed. No evidence of injury to the cord could be discovered. The man died three days later. The autopsy revealed a fracture of the body of the seventh vertebra. There was no subdural hæmorrhage, but there was marked softening of the cord at the seventh cervical segment. There was very little gray matter left in the cord at that level, and there was very little evidence of hæmorrhage into the cord proper. A very prominent symptom had been the extreme pain experienced along the course of the nerves.

The Japanese as Surgeons.—Dr. E. C. Register (*Indian Lancet,* March 11th), writing from Nagasaki, in an article on The Hospitals of Japan, says:

"In surgery the smaller and more delicate and difficult the operation is the more it interests. The average Japanese physician would rather see a cataract operation than a hysterectomy. To watch them prepare for an operation, the time they seemingly throw away arranging little things, the minute instructions they give their assistants and nurses, even in minor surgical cases, and to observe them fix, with so much care and deliberation, every table and tray, every knife and sponge, perfectly oblivious to time, is as amusing as it is tiresome to the hustling, restless, and impatient American."

We are by no means sure, however, that "the hustling, restless, and impatient American" would not do well to learn a lesson from the careful and deliberate Jap.

Special Articles.

ABDOMINAL PAIN IN TYPHOID FEVER.

(From the Service of Dr. Osler, the Johns Hopkins Hospital.)

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IF the question were put to a number of practitioners, "How often does abdominal pain occur in typhoid fever?" it is probable that very varying answers would be obtained. The student, if pressed for an answer, would fall back on his text-book and probably reply that it occurred only with certain complications, especially perforation, for the majority of text-book articles make little mention of abdominal pain in typhoid fever except in complications. One exception is the article by the late Dr. Pepper, in the *American System of Medicine,* in which the statement is made that abdominal pain and tenderness are commonly present. Reference is always made to tenderness in the abdomen and especially in the right iliac fossa.

It is not necessary to establish the importance of an accurate knowledge of the occurrence of this symptom. This is, of course, greatest in connection with the diagnosis of perforation, of which pain is the most constant symptom. Only by early recognition of this complication can we hope to save perhaps one of the two patients with perforation in every hundred typhoid cases. Typhoid fever is becoming more and more a disease which is treated in hospitals. The recognition and estimation of serious abdominal symptoms must often depend on the house physician. For him is especially necessary an accurate knowledge of the various conditions causing abdominal pain. The question of the cause of pain may arise suddenly, other symptoms may be contradictory or deceptive, and the decision as to the occurrence or not of perforation may be most difficult. Special attention to the necessity for careful systematic study of these cases has recently been drawn by Dr. Osler (1). The strain of deciding the question of diagnosis in doubtful cases is very great. Early operation in perforation is all-important. Of course a needless exploration for suspicious signs is to be avoided if possible, although with recent methods the risk has been much reduced and is often less than leaving a doubtful case alone. The same applies to rarer abdominal complications, such as cholecystitis or appendicitis.

The occurrence of five cases of perforation in typhoid fever in about as many months in the medical service of this hospital has necessarily again drawn our attention forcibly to its symptoms and recognition. Several other cases during the same time were under both medical and surgical observation, the abdomen being opened in four, one of which was acute appendicitis, one was liver abscess, and in the other two no lesion was found. In all of these abdominal pain was a prominent symptom. To obtain a definite idea of its occurrence, the last 500 cases in the hospital have been studied with reference to this symptom. The majority of these have been under personal observation.

Before giving the results of this series, it is of interest to note a few of the references in the literature. As a general rule, little mention is made of this symptom. The statement of Pepper is noted before. Wilson (2), in one article, says: "Abdominal tenderness and pain are present in the majority of the cases." In another article this same writer (3) says that "abdominal tenderness may be elicited upon gentle pressure in the majority of cases" and "spontaneous abdominal pain is not common. It may arise, however, in consequence of extensive or deep ulceration and is present in local peritonitis." Moore (4) states that "there is tenderness on pressure over the abdomen," but he makes practically no mention of pain apart from perforation and peritonitis. The middle ground is taken by Murchison (5), who says: "Abdominal pain and tenderness are common but not necessary symptoms." He quotes tenderness as being present in 71 out of 81 of his own cases, in 106 out of 127 in a series of Louis's, and in 15 out of 20 fatal cases reported by Jenner. This statement of Murchison's has been widely copied and translated into foreign articles. In Strümpell (6) it is said that "abdominal pain is often entirely absent. Some, however, complain of abdominal pain throughout almost the entire illness." Tenderness is thought by him to be most marked with constipation. H. A. Hare (7) considers that "pain in the abdomen is distinctly a symptom of the early stages, and in many cases is due to gas. It is usually wandering and is not consequently in one spot; if so, it probably depends on localized complication. Often there is some pain later when there is tympanitis and distention." Melville (8), in reporting the abdominal features of 250 cases seen in India, found pain in 88 at some period. The general idea in the literature generally is that pain is of no special significance apart from the complications.

The 500 cases of this series may be classified under three headings as regards pain:

I. Cases without pain or tenderness at any time during the attack. Of these there were 206, or 41 per cent.

II. Cases with tenderness but no pain. Of these there were 72, or 14 per cent.

III. Cases in which abdominal pain was present at some period of the attack. Of these there were 222, or 44 per cent. Of these 222 cases there were 61 in which the pain was present only at the onset. This leaves 161 cases, or 32 per cent., with pain during the course.

In typhoid fever there are, of course, some patients with stupor or delirium in whom conditions usually causing pain may be present, but no complaint is made. With the employment of the bath treatment such are, however, not common and there are few such in this series.

These classes may now be considered in detail.

I. *No pain or tenderness at any period: 206 cases.* It is of interest to note the occurrence in this group of conditions which at times apparently do cause pain. Of abdominal symptoms, marked distention was present in 27 cases, abdominal rigidity without distention in 6, diarrhœa in 20, distention and diarrhœa together in 2, and in 1 fæcal impaction. Hæmorrhage occurred in 9 of this class—in connection with which it may be noted that, among 36 cases of hæmorrhage, in 22 there was no pain with this complication, in the 13 other cases pain or tenderness occurred in connection with some other condition. Severe vomiting was present in 6 cases. Of thoracic conditions, pleurisy, pneumonia, and pericarditis were present in one each. Abscess of the liver occurred once and marked distention of the bladder six times. It will be noted that there was no instance of perforation. The general impression obtained on reviewing these cases is that they included many of a mild type. There were eight deaths among them—a low rate, but one must remember that none of the cases of perforation and few of the cases of hæmorrhage come in this division.

II. *Tenderness only: 72 cases.* This is a common symptom and, of course, was present in many of the third group. These records are based on the records of ordinary abdominal palpation and probably, if severe pressure were used, tenderness would be present to some degree in more cases. The situation of the tenderness when noted was as follows: General in 26, right iliac fossa in 11, over the lower abdomen in 9, umbilical region in 8, left iliac fossa in 4, epigastrium in 3, and 1 each in both iliac fossæ and hypogastrium. Of associated symptoms, distention was present in 13, diarrhœa in 10, marked muscular rigidity in 6, distention with diarrhœa, hæmorrhage, obstinate constipation, and distended bladder in one each. The statement made by Strümpell that tenderness is most marked with constipation does not seem to be supported by these cases. Constipation was the rule among this series.

III. *Occurrence of abdominal pain: 222 cases.* These may be divided into two groups, one with pain only at the onset, and the other with pain present during the course. The latter group of 161 cases can be divided up into several divisions, which it seems convenient to do in the consideration of the cause.

1. Pain due to conditions apart from any special lesions of the disease, including hysteria, lung conditions, bladder, abortion, labor, and menstruation.

2. Conditions of the gastro-intestinal tract apart from complications, including food, vomiting, constipation, and diarrhœa.

3. Abdominal conditions apart from the specific bowel lesions, including appendicitis, peritonitis (other than due to perforation), cholecystitis, liver abscess, painful spleen, phlebitis.

4. Specific intestinal complications, hæmorrhage, and perforation.

5. No discoverable cause.

Pain at onset. This was the case in 166 cases, in 61 of which the pain was only present at the beginning and not during the course of the disease. The severity of this symptom may lead to error in diagnosis. In cases associated with diarrhœa and without high fever the condition may be thought to be only an enteritis. If the abdominal symptoms are more severe and there are signs in the abdomen, such as localized tenderness, muscle spasm, etc., a diagnosis of appendicitis or peritonitis may be made. There were four cases of this series in which this error was made. Two were considered to be appendicitis from the severity of the pain and the local symptoms. In one of them, that of a patient admitted to the gynæcological service with marked abdominal pain, tenderness, muscle spasm, and leucocytosis, the abdomen was opened. In the two other patients a diagnosis of peritonitis had been made, one being sent in on the gynæcological side. During the same period two patients were admitted to the surgical side with a diagnosis of peritonitis, and immediate operation showed perforation of a typhoid ulcer.

Pain during the course: 161 cases. It may be said that in the majority of these cases complaint of pain was made by the patient.

1. With hysteria, lung conditions, bladder, abortion, labor, and menstruation.

(a) Hysteria and nervous conditions. Of pain due to this there were four instances, two in either sex. In one man severe pain was complained of and, on palpation of the abdomen, there was great tenderness. His respirations rose at once, on examination, to 56 to the minute and were sobbing in character. There were other suggestive neurotic features in the case, and little doubt was felt as to his condition. The other man showed symptoms which were more difficult to place. He complained of sudden intense abdominal pain with which he cried out so loudly as to disturb the ward. There was pain on palpation and there was rigidity of the abdominal muscles. Soon he became nauseated and vomited. He made so much outcry and was so emotional that suspicion was aroused. After these symptoms had been present for forty-eight hours they suddenly cleared up and he was quite comfortable. Later he had two similar attacks which were shorter, perhaps on account of the scant attention he received. The third case was in a woman who had taken some training in nursing. She complained suddenly in the night of severe pain in the right iliac fossa. On palpation, there was marked tenderness with rigidity of the muscles on the right side. She was rather neurotic, and we attributed her symptoms to this. Her knowledge of disease was enough to enable her to give many of the symptoms of appendicitis, which she said she thought she had. At the end of twenty-four hours all the symptoms disappeared. In the fourth case the pain came on after a pronounced nervous attack. The patient screamed with pain and the associated features

were marked. This condition is rarely likely to lead to a mistake in diagnosis. There are apt to be other suspicious symptoms. Still, as in the second case noted above, the recognition may be very difficult.

(b) With pleurisy and pneumonia. There were three instances of this, two with pleurisy and one with pneumonia. In one of the former, with a pleurisy in the left side, there was abdominal pain in the epigastrium and left hypochondrium. In the second instance a pleurisy —evidently diaphragmatic at first—was accompanied by severe pain, usually in the left hypochondrium, but also at times in the epigastrium. This continued for nearly three weeks at intervals, during which time empyema developed, which finally required operation. In the patient with pneumonia, which was in the lower right lobe, there was at first general abdominal pain, greater on the right side and accompanied by marked rigidity of the muscles on that side. Such an abdominal condition might easily lead to error were the lung complication not discovered. In all these cases it seemed probable that the diaphragmatic pleura was involved. They lay emphasis on the necessity of careful examination of the thorax in all doubtful cases, to exclude any pleural cause of pain.

(c) Pain due to a distended bladder. This caused severe pain in four instances. Distention of the bladder is common in typhoid fever, but it is rare for the patient to make any complaint. In all of these severe pain was complained of by the patient. The recognition of the enlarged bladder, followed by the passage of a catheter, brings relief at once. The possibility of this cause of pain should be kept in mind and excluded in obscure cases.

(d) Pain with abortion or labor. This occurred in three cases. In the later periods of pregnancy there would be little chance of error as to the cause of the pain. In the earlier months, when abortion most often occurs, before the uterus is much increased in size and when the fact of pregnancy may not have been recognized, a mistake might easily be made. In women its possibility should be kept in mind.

(e) Pain with menstruation. This must be rare, as menstruation usually does not occur during the course of typhoid fever. It only occurred in one instance among this series.

There was no instance of pain associated with degeneration of the abdominal muscles or with rupture of the recti abdominales.

2. Gastro-intestinal conditions apart from complications—food, vomiting, constipation, and diarrhœa.

(a) With solid food. In two instances there was pain following the taking of solid food, both during pyrexia, the food having been smuggled in by friends.

(b) With vomiting. In three cases associated with severe and protracted vomiting, apart from any complications, there was severe pain.

(c) With constipation and fæcal impaction. Pain apparently due to constipation was present in ten cases, in three of which there was obstinate impaction. In two instances the pain was specially associated with the administration of an enema. There were no special peculiarities associated with the pain. As constipation is the rule in the majority of the cases, it does not seem to be a very common cause of abdominal pain.

(d) Pain with diarrhœa. This occurred in sixteen cases. The pain was like that of colic and was rarely continuous. It was often present just before the bowels moved or during the stool. The absence of other symptoms usually serves to render the cause evident. In two of these cases, however, the symptoms suggested an acute abdominal complication. In one there was severe general pain, with marked rigidity of the muscles on the right side. The pain lasted for two days and cleared up with improvement in the condition of the bowels. In such obscure cases the importance of excluding other conditions before giving opium on account of the diarrhœa is evident. A severe complication might be masked by opium given for pain and diarrhœa.

3. Various abdominal conditions—appendicitis, peritonitis, cholecystitis, liver abscess, painful spleen, phlebitis.

(a) Pain with appendicitis, peritonitis, and obstruction. Any acute abdominal condition which causes pain may occur in the course of typhoid fever. Others than those noted may happen, as, for example, intussusception. There were two cases of pain with appendicitis, in neither apparently due to typhoid lesions. In one there was severe abdominal pain present from admission, but there was a sudden definite increase with the onset of the complication. The pain was severe, worse on pressure, and associated with an increasing leucocytosis. Operation showed acute appendicitis. There was one case due to peritonitis. The patient had shortly before undergone a pelvic operation for pus tubes. With infection probably from that source she had severe pain, vomiting, tenderness, and leucocytosis. At the operation some obstruction was found due to adhesions, and the pain may partly have been due to that. Obstruction was a cause of pain in three cases, all after operation, two for perforation and one for liver abscess. The pain in these was severe and paroxysmal, frequently making the patients cry out. In these cases usually only a diagnosis of some acute abdominal complication can be made.

(b) With cholecystitis. This occurred in four cases, two of which were operated on. In the other two patients, the seat of pain, tenderness, local muscle spasm, with jaundice in one and leucocytosis in the other, seemed to render the diagnosis fairly certain. All of these complained of fairly severe pain in the upper right quadrant of the abdomen. With this there were great tenderness and muscle spasm. The situation of the pain, with the associated symptoms, would seem likely to prevent error in these cases.

(c) With liver abscess. Pain due to this occurred

once. In another case there was no pain whatever. The pain was in the upper right quadrant and was severe and paroxysmal, at times making the patient cry out. It was made much worse by pressure over the right costal margin. There was nothing in its character to distinguish it from that of cholecystitis.

(d) With a tender spleen. This was found in ten cases, and was usually most marked on palpation. In three instances at the time of the presence of the pain the spleen was not palpable, though felt later. In none did the spleen seem unusually enlarged. In only one case was a friction rub made out over the spleen. This pain is rarely likely to lead to any doubt as to its origin. Its situation and the increase on palpation usually render it clear.

(e) With phlebitis. This was the cause of severe abdominal pain in four instances. When it is stated that in two of these laparotomy was done, its significance will be appreciated and the possibility of the symptoms simulating those of perforation. In these two cases the pain came on suddenly and was very severe; there were marked abdominal symptoms, leucocytosis, and in one vomiting. At the operation no perforation or peritonitis was found, but thrombosis of the internal iliac veins. In the third case the pain came on suddenly after an enema; there were marked tenderness, hiccough, and leucocytosis. The presence of some tenderness in the left femoral region for two days before suggested thrombosis, although nothing was to be felt there. In the fourth case, with much the same symptoms, there had been some previous tenderness in the leg. An autopsy in one case showed thrombosis of the left iliac vein, and subsequent œdema of the leg supported the diagnosis in the other cases. The sudden onset and the character of the pain are very like those of perforation. The marked tenderness, leucocytosis, and perhaps vomiting may all tend to support this view. Careful examination of the vessels in the legs and over Poupart's ligament should be made, and the presence of signs there would be an important point in the diagnosis.

4. Pain with hæmorrhage and perforation.

(a) With hæmorrhage. This was associated with pain in 14 cases, among a total of 36 cases of hæmorrhage, so that it appears to be by no means a constant symptom. In nearly all these cases the pain was severe and was complained of by the patient. In some it came on in paroxysms, in others it was more continuous. Its character may suggest perforation, the possibility of which has to be kept in mind. The two complications occurred together in two cases of this series, and in both the mistake was made at first of attributing all the symptoms to the hæmorrhage. Of the thirty cases of perforation since the opening of the hospital to date, April 1, 1901, six have been accompanied by hæmorrhage. In a doubtful case, with pain, the blood examination may show a marked drop in hæmoglobin and red corpuscles before any blood appears externally. This was a valuable diagnostic point in one of our recent cases. In one case, with a sudden onset of severe pain, vomiting, abdominal tenderness, and increased pulse rate, the suspicion of perforation was so strong that an exploratory operation was done with negative findings. The occurrence of leucocytosis in some cases of hæmorrhage also adds to the difficulty of diagnosis. The possibility of hæmorrhage and perforation occurring together puts emphasis on the importance of making a thorough examination and excluding, if possible, the presence of perforation in all cases of hæmorrhage—especially those with pain—before giving opium, with its masking effect on the symptoms. There were three of these cases that showed the presence of pain for some days before the hæmorrhage. This was also noted in some of the cases of perforation. Whether this was an accidental coincidence or not is difficult to say. The pain did not continue after the hæmorrhage.

(b) With perforation. This occurred in 13 in the series of 500 cases, and in all abdominal pain was present. Pain is probably the most constant and valuable symptom of this complication and demands careful study. In some patients with marked toxæmia no complaint will be made, and the perforation may only be discovered at the autopsy. Of the patients in this series *every one* made complaint of pain, and in all the pain seemed severe. The mode of onset of the pain is of interest. These cases may be put into two groups as regards this: (1) With a definite sudden onset, of which there were ten, and (2) those cases with pain for some days before the perforation, of which there were three. In the first of these groups the onset was strikingly sudden in several of the cases. The patients had previously been quiet and comfortable, and suddenly were seized with severe pain, which in four was severe enough to make them cry out. In four it was accompanied by vomiting. In three the pain at the onset was referred to the penis. If this mode of sudden onset occurs, it is very suggestive of perforation. It is important that one should, if possible, see the patient at once, for in a few minutes the severity of the pain may be over and the patient comparatively comfortable. The nurses should be instructed to call the house officer at once when any complaint of abdominal pain is made. The gravity of the case may be realized by the sight of the patient at the onset as it may not be later. This has been impressed on us by some of our recent cases. A sudden onset of pain demands the most careful examination of the patient and careful noting of every symptom and all the conditions, as advised by Dr. Osler. An endeavor should be made to exclude all other possible causes of the pain.

The pain did not remain constantly severe in any instance, but was paroxysmal in character, the patient in the interval being perhaps almost completely free from any pain. Should the patient be seen in one of these intervals—as by a consultant—a very different picture may be presented than a short time previously. In such cases perhaps a couple of hours should be spent in frequent

observation of the case. It is only by doing this that it may be possible to properly estimate the amount and character of the pain. The importance of this careful and constant watching has been brought home to us in some of our recent cases. In one patient the recurring paroxysms of severe pain, with some increase in the respiration rate, were the only symptoms of perforation present for eight hours. Then suddenly tenderness and muscle spasm appeared. Looking back over these cases, the remarkably sudden onset, like a bolt out of the blue, has been a very decided feature. But the second group have to be kept in mind, namely, those in which the patients have had pain for some days before the perforation. In these there is no sudden onset with pain, nor may there be any increase in that previously present. There were three of these among this series. Next to the cases without any pain, they are the most difficult to recognize. When a typhoid patient complains of pain for days and shows abdominal symptoms with perhaps a leucocytosis, the onset of perforation is not likely to make much change in the picture. It may only be the resulting general peritonitis that is made out. In these three patients pain was present for five, nine, and ten days before the perforation. All had abdominal features, tenderness and rigidity or muscle spasm, and in two leucocytosis was present. In one of these patients a sudden severe exacerbation of the pain suggested perforation, in the second the onset of vomiting suggested the general peritonitis which was found at the operation, and in the third the perforation was not recognized. The cause of this preperforative pain is difficult to give. One might suggest a local peritonitis, but an operation in two and section in one of these did not support this view. It may merely have been a coincidence, as there is a group of cases to be described later in which pain, leucocytosis, and abdominal symptoms were present for days, without any subsequent perforation.

5. Pain without any discoverable cause.

Under this heading come 70 cases, a surprisingly large number. In almost all the pain was first complained of by the patient. It was, as a rule, not very severe and of short duration. In only eight of the series was pain present for some days, varying from four to two weeks. In three instances the complaint of pain was made in the tubs. It did not persist after the patient was put back into bed. In two it was associated with nausea and in three with vomiting. In all these cases careful examination was made for some cause of pain, but none could be found.

While the majority of these cases showed no special features, yet there is one group to which attention should be directed, as the cases simulate perforation to some extent. The unusual features, in addition to the occurrence of pain, were the presence of leucocytosis and local abdominal symptoms. There were 14 of these cases. Leucocytosis in typhoid fever speaks for a complication, and hence its importance in these cases. Curiously enough, the number of leucocytes showed little variation, the lowest being 10,000 and the highest 17,000 to the cubic millimetre. The average for the 14 cases was 12,700 to the cubic millimetre. The leucocytosis usually developed suddenly, and in some instances lasted for some days. In addition, most of the cases showed suspicious abdominal symptoms and were under both medical and surgical observation. Two patients were operated on. In one the sudden onset of severe pain, rigidity of the abdominal muscles, tenderness, leucocytosis, and diminishing liver dulness seemed to demand an exploration. On opening the abdominal cavity, a slight amount of free fluid was found, and there were numerous swollen Peyer's patches, the surface over one having a red, "angry" appearance. The patient made a good recovery. In the second case there were much the same symptoms, but nothing was found at the operation. The patient died four days later. In another patient there was sudden severe cramp-like pain in the abdomen, with tenderness and a leucocytosis of 15,000 to the cubic millimetre. With these symptoms the temperature fell over four degrees in eight hours. His general condition was good, but could more worrying symptoms be imagined? The subsequent course showed that the sudden drop in temperature was a termination by *crisis,* and the other features cleared up without any cause being found. Without giving any more of these cases in detail, it may be said that they all were the cause of much anxiety. Two of the patients died, both apparently of intense toxæmia, and at the autopsy no cause for the pain could be found, unless it was due to enlarged mesenteric glands. Abdominal pain has been described as occurring with suppurating mesenteric glands, but whether the ordinarily enlarged glands of typhoid fever can give rise to pain is a question.

What is the cause of the leucocytosis in these cases? There seemed to be a connection, at any rate in some of them, between the leucocytosis and the pain. They came and went together. Perhaps the first possibility that suggests is the occurrence of phlebitis in some of the abdominal or pelvic veins, which might be of small extent. This was kept in mind, but no evidence of its presence was discovered. Careful examination was made to exclude it with the various other causes discussed before. A local peritonitis may be thought of, but what evidence have we that such was present? Neither the patients operated on nor those coming to autopsy showed any signs of it, unless the red, somewhat granular serous surface over an inflamed Peyer's patch could be considered such. Besides, local peritonitis does not seem to occur very often in typhoid fever. This group of cases seems to be worthy of consideration in the general question of the diagnosis of perforation. In the majority of these cases the absence of pronounced local abdominal symptoms, such as tenderness, rigidity, muscle spasm, etc., was of value in the diagnosis. Under examination, there would be little or no change in the local abdominal con-

ditions in most of them. Where these were present, as noted in two cases, an exploration seemed justified.

As to the cause of abdominal pain generally in typhoid fever, little can be said that is satisfactory. In certain of the complications an explanation is evident, but why, for example, should some patients have severe pain with hæmorrhage? Many of the conditions are common to all patients with the disease. Is it, then, largely due to individual peculiarities? The common intestinal conditions, such as distention, constipation, diarrhœa, etc., seem to be a cause in comparatively few cases. A local peritonitis, which is often advanced as an explanation, must be a rare cause, judging from operation and autopsy experience. Is there pain associated with an inflamed serous surface over an inflamed Peyer's patch—which, perhaps, some might term a local peritonitis? In some instances apparently there is, as was found in one of our cases. The patient had complained of pain for some days, with tenderness on palpation, but no other symptoms of importance. With a sudden increase in the pain, muscle spasm, and leucocytosis, some acute abdominal complication seemed probable, and an exploration was done by Dr. Mitchell. No general anæsthetic was given, the abdomen being opened under cocaine. His pain and tenderness were greatest just to the right of the navel. On opening the abdominal cavity, on the intestine just below this point was a large Peyer's patch, with the serosa much inflamed and having a somewhat granular look. The patient's eyes were covered so that he could not see. This loop of intestine was brought out of the abdominal cavity. With the handling of the intestine he made no complaint of pain, but even a gentle touch over this inflamed area made him cry out with pain, which he said was exactly like the pain which he had felt before the operation when pressure was made on the surface of the abdomen just to the right of the navel. An acute appendicitis was found. The appendix was removed and the patient made a good recovery. Yet in other cases, with exploration done under cocaine, the patient made no complaint when the serous surface over the ulcers was handled. Whether deep ulceration may be a cause of pain in some cases is difficult to say. It certainly is not constantly associated with pain, as patients who have been free from pain throughout have been found at the autopsy to have deep ulceration. It is possible that phlebitis may be present more frequently than we suppose. Perhaps lymphangeitis may be a cause in some cases. Lennander (9), in a recent article, reports observations on the sensation of the peritonæum, made in patients operated on with cocaine anæsthesia. He considers the visceral peritonæum as being practically insensitive in contrast to the parietal peritonæum. However, in certain cases the visceral peritonæum is evidently very sensitive. While in some cases of abdominal pain in typhoid fever an explanation for the occurrence of pain is evident, yet in many there seems to be no satisfactory way of accounting for it.

Summary.

From the study of these cases the following conclusions can be drawn:

1. About two fifths of the patients are free from pain or tenderness, rather less than one fifth have tenderness only, and pain is present at some time in about two fifths of the cases, but during the course only in about one third.

2. Pain due to some condition other than the specific bowel lesions was present in about 14 per cent. of all cases and in about two fifths of the patients having pain during the course.

3. Pain occurred with hæmorrhage or perforation in about 5 per cent. of all cases and in about 15 per cent. of the cases in which there was pain during the course.

4. Pain was most constantly present with perforation, when it was usually sudden in onset, severe in character, and paroxysmal in occurrence. The pain of perforation was most closely simulated by that occurring in some cases of hæmorrhage, that from phlebitis, and that of unknown origin.

5. In about two fifths of all cases with pain during the course no cause could be found. Should this occur with other abdominal symptoms the condition may much resemble perforation.

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SPINAL ANÆSTHESIA BY CATAPHORESIS.

By J. LEONARD CORNING, M. D., LL. D.,
NEW YORK.

I HAVE been conducting some experiments this winter with a view to modification and possible improvement of the technique at present in vogue for inducing spinal anæsthesia. Urged to place on record the nature and significance of these observations, yet lacking both time and energy, just now, to indulge in a lengthy and more formal writing, I take the liberty briefly to set down the following points:

To make the anæsthetic penetrate the membranes without puncturing them, by Cataphoresis.—To this end

I invoked the services of a tube four inches long, terminating at one end in a small metal bulb, pierced to give passage to a tube of smaller calibre, upon passing the latter down through the larger tube. At the other (upper) end of the larger tube is a binding-post for securing the conducting cord (positive pole) of a galvanic battery.

The smaller tube, which projects an inch and a quarter beyond the upper end of the larger tube, is provided with the socket requisite to attach it to a hypodermic syringe (glass). A diminutive metal collar, sliding along the smaller tube between the socket and the upper end of the larger tube, may be kept in place at any point by the aid of a small set-screw. By this device it is possible accurately to regulate the distance to which the small tube shall be thrust beyond the bulbous end of the larger tube (about half a centimetre). The lower end of the smaller tube has no bevel whatever, and is slightly rounded at the edges. The larger (outer) tube is insulated throughout its entire length, save at the bulb, which is bare.

From the foregoing description it is not difficult to divine my intention. Briefly, I proposed to introduce the larger (insulated) tube between the spinous processes of the third and fourth lumbar vertebræ till the metal bulb was stopped by the ligamentum subflavum, then to thrust forward the inner tube sufficiently to pierce the ligament, yet leave the dura and arachnoid unscathed, a thing very easily done, as these membranes, bolstered only by the yielding cerebrospinal fluid, would inevitably give before the rounded end of the small tube, which could at most indent, but never pierce them.

Once having pierced the ligamentum subflavum, I would attach the syringe to the small tube, and inject the anæsthetic upon the dura. This done, I would unscrew the syringe, withdraw the smaller tube, and, securing the positive conducting cord of a galvanic battery to the binding-post of the larger tube—the negative sponge of the battery being already over the abdomen—cause the current to pass. The cataphoretic action thus resulting would, I hoped, materially aid the passage of the anæsthetic through the membranes.

During the early part of last winter I had an opportunity of putting all this to the touch of proof in a man to whom it was thought inadvisable to give a general anæsthetic. I was requested by Dr. T. J. McLoughlin, who evinced a lively interest in what was proposed, to attempt to produce spinal anæsthesia in this patient, then lying at St. Francis's Hospital, Jersey City.

Without entering into collaterals, I will state briefly what I did. With a Graefe knife, I made an incision between the spinous processes of the fourth and fifth lumbar vertebræ, a little to the right of the ligamentum interspinosum, thrusting it down till the ligamentum subflavum was nearly reached. Into the incision thus made I thrust the outer (insulated) tube of the before-mentioned instrument* till its bulb came to rest upon the ligamentum subflavum—was stopped by it in fact, precisely as intended. The inner tube was then thrust through the larger tube till, the ligamentum subflavum being pierced, the syringe could be screwed on and its piston withdrawn, whereby we convinced ourselves that the membranes had *not* been pierced. The syringe was then unscrewed, filled with a two-per-cent. solution of the hydrochloride of cocaine, and thereafter rescrewed to the tube. Fifteen minims of the solution were then injected, that amount being deposited between the dura and the vertebral canal. The inner tube was then withdrawn (within the outer one), and the binding-post of the outer tube attached by a long conducting cord to the positive pole of a galvanic battery provided with a milliampèremeter graduated in tenths of a milliampère.†

A large sponge, attached to the negative pole of the battery by a long conducting cord, was then applied to the abdomen, and the current turned on till the milliampèremeter showed three tenths of a milliampère. The current was allowed to do its work in this way for upward of twenty minutes before the precursory paræsthesiæ began to be felt. There was then a long time of waiting—perhaps half an hour—before any true anæsthesia appeared, and this was too irregularly distributed to permit of operating.

Not wishing to detain the surgeons and the large number of other medical gentlemen present, I suggested applying the ether cap. This was done, but scarcely were the preliminary steps of the operation—an osteotomy of the foot—taken, when the house surgeon drew my attention to the facts that he had left off giving the ether, and that the patient, now entirely conscious, was suffering no pain whatever. From now on, there was no giving of ether whatever, the subject conversing with those about him quite contentedly and without the least sign of discomfort, although cutting, chiseling, sawing, and suturing were indulged in, according to the technical demands of the occasion. After the removal of the subject from the operating-room to the surgical ward, the anæsthesia of the legs persisted for considerably more than an hour.

Physiologically, then, the undertaking was a success; practically, I do not think it was—not because of the few whiffs of ether given at first, but because of the very long time necessary to induce the anæsthesia and the rather formidable paraphernalia required. My friends, however, have thought the observation of scientific interest, and, yielding to their amicable persuasions, I have taken the liberty of recording it, trusting that others may improve upon it or be saved the trouble of going over the same ground.

In conclusion, I desire to express my sincere acknowledgment and appreciation of the zeal shown in these efforts by Dr. McLoughlin and the entire staff of St. Francis's Hospital.

53 West Thirty-eighth Street.

*Made for me by W. F. Ford & Co., of New York.

† This instrument was made for me by Waite & Bartlett.

THE PATHOLOGY AND BACTERIOLOGY OF URETERO-INTESTINAL ANASTOMOSIS.*

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CHICAGO,

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URETERO-INTESTINAL anastomosis, or the implantation of both ureters into the rectum, would be a very acceptable procedure to the surgeon in all cases of malignant disease of the bladder, or its neighboring organs,

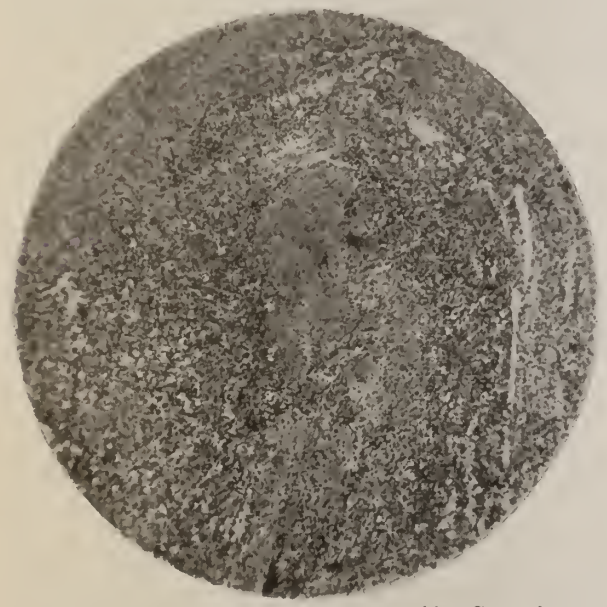

FIG. 1.—Specimen from medullary pyramid. Central necrotic area with colon bacilli in collecting tubules, surrounded by a dense zone of leucocytic infiltration.

in which the bladder must be removed. Maydl's operation, by which the vesical trigonum with its natural ureteral orifices is implanted into the sigmoid flexure, is only applicable to cases of exstrophy of the bladder. Surgeons have for years experimented to produce uretero-intestinal anastomosis with a view of preventing the bad effects attendant upon the lack of the natural orifices, which allows an entrance of the bacteria of the intestine into the ureters and resulting ascending renal infection and pyelonephritis.

The cases upon which this report is based include the various operations recommended and done by Dr. Franklin H. Martin and Dr. Reuben Peterson on 141 dogs, with a view of devising an operation which should do away with the attendant dangers of such operations, and an experimental study of the pathology and bacteriology of the same. I am indebted to the above-named gentlemen for assigning the latter part of this investigation to me.

After more than two years of faithful work in this direction, I am forced to the conviction that, no matter what operation is done, the pathology of ureteral implantation into the rectum is the pathology of pyelonephritis and its sequelæ, if it is permissible to judge from operative results upon dogs. It does not appear from the literature that the conditions for recovery in the human individual are much more favorable with better care and control of the patient and better hygienic surroundings.

The high mortality of ureteral implantation into the rectum, 84 per cent., during the first two days even, is a serious objection, but a more important one yet is the fact that dogs which had recovered from the operation and the resulting pyelonephritis, and were to all appearances in perfect health and vigor again, *all* had granular contracted kidneys. Without exception they all had pyelonephritis shortly after the operation. When killed, from five to thirteen months later, these "cured dogs" were found to have small, hard, contracted kidneys due to induration and cicatrization of the diseased areas following pyelonephritis.

History.

The extensive literature on ureteral implantation has been collected from original sources in a most thorough manner by Dr. Reuben Peterson (1) and Dr. Franklin H. Martin (2).

Ureteral Implantation into the Rectum in Dogs.—Of sixty unilateral and sixty-eight bilateral implantations on dogs reported in the literature, with a mortality of 61 per cent. for the unilateral and 85 per cent. for the bilateral operation, the cause of death is given as—peritonitis in fifty-one, stenosis of the ureteral orifice and hydronephrosis in thirteen, pyelonephritis in twenty-nine, and uræmia in six. Unfortunately, very few of

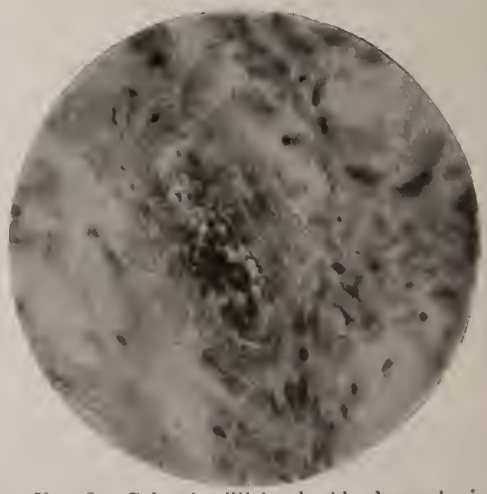

FIG. 2.—Colon bacilli in the blood-vessels.

the experimenters have deemed it necessary to report the pathological or bacteriological findings.

Of the dogs which recovered, not one has been proved to have had healthy kidneys when killed.

Bardenheur (3), Navaro (4), Rosciszewski (5), Giordano (6), Weller Van Hook (7), and Duval and Tesson (8) report that the dogs which recovered from

*Read before a joint meeting of the Chicago Pathological Society and the Society of Internal Medicine, December 10, 1900.

the operation had pyelonephritis, hydronephrosis with hydro-ureter, and stenosis of the ureteral orifice. Kalabin (9) reports one dog with unilateral implantation of the ureter into the rectum as having interstitial nephritis of the corresponding kidney.

Morestin (10), after ten bilateral and fourteen unilateral implantations, with fatal results in all, concludes that the primary mortality in man should be less than in animals, because of the larger size of the ureters and the possibility of better asepsis.

Giordano (6), after having done sixteen operations, concludes that without obstruction of the ureters no infection of the kidney should occur.

Weller Van Hook (7) did ten unilateral and six bilateral operations. His cases were thoroughly examined pathologically and bacteriologically. All the dogs which recovered from the operation (7) had pyelonephritis. He concludes that implantation of one or both ureters into the rectum is an unjustifiable operation under all circumstances.

Chaput (11), after a series of experiments on dogs with fatal results in all, concludes that experiments on dogs are of but little value as to man, because the bacterial contents of the dog's intestine are more virulent. He fails to bring forward any proof of this assertion.

Frank (12) does not expect any better results in man than in animal experiments.

Ureteral Implantation into the Rectum in Man.—Ureteral implantation into the rectum in the human being was first employed by Simon (13) in 1851. In this case the patient died of pyelonephritis one year after a bilateral operation.

Smith (14) reports a bilateral implantation with death after fourteen months of pyelonephritis.

Duplay (15) reports two fatal cases of bilateral implantation. Pyelonephritis took place, with death a few months after operation.

Casati (16) had a death from pyelonephritis in thirty-five days after a unilateral operation.

Tuffier (17), Fritsch (18), Krause (19), and Wood (20) report similar cases.

Peterson (1) collected thirty-one cases from the literature (seventeen bilateral and fourteen unilateral). Only nine of the patients recovered (five from the bilateral and four from the unilateral operation), a mortality in man of seventy-one per cent.

If we exclude the four cases of unilateral implantation because the corresponding kidney may have been diseased or inactive, and the patient lived upon his other kidney, there are only five recoveries reported, as follows:

Krause (19), three months and a half.

Peters (21), ten months.

Chalot (22), twelve months.

Beck (23), twenty months. (In this case the patient died in December, 1900, of pyelonephritis.)

Fowler (24), four years and a half.

The first four can hardly be said yet to be fully recovered, as we shall see presently. This leaves only Fowler's case, in which he did a bilateral ureterorectal anastomosis for exstrophy of the bladder in a boy of six years. This patient is still alive, four years and a half after the operation.

Martin (2) concludes that animal experiments will

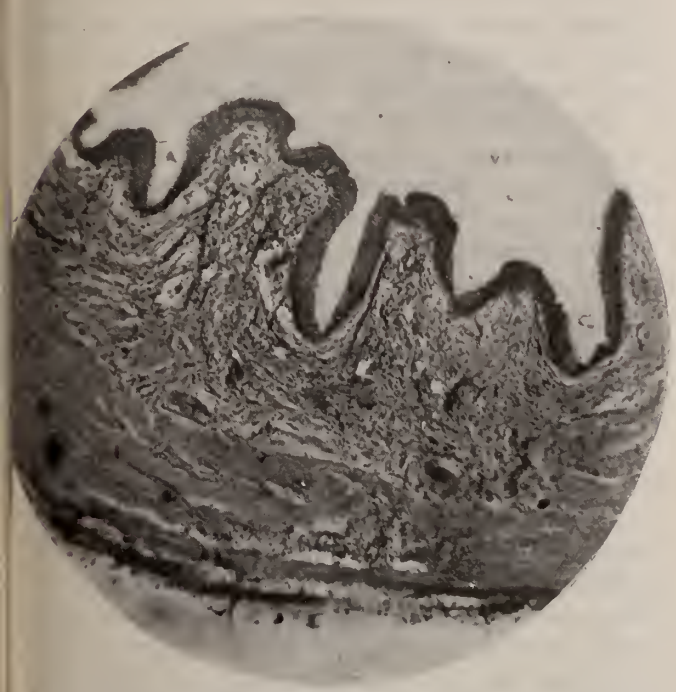

Fig. 3.—Ureter implanted into the rectum. The ureter is comparatively healthy, in strong contrast to the necrotic papillæ and severe pyelonephritis of the same kidney.

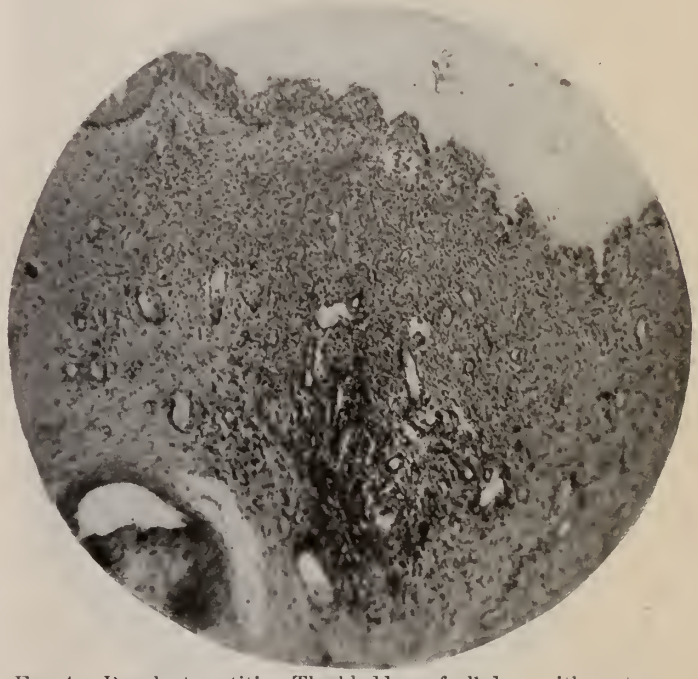

Fig. 4.—Purulent cystitis. The bladders of all dogs with ureters in the rectum are infected by way of the urethra. Small-cell infiltration of the mucosa. Desquamation of covering epithelium.

never solve the problem of ureterorectal anastomosis because:

(*a*) The care and hygienic surroundings of the animal cannot be so complete as in man;

(*b*) Gravity, exerted upon the urine of the upright human patient, is lacking in the horizontal animal, thus increasing the danger of infection;

(*c*) The rectum of the human patient can be kept clean;

(*d*) Ureteral catheters can drain the ureters for several days after the operation and thus protect the mouths of the ureters from infection when resistance of the tissues is at its lowest;

(*e*) Compensatory resistance to infection is higher in man.

He thinks the evidence furnished by recorded cases

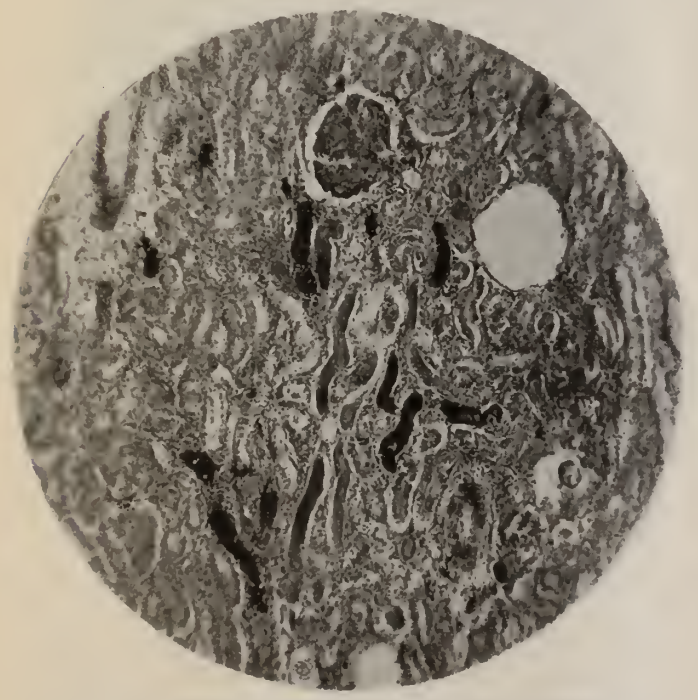

FIG. 5.—Showing the invasion of uriniferous tubules by colon bacilli during the first forty-eight hours after implantation of the ureters into the rectum. The dark portions are bacterial casts in convoluted tubules.

of this operation in the human being "has in it not a little which will stagger the pure theorists."

I have carefully examined his tabulated list of seventy-four cases collected from the literature which he offers as "furnishing the evidence with which to refute the theory of ascending infection in man," and fail to find any material difference in the results from those furnished by his own experiments and those of Peterson on animals. On the contrary, I have been amazed to find in a study of the literature on the subject during recent months how closely the results of my work on Martin's and Peterson's dogs agreed with those in the human being.

We must naturally exclude from Martin's list of the literature of seventy-four cases in the human being all those in which a Maydl operation was done, to make fair comparisons between animal experiments and the results of his operations on dogs. Only cases of uretero-intestinal anastomosis should be considered.

Chaput's (11) case, in which the patient is well eight years after implantation of but one ureter, furnishes no proof. The patient is living by his other kidney, as several of our dogs did in which a unilateral implantation was done.

Peters's (21) and Krause's (19) cases, in which the patients were well, respectively, five weeks and three months after the operation, can hardly be considered yet as recovered.

Chalot (22) and Kryuski (25) report one case in which the patient was well after one year.

Bergenheur (26) reports one patient well after a year and a half.

It is very probable that these patients have the same contracted kidneys which our "cured" dogs showed when killed, after having apparently perfectly recovered from the operation done—300 to 405 days before.

This leaves only von Eiselberg's (45) two cases, in which the patients were well after three and four years, and Fowler's (24) patient, well four years and a half after the operation, whose case has already been quoted.

Martin's operative results on the human being, which he reported in the same article (2), also agree with those of his animal experiments. With all his technical skill, acquired by such a large experience in uretero-intestinal anastomosis in animals, his results in the human being are not better than those obtained in animals.

It would seem from all this that we cannot expect any better results in man than in animal experiments.

Implantation of the Trigonum—Maydl (27), *for Exstrophy of the Bladder.*—To prevent renal infection, Maydl, in 1894, recommended as an operation for exstrophy of the bladder the implantation of the vesical trigonum and its ureteral orifices into the sigmoid flexure. The thirty-six cases collected by Peterson from the literature showed a primary mortality in this operation of nineteen per cent. The subsequent results are as follows: After one year, nineteen living; after two years, ten living; after three years, seven living; after four years, four living; after six years, one living; after seven years, one living.

Pathological and Bacteriological Findings.—Individual reports of some of the findings have already been published, together with descriptions of operations performed by Martin (43 and 44) and Peterson (1). A summarization of them represents a description of the various stages of pyelonephritis and its sequelæ. All the variations of this form of suppurative nephritis have been seen in the dogs operated on—from the earliest beginning of this ascending infection, a few days after the operation, up to the healed condition with induration and cicatrization, the granular, contracted kidneys which are found in all dogs that have recovered from the pri-

mary results of their pyelonephritis. The majority of our cases plainly showed that infection could only have taken place by way of the ureters, the pelvis of the kidney, and the uriniferous tubules, and that the pyelonephritis was caused by the *Bacillus coli communis.*

The earliest changes are found in the papillæ. Extensive necrosis is seen here very early. Soon after, yellowish flame-like rays extend into the pyramids, and finally small abscesses in the form of yellow elevated granules of the size of a pin head; some with and others without a narrow red zone are seen upon the surface of the cortex. Upon section, these can be seen to extend into the medulla. The kidney is enlarged and soft. Sometimes only one or more papillæ and medullary pyramids are involved, and their corresponding area of cortex. If the whole kidney is involved, multiple secondary pyæmic abscesses and endocarditis lead to the death of the animal. Colon bacilli are found in the lumen of the uriniferous tubules, surrounded by a necrotic and fatty zone, outside of which is a zone of leucocytic infiltration (Fig. 1). The interstitial tissues and lumen of the tubules contain enormous numbers of polymorphonuclear leucocytes and extravasations of blood, so severe at times that the structure of the kidney becomes obliterated. In the cortex, fatty degeneration and necrosis of the lining epithelium of the convoluted tubules are found in the neighborhood of the affected regions.

Most of the dogs died of peritonitis due to leakage of urine, or general sepsis and pyelonephritis, during the first ten days. Dogs living a longer time died of pyelonephritis, pyelonephrosis, and pyæmia, or recovered from the pyelonephritis with contracted kidneys. It was not always easy to determine what form of suppurative nephritis was present. A number of the kidney specimens looked more like embolic suppurative nephritis and infection of hæmatogenous origin. Pyæmia and endocarditis were found in some of these cases, and it became questionable whether they had caused an embolic suppurative descending nephritis, or whether an ascending infection or pyelonephritis had caused the pyæmia. It is possible that in some of the cases a blood infection may have been ingrafted secondarily upon an already existing pyelonephritis, because I found colon bacilli in the blood-vessels of some of the sections (Figs. 2 and 3).

Orth (28) describes such cases with many small abscesses, distributed over the whole surface of the organ, as having been caused by the entrance of colon bacilli into the arteries, which then produce infectious capillary emboli in the cortex. Aschoff and Gaylord (29) also state that, when large abscesses have formed, the bacteria, having caused the ascending infection, may enter the blood-vessels of the kidney or enter the general circulation by the lymph-vessels, and thus add a descending to the ascending suppurative nephritis. The distinction is usually made that cocci cause the descending embolic suppurative nephritis, and bacilli (coli and proteus) the ascending infection, or pyelonephritis, and that in the descending type the bacteria of the small cortical abscesses are in the capillaries of the glomeruli, whereas in the ascending infection they are in the convoluted tubules, having passed up into the cortex from the collecting tubules.

I cannot pass this without a brief discussion of the subject of the *excretion of bacteria by the kidney.* It would seem from our experiments, in which many cases with blood infections occurred, that we should have seen more of the descending infection, or embolic suppurative nephritis; but such was not the case. Several dogs in which only one ureter had been implanted into the rectum died of the pyelonephritis and pyæmia, but had only slight or no parenchymatous changes with colon bacilli in the other kidney and in the blood. There can be but one explanation of this observation: *Bacteria in the blood are excreted by the kidneys and may pass through normal glomeruli without necessarily producing any anatomical lesions.*

With regard to the excretion of bacteria by the kidneys, two essentially different views were held until recently. One is that anatomical lesions must be present in the kidneys to allow a passage of bacteria from the blood into the urine; the other, that the kidney furnishes a perfect physiological filter for all foreign elements of the blood. The first opinion found its greatest defender in Wyssokowitsch (30), who found staphylococci in the urine six hours and three quarters after intravenous injection, anthrax bacilli in twenty hours, and streptococci in forty-eight hours, always accompanied by anatomical lesions and rhexis. He found weighty defenders of his views in his teacher, Flügge, and in Birch-Hirschfeld. Extensive experiments by Boccardi (31), Pernice and Scagliosi (32), and Konja-

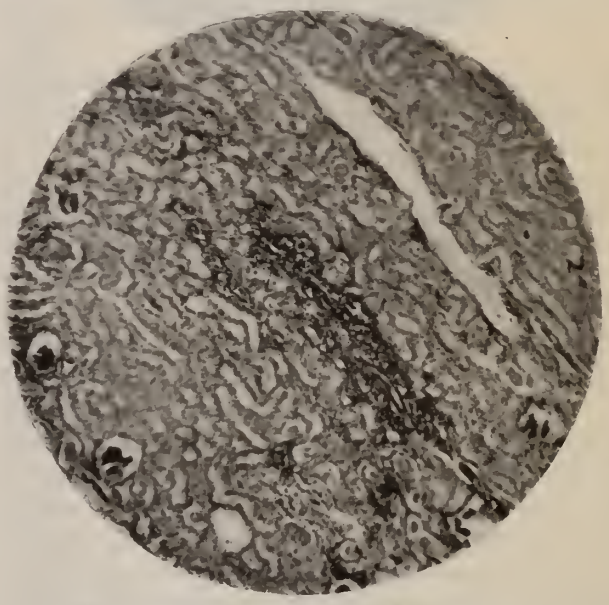

FIG. 6.—Beginning ascending infection within forty-eight hours after implantation of the ureters into the rectum. Hyperæmia, marked leucocytic infiltration, and some cloudy swelling.

jeff (33) appeared to support Wyssokowitsch's (30) opinion.

With regard to the second view, which is the generally accepted one to-day, that a physiological excretion of bacteria by the kidneys may take place without

FIG. 7.—Thrombosis of the portal vein in a dog that died, thirty days after ureteral implantation into the rectum, from pyelonephritis.

anatomical lesions, we find that as early as in 1870 Grawitz (34) found hyphomyecetes spores in the urine for twenty-four hours without any red blood-corpuscles, after intravenous injection. No anatomical lesions were found.

Fütterer (35 and 36) described the glomerular excretion of tubercle bacilli in 1885, and typhoid bacilli in the urine in 1888. Fütterer concluded that tubercle bacilli were excreted by the normal kidney without causing tuberculosis of this organ, because his observations on a very extensive *post-mortem* material had shown him that in cases in which the other organs were densely covered with miliary tubercles, only few tubercles were found in the kidneys. He argues that in miliary tuberculosis, when the dissemination of the tubercle bacilli takes place, the kidneys must receive a good share of them, and certainly not less than other organs, and we could reasonably expect the kidney to be covered with as large a number of the miliary tubercles as we find in other organs. This can only be explained by the excretion of large numbers of tubercle bacilli by the glomeruli without causing any characteristic lesions.

Fütterer also instigated Schweizer's (37) experiments, which proved that living and dead foreign bodies might be excreted by healthy kidneys. Fine granules of carmin, barium, and stibium were found in the Malpighian bodies and convoluted tubules, and bacteria in the urine, three hours and a half after intravenous injection, without histological changes.

Ribbert (38) found staphylococci in the urine six hours after injection, without pathological conditions in the kidney.

Baumgarten's (39) and Ernst Meyer's (40) experiments proved that tubercle bacilli could penetrate *normal* vessel walls (glomeruli) and enter the surrounding tissue.

Orth (28) states that bacteria may pass the glomeruli in pyæmia and produce bacterial casts in the uriniferous tubules, with the cortex and glomeruli remaining normal.

Biedl and Kraus (41) obtained cultures of the *Bacillus coli communis, Bacillus anthracis,* and *Staphylococcus aureus* in ten minutes after intravenous injection from the urine.

Fütterer's (42) experiments of last year, in which he obtained culture of *Bacillus prodigiosus* from the urine two and three minutes after intravenous injection, show that an excretion of bacteria takes place in such a short time that anatomical lesions, such as rupture of vessels and degenerative changes, can be excluded, and *that a perfectly intact kidney may excrete bacteria by physiological function without anatomical lesions.*

Fütterer and I recently undertook some experiments on dogs which go to prove the correctness of this position. Dogs with one ureter tied were injected, by way of the external jugular vein, with 2 cubic centimetres of a twenty-four-hour virulent culture of *Bacillus coli communis* in bouillon, and invariably were found to have pyelonephritis of the ligated side when killed, whereas the other kidney remained normal. Control animals had colon bacilli in the bladder for a few days,

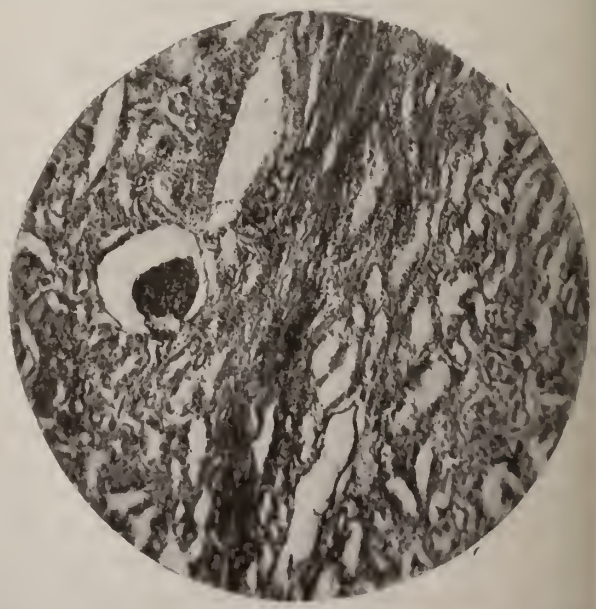

FIG. 8.—Interstitial small-cell infiltration. Dilated uriniferous tubules and capsules. Partly denucleated epithelium.

but both kidneys were found perfectly normal when the animals were killed.

The results following the various operations performed are so uniform that I abstain from describing

the operation done. The ureters remain almost normal, although distended at times, and show very little or no leucocytic infiltration, no matter how extensive a pyelitis or pyelonephritis may be present.

After a search of the literature, I believe that Orth's (28) explanation of this phenomenon is the most feasible one. The motility of colon bacilli is not such that we might expect them to wander up the ureter. They simply rise to the highest level of the stagnant urine, due to more or less stenosis at the opening into the bowel, and thus enter the pelvis of the kidney and multiply there and in the collecting tubules.

Purulent Cystitis.—The bladder was always found to be infected by way of the urethra. In all cases in which the bladder had not been removed it was found to contain a purulent fluid teeming with bacteria, mostly *Staphylococcus albus* and *Bacillus coli communis.*

Sections show small-cell infiltration of the mucosa and submucosa, with desquamation of the covering epithelium. Peterson thought this effect was produced by not emptying the bladder of urine at the time of operation. I found, however, the same condition present in all the following cases, in which I took the precaution to squeeze out the bladder thoroughly before closing up the abdomen.

The examination of the dogs operated on includes:

1. Anatomical diagnosis.
2. Cultures from (*a*) cortex of kidneys;
   (*b*) pelvis of kidneys;
   (*c*) ureters;
   (*d*) bladder;
   (*e*) spleen;
   (*f*) liver;
   (*g*) heart-blood.
3. Direct cover-glass smear preparations from the same organs.
4. Sections of (*a*) kidneys;
   (*b*) ureters;
   (*c*) bladder;
   (*d*) spleen;
   (*e*) liver;

hardened in alcohol, imbedded in paraffin, and examined for (*a*) bacteria in tissues;
(*b*) histopathology.

5. Intraperitoneal inoculation of guinea-pigs with pure cultures of *Bacillus coli communis* obtained by plating out from kidney cortex in eight cases. All the animals died in from twelve to seventy-two hours.

Five dogs which had apparently recovered from the operation were chloroformed and cultures taken, as well as cover-glass smears, from the organs while the animals were alive. Sections of the various organs were placed at the temperature of life in absolute alcohol. This should exclude any possible questions of bacterial invasion of organs soon after death. These five animals were killed in from two to forty days after the operation, in from one to ninety days, in from one to 210 days, and in from one to 405 days, and all showed recent or old pyelonephritis, as will be seen from the report following.

(To be concluded.)

THE USE OF THE SUPRARENAL CAPSULE IN DISEASES OF THE HEART.

(Second Paper, with a Report of Cases.)

BY SAMUEL FLOERSHEIM, M. D.,
NEW YORK.

THE suprarenal substance is an ideal heart stimulant. No other drug can compare with it for rapidity of action, strength, efficiency, and safety combined.

My results were obtained with three grains of the dried powdered gland, loosely packed in a gelatin capsule.

Preparations.—The dried and powdered gland of the sheep can be obtained commercially. It is efficient and keeps indefinitely. For convenience of administration the powder is placed in a gelatin capsule. Tablets are useless.

Dose.—Three grains of the powder produce an effect. But larger doses, one drachm or more, are not injurious.

Method of Administration.—The mode of administration is important. Three grains of the dried suprarenal powder, loosely packed in a gelatin capsule, are thoroughly chewed, dissolved in the mouth, and swallowed without water. When tightly packed capsules or the tablets are administered, the action is uncertain or less rapid. For children, I usually administer an emulsion by the mouth, which is efficient; three grains of the powder are mixed in a little water in a teaspoon.

It is unnecessary to administer a solution of the suprarenal extract hypodermically, even when the patient is unconscious, as its effects are produced immediately, in less than one minute, when a solution of the extract is dropped into the mouth and absorbed by the mucous membrane of the buccal cavity.

Rapidity of Action.—The action of the extract became apparent in less than five minutes in two hundred cases of heart and lung diseases observed. In some cases the effect was noted within fifteen seconds. The effect continued for from five minutes to three hours or longer.

In one case, Dr. W. H. Bates syringed a solution of the extract into the lacrymal sac, while Dr. G. E. C. Kelly observed its effect on the pulse. While the fluid was flowing down the nasal duct and into the nose, and before all the fluid had left the syringe (about ten minims), a high-tension pulse was observed to become softer. This effect was noted in less than ten seconds.

The suprarenal extract acts more promptly than other heart remedies, its *maximum* effect being obtained within five minutes, which is a much more rapid action than can be obtained from any of the other known heart remedies.

It also acts better and much more rapidly when it is absorbed before it reaches the stomach, as the juices of the stomach may interfere with the action of the suprarenal.

Physiological Action.—The suprarenal substance is a powerful muscle stimulant. Oliver and Schäfer, Cleghorn, and others, find that the extract increases the tone of all muscular tissue. Cleghorn, in experimenting on the dog's heart, found that the extract acted on the isolated apex in which it was believed that no nerves existed. He also states that the strength of the contractions of the heart was doubled by the suprarenal extract which, he believes, acted directly on the heart muscle.

It is not poisonous and it has no cumulative effect like digitalis. It does not act upon the nervous system.

Comparison of the Suprarenal Extract with Some Other Heart Remedies.

The Suprarenal Extract is indicated in organic heart disease with a weak, fluttering, intermittent or irregular pulse. It is likewise indicated in cases with dilated peripheral blood vessels, and also when the blood vessels are contracted, in cases with apparently a high-tension pulse and in all the valvular lesions. The reason the suprarenal extract is valuable in many cases of organic heart disease is that it acts directly on the muscle. As before stated, the maximum effect of the extract is obtained within five minutes, which is a much more rapid action than can be obtained from any of the other heart remedies. The action is continued for from five minutes to three hours or longer. The cumulative effect, such as is seen with digitalis, was not observed in a single instance in two thousand cases of diseases of the eye, ear, and nose, reported by Dr. W. H. Bates, or in the two hundred cases of heart and lung diseases which have come under my observation. This is a valuable property of the suprarenal extract, and enables one, without fear of later consequences, to administer the amount necessary to attain the desired result. It is not poisonous. It has no contraindications.

Digitalis is indicated in organic heart disease with an irregular, weak, or intermittent pulse, with dilated peripheral blood vessels, in aortic stenosis, in mitral regurgitation, and in mitral stenosis. It is contraindicated in a high-tension pulse with contracted peripheral blood vessels, in a fatty heart, and in aortic regurgitation. It is also contraindicated where there is gastric disturbance.

The suprarenal extract is indicated in all these conditions. One must be careful in the administration of digitalis, as large doses have caused alarming symptoms. Long-continued administration may suddenly show signs of poisoning, without any increase in the dose, from the cumulative action of the drug. When too large doses of digitalis are taken, the contractions of the ventricles become irregular.

The suprarenal extract has none of these objections.

Strychnine is indicated in organic heart disease with a weak and irregular pulse. It is a poison, and the dose must be carefully considered. Strychnine does not diminish a high-tension pulse. It is contraindicated in patients having increased motor nerve force and in epileptics. It acts on the nervous system.

The suprarenal substance produces the beneficial effects of strychnine without its disadvantages.

Nitroglycerin is indicated in organic heart disease with a high-tension pulse and contracted peripheral blood vessels, although it is not altogether contraindicated in a low-tension pulse with dilated peripheral arteries. In a low-tension pulse, nitroglycerin does not apparently raise the blood pressure. It is a powerful poison.

The suprarenal powder benefits the same class of cases more efficiently and more rapidly, and the suprarenal powder is not a poison.

Strophanthus is similar to digitalis, with less objectionable properties. It is not so rapid or so safe as the suprarenal extract.

When strychnine or nitroglycerin is administered internally, at least twenty minutes are required for either of them to show its effects. When digitalis or strophanthus is administered internally, either of them requires at least one hour or more before its effects are observed, while the maximum effects are not obtained for four hours or longer.

The suprarenal produces its effects as promptly when administered internally as the before-named drugs do when they are administered hypodermically.

Uses of the Suprarenal Powder.—When the pulse was found to be weak the suprarenal extract made it stronger in all the cases of organic heart disease observed —eighty-two in number. When the pulse was irregular in force and frequency, intermittent, too slow or too rapid, it usually became more like the normal after the administration of the powdered suprarenal.

In cases with a mitral regurgitant murmur, it was observed that the murmur became lessened in volume and intensity, while in a few cases it wholly disappeared after the administration of the suprarenal extract. Other murmurs were lessened, increased, or unaffected. A dilated heart was contracted. When the normal cardiac sounds were indistinct and muffled, they became louder and more easily distinguished after the administration of the extract. The suprarenal powder has also aided in the diagnosis of organic heart disease; when the heart was very weak and the normal heart sounds and murmurs were indistinct and muffled, and after the suprarenal extract had strengthened the heart, the normal heart sounds and the murmurs became easily distinguishable.

The suprarenal extract is a most powerful heart stimulant. The evidence of this is conclusive. For, after digitalis, strychnine, nitroglycerin, and alcohol had failed to benefit, the administration of the suprarenal powder was followed by immediate relief.

Bates has reported a decidedly beneficial action on the pulse of organic heart disease after the instillation of the suprarenal solution into the eye.

It is remarkable that so powerful a substance should have no objectionable properties, and, while it is exceedingly active in cases which *need* benefit, the remedy has apparently absolutely no effect on the normal heart or on the heart of organic disease when its action *is not* needed.

Cases of Organic Heart Disease, in which the Suprarenal Capsule Produced an Apparent Effect—Eighty-two in Number.

Case I.—The patient, a man, aged sixty-six years, had a mitral regurgitant murmur, the heart acting very irregularly. There was no radial pulse; the heart beats were thirty-nine. After the administration of the suprarenal capsule, the heart's action became regular and the normal cardiac sounds became plainer. The pulse was 63 and had returned at the wrist.

Remarks.—The patient had been in a state of collapse, but recovered without any other treatment.

Case II.—The patient, a man, aged thirty years, had mitral regurgitation and irregular action of the heart; the pulse was 90, hard, and very irregular. After the administration of the suprarenal capsule, the action of the heart became more regular; the pulse was 90, softer, and more regular.

Case III.—The patient, a woman, aged fifty-three years, had mitral regurgitation and aortic stenosis, and the action of the heart was weak and irregular; the pulse was 96, very weak, and irregular. After the administration of the suprarenal capsule the mitral murmur became lessened in volume and more localized; the heart was markedly stimulated. The pulse was 91, regular, full, and strong.

Remarks.—The patient felt well after the administration of the drug.

Case IV.—The patient, a woman, aged thirty-nine years, had mitral and aortic regurgitation; the mitral murmur was loud; the aortic murmur was soft; the heart was much hypertrophied. The pulse was 84 and of fair force; one or two beats dropped every twenty seconds. After the administration of the suprarenal capsule the action of the heart became nearly regular, and the mitral murmur became less audible. The pulse was 84, and more uniform in quality and rapidity; the drop beats disappeared.

Case V.—The patient, a man, aged fifty-six years, had mitral and aortic regurgitation; the action of the heart was very irregular. The pulse was 82, irregular, and hard. After the administration of the suprarenal capsule the mitral murmur became lessened in volume and more localized; the aortic murmur became much lessened in volume, and softer; the action of the heart became less labored; the apex impulse became less diffused. The pulse was 80, softer, fuller, and more regular.

Remarks.—The patient had an attack of rheumatism.

Case VI.—The patient, a woman, aged forty-three years, had a rough mitral regurgitant murmur; there was slight aortic regurgitation; the apex beat was at the seventh rib, one inch and a half to the right of the left nipple line; there was marked cardiac hypertrophy with beginning dilatation. The pulse was 96, irregular, and weak; there were many beats dropped. After the administration of the suprarenal capsule, the heart acted more regularly; the rough mitral murmur became smoother, lessened in volume, and more localized. The pulse was 88, nearly regular, full, and strong; all the intermittence disappeared.

Case VII.—The patient, a man, aged thirty-nine years, had slight aortic and mitral regurgitation (Flint murmur); the apex beat was at the seventh rib, midway between the median line of the body and the left nipple line; the heart's action was irregular. The pulse was 109, irregular in force and frequency, and weak. After the administration of the suprarenal capsule, the action of the heart became regular and increased in force; the forcible apex beats became lessened in force; the aortic regurgitant murmur became almost inaudible; the mitral murmur was not heard. The pulse was 106, of good quality, and regular in force and frequency.

Remarks.—The patient had an attack of myalgia, acute bronchitis, and pharyngitis. The bronchitis and pharyngitis were relieved by the suprarenal powder.

Case VIII.—The patient, a young girl, aged fifteen years, had mitral and aortic regurgitation and a dilated heart; the action of the heart was very irregular and weak; there was no perceptible apex beat seen on inspection. The pulse was 112, weak, and irregular; there were many beats dropped. After the administration of the suprarenal capsule, the mitral murmur became much lessened in volume and intensity, and became localized; the aortic murmur was slightly lessened in intensity; the apex beat was seen on inspection. The pulse was 102, fuller, stronger, and fully regular; all the intermittence had disappeared.

Remarks.—The patient had phthisis pulmonalis, cephalalgia, and anæmia; she was also kyphotic. The cough and headaches were lessened, and the patient felt much improved after taking the drug.

Case IX.—The patient, a woman, aged thirty-seven years, had a loud, blowing, mitral regurgitant murmur, and an irregular action of the heart. The pulse was 109, weak, and irregular. After the administration of the suprarenal capsule, the loud murmur became less loud and lessened in volume; the action of the heart became regular. The pulse was 109, soft, regular, and full.

Case X.—The patient, a woman, aged thirty-eight years, had a loud, blowing, mitral regurgitant murmur; the heart's action was weak and irregular. The pulse was 80, weak, very small, and irregular; there was one beat dropped every minute. After the administration of the suprarenal capsule the murmur became much lessened in volume; the normal heart sounds became clearer; the heart acted more strongly and regularly. The pulse was 82, fairly full, regular, and soft.

Remarks.—The patient had taken cardiac depressants; the depressant effects were rapidly overcome by the suprarenal powder.

Case XI.—The patient, a man, fifty years old, had a loud, blowing, mitral regurgitant murmur, with a very weak and irregular action of the heart; the normal cardiac sounds were muffled. The pulse was 52, very weak, irregular, and trembling; there were many beats dropped. After the administration of the suprarenal capsule the action of the heart became fully regular and stronger; the murmur became diminished in volume, and the normal heart sounds became plainer and more easily distinguished. The pulse was 69, regular, full, and soft; the trembling and the intermittence disappeared.

Remarks.—The patient's headaches were relieved after the administration of the drug.

Case XII.—The patient, a little boy, aged seven

years, had a double mitral lesion; the normal heart sounds were indistinct. The pulse was 102, slightly irregular, and of fair force. After the administration of the suprarenal capsule, the mitral murmurs became lessened in volume and separated; a distinct difference between them was observed; the action of the heart became fully regular; the normal heart sounds became plainer, and the apex beat was more easily located. The pulse was 102 and regular.

Remarks.—The bronchitis became less annoying and the dyspnœa disappeared.

CASE XIII.—The patient, a woman, forty-three years old, had mitral regurgitation. The pulse was 76, regular, and of good force. After the administration of the suprarenal, the murmur became decreased in volume. The pulse was 76, regular, and not changed.

CASE XIV.—The patient, a woman, aged thirty-four years, had mitral regurgitation with hypertrophy. The pulse was 136, slightly irregular, and weak. After the administration of the suprarenal capsule, the pulse was 109, regular, and strong.

Remarks.—The patient had amygdalitis, which was relieved by the drug.

CASE XV.—The patient, a woman, aged fifty-six, had mitral regurgitation. The pulse was 83, weak, but regular. After the administration of the suprarenal capsule, the pulse was 83, stronger, and regular.

CASE XVI.—The patient, a woman, aged twenty-four years, had a pronounced mitral regurgitant murmur. The pulse was 86, irregular in force and frequency, and weak. After the administration of the suprarenal capsule, the normal heart sounds became more distinct. The pulse was 76, stronger, and regular.

CASE VII.—The patient, a man, sixty-four years old, had mitral regurgitation with a rough aortic second sound. The pulse was 60, regular, and of high tension. After the administration of the suprarenal capsule, the mitral sound became almost inaudible; the rough aortic second sound became smoother; the normal heart sounds became clearer. The pulse was 60, regular, and of lower tension, resembling the normal in tension.

CASE XVIII.—The patient, a man, thirty-eight years old, had mitral regurgitation. The pulse was 83, regular, but weak. After the administration of the suprarenal capsule, the pulse was 81, stronger, fuller, and regular.

CASE XIX.—The patient, a little girl, aged ten years, had aortic stenosis and a hæmic murmur; there were also mitral stenosis and regurgitation. The mitral regurgitant murmur was very loud; the heart was very much enlarged; the apex beat was diffused. The pulse was 120, fairly strong, slightly irregular, and trembling. After the administration of the suprarenal capsule, the mitral regurgitant murmur became softer, lessened in volume, and localized, while the other murmurs and the normal heart sounds became more distinct; the apex beat became localized. The heart was contracted a quarter of an inch on each side; the heaving of the chest with the cardiac impulse was lessened. The pulse was 108, softer, regular, and fuller.

Remarks.—The patient had phthisis pulmonum. The cough was lessened in severity, and the patient felt brighter and stronger.

CASE XX.—The patient, a woman, forty-one years old, had double mitral and aortic lesions. The pulse was 71, irregular in frequency and in force; there were many half beats. After the administration of the suprarenal capsule, the mitral regurgitant murmur became decreased in volume. The pulse was 71, regular, and stronger; the half beats disappeared.

CASE XXI.—The patient, a woman, forty-eight years old, had double mitral and aortic lesions. The pulse was 70, very irregular in frequency and in force, and very weak. After the administration of the suprarenal capsule, the heart was powerfully stimulated, and acted much more strongly and easily. The pulse was 70, much more regular in frequency and force, and much stronger.

CASE XXII.—The patient, a boy, eleven years old, had a shrill mitral regurgitant murmur; the apex beat was diffused. The pulse was 84, intermittent, weak, and very irregular in frequency and in force. After the administration of the suprarenal capsule, the action of the heart became regular in every respect; the murmur became lessened in volume and less shrill; the diffused apex beat became localized, and the heaving of the chest with each cardiac impulse lessened considerably. The pulse was 72, regular, full, strong, and soft.

Remarks.—The stimulating effects of the drug became apparent within one minute and continued for more than an hour. The patient had inflammatory rheumatism.

CASE XXIII.—The patient, a little girl, two years old, had a mitral regurgitant murmur, enlarged heart, and a diffused apex beat. The pulse was 122, irregular, intermittent, and weak. After the administration of the suprarenal capsule, the murmur and the apex beat became localized; the heart was contracted. The pulse was 112, stronger, nearly regular, and not intermittent.

Remarks.—The patient was very anæmic and weak, but improvement resulted.

CASE XXIV.—The patient, a woman, twenty-seven years old, had mitral regurgitation with a hæmic murmur; there was a diffused apex beat. The pulse was 72, irregular in force and frequency, and very weak, almost imperceptible. After the administration of the suprarenal capsule, the mitral murmur was slightly decreased in volume and the apex beat was localized. The pulse was 76, regular, full, and much stronger.

CASE XXV.—The patient, a boy, eleven years of age, had slight mitral stenosis and regurgitation; compensation was good. The pulse was 101, full, regular, and strong. After the administration of the suprarenal capsule, the regurgitant murmur almost disappeared; at times it disappeared for a longer or shorter period. The pulse was 101.

CASE XXVI.—The patient, a woman, twenty-four years of age, had mitral regurgitation, with an irregular heart's action. The pulse was 96, of fair force, and irregular. After the administration of the suprarenal capsule, the murmur almost disappeared and the heart's action became nearly regular; after a second dose the murmur entirely disappeared. The pulse was 100, stronger, and regular.

CASE XXVII.—The patient, a man, thirty-eight years of age, had aortic stenosis and mitral regurgitation; the heart's action was regular, but weak. The pulse was 76, weak, regular, and thready. After the administration of the suprarenal capsule, both murmurs were increased in volume and intensity; the heart's action was stronger. The pulse was 76, stronger, fuller, and softer.

Remarks.—The patient felt much better after the administration of the drug.

CASE XXVIII.—The patient, a woman, twenty years of age, had a very loud mitral regurgitant murmur which was heard all over the chest; there was heaving of the chest with each cardiac beat; the apex beat was in the

ixth interspace, an inch to the left of the left nipple line. The pulse was 128, regular, and hard. After the administration of the suprarenal capsule, the mitral murnurs became slightly lessened in volume and intensity; he heaving of the chest with each heart beat became less narked. The pulse was 102, soft, and regular.

Remarks.—The patient had inflammatory rheumaism, and was relieved of the sensation of the heart beatng against the chest, which was the first time that relief had been obtained in three weeks.

(To be concluded.)

THE LAW AND THE INEBRIATE; WITH REMARKS ON THE TREATMENT OF INEBRIETY.*

By JOSEPH COLLINS, M. D.,

NEW YORK.

The confirmed inebriate needs the aid of his sane brother to save him from the mental and physical decay which is certain to overtake him.

The ordinary means and methods of treating disease are, when applied to confirmed inebriety, not only inadequate, but of comparatively little value. Prolonged abstinence, during which period the vital resistance of the body and mind are enhanced, is the only way of combating the infirmity that gives reasonable promise of success.

This statement summarizes the writer's experience and belief based thereon, and makes it unnecessary to mention or discuss the many "cures" for alcohol and drug inebriety, whose claims the physician and the layman have at one time or another to consider. Any mode of treatment secret, patent, proprietary, natural, supernatural, or scientific, will cure some cases of inebriety, just as any of these measures utilized in the treatment of a neurosis or psychosis of different origin will now and then be successful. But they have been, are, and will continue to be, wholly impotent to make any impression upon inebriety as a scourge to the peoples of the world or to thwart its disease-producing capacity. This gives alcohol and the narcotics a free hand in the production of mental and bodily disease, which they use appallingly. At this date it need scarcely be said that alcoholism is responsible for more insanity, idiocy, and psychical and somatic degeneracy, than any other agency. In truth it is the most important factor in the causation of mental diseases. If this were not sufficiently grave a charge to lay at its threshold, we need only recall what might be said of it as a social juggernaut and a transformer of morals—things that have been said so often, in language temperate and intemperate, that even sheer reference to it is tiresome. But the reality of it must be admitted. Although the question whether inebriety is a habit or a disease is still debatable, no one can deny that the results of this infirmity constitute disease. Our duty toward disease is plain enough. It is to prevent it and cure it. No real physician is so unmindful of his high office and rare privilege that he needs to be reminded of his duty in the prevention of inebriety and its effects. In the present status of therapeutics there is but one way to encompass its cure, and that is through prolonged abstinence, during which time the physical strength, mental vitality, and moral tone can be enhanced and the individuality of the victim catered to and nurtured by providing diverting, if not entirely congenial, occupation.

How to bring about this prolonged abstinence is the question that has occupied the attention of sociologists and physicians for many a year. It is universally conceded that in order to reach more than a few inebriates in any community the measure must be compulsory. This can be done only through legislation, and the governments of some countries have endeavored to aid in the solution of the problem by the framing of laws which have for their object the detention of habitual inebriates in institutions or colonies provided for their reception. Before taking any steps looking toward the framing of laws whose enforcement shall provide for the redemption of the inebriate, it seems to me that it is necessary to present a brief up-to-date retrospect of the laws relating to inebriety in this and other countries, to remark on their efficiency or inefficiency, and to call attention to their shortcomings.

The countries whose peoples rank themselves as most advanced in civilization and social economics, Great Britain, Germany, and France, are the ones most derelict in legislation for inebriates. On the other hand, one of Great Britain's colonies, New Zealand, and that little republic, Switzerland, out of which has come so much reformatory legislation of the best kind, have taken the lead.

England has had, since 1879, an Habitual Drunkards' Act. The bill, as originally proposed, contained adequate provisions for effective legislation, but it was necessary to modify it in order to secure its passage, so that from the first it has fallen far short of adequacy to what its framers asked for.

An habitual drunkard is defined as "a person who, not being amenable to any jurisprudence in lunacy, is, notwithstanding, by reason of habitual intemperate drinking of intoxicating liquor, at times dangerous to himself, or herself, or to others, or is incapable of managing himself, or herself, or his or her affairs."

Admission to licensed retreats is voluntary only. Written application must be made by the drunkard, stating the time during which he wishes to remain in the retreat. This must be accompanied by statutory declaration by two persons, and attested by two justices, to the effect that the signer is an habitual drunkard and fully understands the meaning of his application. The patient must then enter the retreat of his own accord, but having once entered may not leave until the expiration of the time for which he has signed away his liberty. This term may not exceed twelve months. If he escapes,

* Read at a meeting of the New York Academy of Medicine, March 21, 1901.

the licensee of the retreat must apply to a magistrate for a warrant for his recapture and appearance before a magistrate, who may send him back to the retreat.

Two days after the patient has entered a retreat the licensee must send a copy of the application to the clerk of the local authority and to the Secretary of State. A patient may be discharged at any time by order of the Secretary of State or a judge of the High Court of Justice, or by a local county court judge upon report of any one ordered by him to visit the patient, or by a justice upon a written request from the licensee.

No provision is made under the act for the inebriate who is unwilling to apply for admission to a retreat, or for the pauper. In 1888 an act to amend the original act was passed. The two are known as the Inebriates' Acts, 1879 and 1888. The amendments are in matters of detail, except the removal of the time limit of ten years attached to the first act.

In 1892 a commission was appointed by the government to make inquiry into the results of the Inebriates' Acts and to report on the best mode of treatment for inebriates. This report from the Departmental Committee on the Treatment of Inebriates, presented to both Houses of Parliament in 1893, set forth at length the weaknesses in the acts as they stood and detailed recommendations for effective legislation. The causes assigned for the relative unsuccess of the measures provided were briefly:

1. Want of sufficiently general knowledge of the existence of the asylums. 2. The complicated procedure involved in the admission of patients. 3. The absence of the legal right of committal. 4. The insufficiency of the maximum time for admission (twelve months), and the obstacles in the way of readmission. 5. The difficulty in the way of retaking escaped patients.

Some of these deficiencies are removed by the amendment of 1898, which makes the maximum time of detention two years and allows one justice to suffice as an attesting authority to the signature of the applicant, instead of requiring two. The obstacles in the way of readmission have, in a measure, been removed, insomuch as a second statutory declaration is not necessary and the justice is not required to satisfy himself that the applicant is an habitual drunkard. A warrant to retake an escaped patient may be issued by any justice.

Despite these additions and improvements, private advices from London inform me that "the act is practically a dead letter, its operation being stopped by the fact of the reformatories not having been provided. Many cases of habitual drunkards come before our London magistrates, but they complain that nothing can be done under the act as scarcely any places are open for the reception of the drunkards."

Far greater progress in legislation for the inebriate has been made in some of the colonies than in England.

The three signal points which commend themselves in the laws existing in Canada and Australia, as in some States in this country, in contrast to those of England, are:

1. Provision for the commitment of involuntary patients. 2. Simplicity and directness of the method of procedure. 3. Provision for the maintenance of patients who are unable to pay expenses while in a retreat, and the further provision for the enforced payment of such costs by patients who are able but unwilling to meet them.

Australia and New Zealand, perhaps, stand ahead of all other countries in the matter of legislation for inebriates. In South Australia the present provisions are embodied in an act passed in 1881, though as early as 1874 the first Inebriates' Act was passed. Under the last act an incorrigible drunkard is any person who has been convicted of drunkenness three times within a period of six months. Retreats may be licensed by the governor, rules and regulations for the conduct of the establishment, rates of payment, etc., being made by the committee in charge of it, subject to the governor's approval. These rules must also be laid before Parliament according to certain specifications. Any justice of the peace or any one authorized by a justice may visit the retreat and record the condition of the inmates.

Both voluntary and involuntary patients are admitted. In the case of the latter, any person charged with being an incorrigible drunkard before a judge, special magistrate, or two justices of the peace, may, upon the written certificate of two medical practitioners, be committeed to a retreat for a period not exceeding twelve months. Such commitment may be made even though the inebriate fails to appear when summoned before the magistrate. An escaped patient may be retaken by any person authorized in writing by the superintendent of the retreat. The judge may direct payment by the inebriate for his board and also the charge of conveyance to the retreat as a judgment debt. After six months' residence a patient may be discharged by the committee of management with the approval of the medical officer. Any relative or any police officer, by direction of a justice of the peace, can obtain a justice's summons calling upon an alleged drunkard to show why a certificate should not be issued that he is an habitual drunkard under the law. This certificate, if issued, remains in force for twelve months. There may be an appeal from any order of justices of the peace to the local court.

Inmates of retreats who are unable to pay for their maintenance are employed at a fair rate of wages, the value going toward the payment of these expenses. A penalty attaches to aiding in the escape of an inmate, and a punishment of from two to three months' imprisonment for insubordination, destruction of property, or wilful disobedience of rules by an inmate.

The Government of South Australia has given £3,000 to the Asylum for Inebriates at Adelaide.

In Victoria, by an act of 1872, provision is made for inebriates, almost identical with that in South Australia

Committal can be ordered by a county court judge upon statutory declaration by two medical men.

In New Zealand, legislation for the inebriate is included in the Lunatics' Act, 1882. Application may be made to a judge of the Supreme Court for an order for detention by the drunkard himself, or by the parent, husband, wife, child, or friend, in cases where the person has through drunkenness recently wasted his means, failed to provide for his family or threatened violence toward himself or any member of his family. After twenty-four hours from the serving of the notice in writing, the judge may, in the latter case, upon the evidence of not less than two doctors, make a written order for the detention of the drunkard in any asylum or place authorized under the act for lunatics (but in a ward or division where lunatics are not detained) or an institution specially appointed by the colonial secretary for curative treatment, for a period of not more than twelve months. The judge may direct payment by the inebriate, or security for payments. The superintendent may require patients to work under regulations approved by the colonial secretary. The labor is recorded in a book. For refusing to work, a patient may be fined a sum not exceeding £50, to be recovered summarily. The superintendent may employ force to prevent the escape of a patient, or if he fails to return after leave of absence, which may be granted by the medical officer, he may be brought back by order of a resident magistrate. The orders for payments are usually at from twenty to thirty shillings weekly, but in many cases there are no available funds and no payments are made.

In the Dominion of Canada nearly all of the provinces have, by legislation, provided effective measures toward this end.

In Ontario, an act was passed in 1872 to establish a hospital for inebriates. It was modified and extended in 1883, so that it now applies to "any person, male or female, who is an habitual consumer of stimulating or narcotic drugs to such excess as to cause mental or physical derangement or disease."

Admission to hospitals is effected upon written application from the inebriate or upon committal by the Provincial Secretary after inquiry by a judge. In the latter case, such inquiry must be preceded by a petition under oath presented by relatives, or, in default of relatives, by a friend of the inebriate, to the judge of the county of which he is a resident. Committal is for twelve months or less. Poverty is no bar, but those who are able to pay must do so. To secure such payment the property of the inebriate may be sold by the inspector appointed by the lieutenant-governor, subject to review by the county court judge. The lieutenant-governor has power to purchase, equip, and maintain a hospital for inebriates, and the inspector of prisons and asylums has the same power over this retreat as over asylums for the insane.

In Quebec, by act of 1870, any judge of the Superior Court of Lower Canada may pronounce interdiction of an habitual drunkard, and appoint a curator to manage his affairs and control his person as in interdiction for insanity. In order to regain civil rights, the interdiction must be removed by a judge, which may be done after one year's sobriety. A family council to examine the facts must be called before interdiction be pronounced, but the facts need not be in writing, nor need the drunkard be examined. The judge's decision is final. The curator may place his charge in a licensed home for inebriates and remove him at any time. These homes are licensed by the lieutenant-governor in council and are subject to regulations issued by him. The names of the interdicted are placed upon the general roll of the interdicted. A reputation for drunkenness, based upon common report of the neighborhood, is sufficient to establish a man's status as an habitual drunkard.

On very similar lines, with slight modifications, are the methods sanctioned by legislation for dealing with habitual inebriety in Nova Scotia, New Brunswick, Manitoba, and other provinces.

On the Continent of Europe, Switzerland is the only country that has provided by legislation for the committal of inebriates to special homes for the purpose, though the subject has been repeatedly discussed in France and other countries during the last decade.

In the canton of St. Gall a law was passed in 1891 by which habitual inebriates may be placed in an inebriate asylum for a period of from nine to eighteen months, but for an indefinite period upon a second commitment, either by voluntary application or by direction of the district council, which is the local authority, upon certificate from the medical officer of health. Proceedings may be initiated by a relative or by any public servant. If the subject's personal property is insufficient to defray expenses these are to be met by the public funds. Not only can such charges be applied for, but application can be made for the support of his family during his enforced detention. Other cantons have similar provisions.

In Belgium, drunkenness is regarded as a form of mania, judicially, and under the law a drunkard can be interned in a *maison de santé.*

In Germany and France there are no public asylums for inebriates and therefore no laws on the statute books for their detention. The only measure provided by law for such cases is interdiction, which involves the deprivation of civil rights and the appointment of a guardian.

At the fifth Congrès des médecins aliénistes et neurologistes, held at Clermont-Ferrand in 1892, legislation for inebriates was discussed, and the following resolutions were adopted:

1. That special asylums be founded for the treatment of drunkards. 2. That special measures be taken in regard to habitual drunkards, who constitute a menace to society. 3. That medical "alienists" be consulted in regard to the construction of an asylum for inebriates.

A scheme was presented by the commission of the

congress to the Chamber of Deputies for the revision of the law of 1838 in regard to public asylums.

There is every reason to believe that France will soon provide laws and sanatoria for the care of her habitual inebriates, but it has not yet been done, as is shown by the following letter of Dr. Pierre Marie:

209 BOULEVARD ST. GERMAIN,
28 Fevrier, 1901.

TRÈS HONORÉ CONFRÈRE:

Je regrette de ne pouvoir vous donner de renseignements sur la question qui vous intéresse, mais nous n'avons en France aucune organisation spéciale pour le traitement des buveurs d'habitude. La seule chose qui existe chez nous c'est une loi punissant l'ivresse; on se contente d'arrêter les gens ivres, on ne les soigne pas, il arrive même trop souvent qu'on les laisse se suicider dans les postes de police.

Le Professeur Joffroy dans son Rapport sur le service des aliénés du département de la Seine pendant l'année 1898 a bien réclamé la création d'asiles spéciaux pour les buveurs d'habitude, mais l'Etat continue à s'occuper plutôt des marchands de vin que de leurs victimes.

Legislation in behalf of the habitual drunkard in the United States has been spasmodic, more or less desultory, and wholly unsatisfactory.

The first effort was made by New York in 1854. The New York State Inebriate Asylum was incorporated in 1857. The object as stated in the charter was "the medical treatment and control of the inebriate." Admissions were either voluntary or by order of a committee on the habitual drunkard. This committee, duly appointed by a justice of a court of record, might commit the drunkard to the custody of the officers of the asylum, there to remain until discharged by the committee. Destitute patients were to be employed in some labor, the payment for which, after expenses for board were deducted, was to be sent to their families, or, if they had none, to be paid to the patients upon their discharge.

The Inebriates' Home, Kings County, was incorporated in 1867. It is empowered to receive patients upon their own application or upon order of the trustees, for a period not exceeding six months. The trustees may choose from those imprisoned in the county jail such as they think fit subjects for the home. Such persons are transferred to the home upon a certificate from the president. A justice may also commit any one who, by return of a commission, is pronounced to be an habitual drunkard and incapable of managing his or her affairs. The maximum time for committal is one year. This home has received contributions from the fees paid for liquor licenses and for violation of excise laws. By the act of 1875, this annual modicum was fixed at twelve per cent. of the license moneys.

Under a special enactment of the New York legislature of 1887, St. Saviour's Sanatorium, at Inwood, N. Y., was empowered to receive and detain females committed by a magistrate on the certification of inebriety by two registered examiners in lunacy. The operation of the law has been fairly satisfactory, although lately its constitutionality has been questioned.

By act of Illinois, 1867, the officers of the Washingtonian Home of Chicago, incorporated in February of that year, may receive and detain until the expiry of the sentence any person sentenced by the authorities of the city of Chicago for intemperance or any misdemeanor caused thereby. They may also require the inmates to work. The home receives ten per cent. of all drink license fees.

By act of the State of Connecticut, 1874, the court of probate for the district can issue an inquiry into the allegation that a person is an habitual drunkard or dipsomaniac, made in an application of a majority of the selectmen of the town in which he resides. Upon the allegation being proved to be true and upon the attested certificate of two physicians, the individual may be committed to an inebriate asylum in the State for from four to twelve months if an habitual inebriate, and for three years if a dipsomaniac. Patients may be allowed out on probation, and a Supreme Court judge can order discharges upon information of unjust detention.

In New Jersey, any judge can, on the sworn certificate of two physicians of good standing, commit a drunkard to a home or hospital for such a time as the officers thereof deem necessary. In destitute cases the cost of maintenance is defrayed from the poor tax or from the moneys collected for liquor licenses by the county or city from which the inebriate was received.

Massachusetts has a State Hospital for Inebriates, in which the cost of board and treatment, when the patient is unable to pay, is met by the municipality in which he resides.

In Texas, one hundred thousand dollars was recently appropriated by the legislature for the construction and equipment of an institution for the treatment of inebriates.

In Pennsylvania, if there is no committee of an habitual drunkard, an inebriate can be received and detained by the proper officer of the Pennsylvania Sanitarium, incorporated in 1867, upon presentation, by his guardian or friend, of a certificate by two physicians, attested by a judicial officer having power to administer oaths.

A bill, to be introduced at the coming session of the Indiana legislature, provides that any habitual drunkard who is a public charge or likely to become a public charge may, on application to the county judge, either in person or by friend or near kin, making oath to the facts in the case, be sent to an institution in which inebriates are cured (*sic.*) The expense, not to exceed $100, is to be paid by the county of which the beneficiary is a resident.

Such is a brief survey of the law and the inebriate abroad and at home.

Therapeutical Notes.

For Catarrhal Aphonia.—The *Journal de médecine de Bordeaux* for March 17th quotes the following from the *Quinzaine médicale:*

℞ Sodium benzoate. . . . . 90 grains;
Alcoholate of aconite root. . . . . 20 drops;
Cherry laurel water. . . . . 45 minims;
Syrup of tolu, } of each. . . . . 450 grains;
Syrup of codeine, }
Water. . . . . 900 minims.

M. To be taken in four equally divided doses in the twenty-four hours.

A dry compress of cotton, retained with a flannel bandage, should be applied to the throat during the night.

The Prescribing of Sodium Glycerophosphate.—It is often forgotten by physicians that the physical characteristics of sodium glycerophosphate are such as to render this salt unsuited to dispensing in any form but that of a watery mixture. Although a solid, it is of a thick paste-like consistence, and is therefore not to be prescribed in solid form with other powdered drugs; neither is it desirable to prescribe it in pills, capsules, or cachets, since, owing to its deliquescent properties, a large bulk of dry excipient would have to be added. The best form in which to prescribe it is probably in twenty-five-per-cent. aqueous solution, a teaspoonful of which will then contain fifteen grains of the salt. This may be administered in water, alone or combined with other drugs or flavoring agents.

For Constipation in Children.—The *Revista de la Asociacion medico-farmaceutica* for December, 1900, quotes the following prescriptions from the *Journal des praticiens:*

℞ Sodium bicarbonate. . . . . 180 grains;
Powdered rhubarb. . . . . 10 "
Sodium sulphate. . . . . 480 "
Essence of peppermint. . . . . 20 drops.

M. From half to one level teaspoonful of this powder, fasting in the morning.

Or:

℞ Manna. . . . . 480 grains;
Calcined magnesia, } of each. . . 960 "
Sublimated sulphur, }
Honey. . . . . 480 "

M. From one level teaspoonful to a tablespoonful dissolved in a cup of hot milk, to be taken night and morning.

Silver Nitrate and Copper Sulphate in the Treatment of Chronic Urethritis.—In his translation of de Keersmaecker and Verhoogen's treatise, entitled *Chronic Urethritis of Gonococcic Origin,* recently published, Dr. Ludwig Weiss inserts the following addition to the authors' remarks on various astringents: "The use of any of these remedies at the proper time would be of great benefit to the patient and a source of satisfaction to the physician. But we must confess that hitherto the indications for their employment have been so vague that it borders almost on intuition to choose the right one. We are, therefore, indebted to Finger, who quite recently expounded the use of nitrate of silver and sulphate of copper in chronic gonorrhœal urethritis. For the recent superficial lesions, because only such are amenable to injections or instillations, he recommends the nitrate of silver; for older ones, the sulphate of copper. He draws a happy parallel with the treatment of trachoma of the conjunctiva. There the catarrhal symptoms are combated with silver, while the older processes are attacked with the sulphate of copper in substance. The same indications hold good for chronic urethritis, with this modification: In recent cases of chronic urethritis, where gonococci are yet present, nitrate of silver should be employed; in inveterate cases, where no gonococci are present in the filaments, the sulphate of copper will prove effective. The nitrate of silver in one-half- to five-per-cent., the sulphate of copper in five- to ten-per-cent. solutions.

"It is best to begin with the milder percentages, in order to test the reaction of the urethra. If stronger solutions are well borne, we will employ a glycerin solution of them instead of an aqueous one. The glycerin possesses great affinity for moisture, and will imbibe deeper than a watery vehicle. Finger recommends also the use of a lanolin salve to be used through Tommasoli's salve syringe."

The Treatment of Chalazion. — *Nord médical* for March 1st ascribes the following to Strzeminski:

℞ Pure iodine. . . . . 3 grains;
Potassium iodide. . . . . 9 "
Lanolin. . . . . 1 drachm;
Vaseline, } of each. . . . . 12 grains.
Distilled water, }

M. This ointment is applied by the patient to the affected part at bedtime, and allowed to remain on all night. It does not provoke pain or stain the skin. It goes without saying that during the existence of the chalazion and after its disappearance, conjunctivitis, blepharitis, and atresia of the lacrymal duct, if present, must also be treated. In tuberculous or "scrofulous" patients general treatment is also called for.

For Dentition.—The *Journal de médecine de Bordeaux* for February 24th gives the following:

℞ Citric acid. . . . . 8 grains;
Distilled water. . . . . 8 minims;
Cocaine hydrochloride. . . . . ¾ of a grain;
Syrup. . . . . 150 drops;
Syrup of saffron. . . . . 150 "
Tincture of vanilla. . . . . 12 "

M. To be rubbed into the gums during dentition.

For Urinary and Fæcal Incontinence in General Paralysis.—M. Athanassio (*Arte medica,* April 7th) recommends the following formula:

℞ Tartrate of iron and potassium. . . . . 15 grains;
Tincture of nux vomica. . from 225 to 300 drops;
Decoction of rhatany. } of each. . 1,500 minims.
Decoction of cinchona, }

M. To be taken in equally divided doses in the course of two days.

The Local Application of Turpentine for Neuritis.—Mircoli (*Clinica medica della R. Univ. di Genova; Arte medica,* April 7th) highly praises the use of frictions of turpentine in neuritis due to cold, and especially in sciatica. He uses:

℞ Venetian turpentine. . . . . 30 parts;
Dissolve in
Oil of turpentine. . . . . 6 "
And add
Olive oil. . . . . 50 "

The turpentine resin, adhering to the skin, exerts a continuous action after the cessation of the frictions.

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GYNÆCOLOGY AND SURGERY AMONG THE ANCIENTS.

THERE have been times when we have been tempted to deplore the decadence of scholarship in the medical profession; of literary scholarship, we mean, as distinguished from a study of medical literature merely from the standpoint of utility and for purposes of applied medical science. We have been inclined to look back with regret to the days when great physicians were almost universally great scholars, *i. e.*, learned in much of the learning that was then attainable outside of those things pertaining to the practical application of their knowledge. We have always gladly noted any instance of devotion to such scholarship, and it is with pleasure that during the last years of the century that has closed we have witnessed an unmistakable increase in the bent toward it displayed by the profession at large. To say nothing of members of our craft who have entered upon the paths of general literature, some of them, like Dr. Weir Mitchell, attaining no mean eminence therein, increasing interest in medical scholarship has been illustrated by increasingly numerous contributions to professional journals on matters of medical history, biography, archæology, and folklore. A work suggesting these reflections,* by an Australian physician, will be welcomed by all lovers of scholarly research. It is safe to say that it was a labor of love, for no man who had not all the essential instincts of the scholar would have undertaken such a laborious task; and that fact alone would lead us to expect what we actually find in the work, a perfect storehouse of information concerning the attainments of the ancients in the field of gynæcology. Indeed, the author gives us the keynote of his spirit in the following felicitous quotation from Robert Louis Stevenson:

> "I know not how it is with you:
> I love the first and last—
> The whole field of the present view,
> The whole flow of the past."

In 302 pages, Dr. McKay surveys in its continuity the literature of ancient gynæcology, Egyptian, Hindu, Greek, Alexandrian, Roman, and Byzantine. He deals in detail with the great professors of the art and with the encyclopædists whose labors have preserved for us much of the knowledge of their times and of those which had preceded them—Hippocrates, Celsus, Pliny, Rufus Ephesius, Dioscorides, Soranus, Aretæus, Galen, Oribasius, Moschion, Aetius, Paulus Ægineta, and the Arabian writers from Bagdad in the east to Cordova in the west. From the Papyrus Ebers, of the sixteenth century B. C., to "old Avicenna" (A. D. 980) and Albucasis on the threshold of the Middle Ages, he has sought out, and actually transcribed for our startled interest, almost every original mention that is made of matters gynæcological. The importance of such a work is incalculable. The diseases of women, more than any other subject in medicine, are of interest, not only to the specialist and the distinguished physician, but to every practitioner.

The establishment and legitimization of operations involving abdominal section is regarded as, perhaps, the greatest triumph of nineteenth century surgery. Can we, then, fail to be more than interested, even fascinated, by the following description of the abdominal operation as laid down as a recognized procedure of surgery in the Hindu Upavédas, a supplement, so to speak, to the Brahman Védas? Of these, the Ayur-Véda contains the medical writings, respectively the Charaka-Samhita and the Insruta-Samhita. Dr. McKay says:

"Taking for granted that these works were written 500 B. C., then the following passages are the first mention of such operations; but if these works date later than this, then the Alexandrian surgeons have a prior claim, for we shall see later on that they deliberately operated on the abdominal organs. In the chapter on Enlargement of the Abdomen (Udara) the following passage occurs: . . . 'When the remedies [in obstruction of the bowels] are of no use and the situation of the patient desperate, an operation is recommended, which is to be performed in the following manner: Below and on the left side of the umbilicus, and four fingers' breadth from the linea alba, an incision is to be made four fingers' breadth in length, and the breadth of four fingers of the gut is to be drawn out, and the substance, whether hair, or stone, or a bad secretion, which was the

*The History of Ancient Gynæcology. By W. J. STEWART McKAY, M. B., M. Ch., B. Sc., Senior Surgeon to the Lewisham Hospital for Women and Children, Sydney, etc. New York: William Wood & Company, 1901. Pp. xx-302.

cause of the disease, is to be removed. Ghee and honey is to be rubbed over the wound in the intestine, and it is then returned into the abdomen. Apply sutures, and treat the internal wound as recommended in such cases.' "

Passing to the Alexandrian period, we find that Erisistratus deliberately operated on the liver and spleen in cases of tumor, while Xenophon, of Cos, a follower of Erisistratus, appears to have been the first to ligate vessels as a means of checking hæmorrhage. Later still, we find the following picture of Roman medicine in the time of Trajan (98 to 117 A. D.):

"Heliodorus, a contemporary of Juvenal, appears to have practised amputation by the flap method, while plastic surgery was everywhere in vogue. Tracheotomy and operations for curing cataract were attempted with success, while lithotomy and lithotrity were common operations in the hands of specialists. An abscess of the liver would be opened if diagnosed, and the radical cure for hernia and for stricture of the urethra was not uncommon; while specialists operated on the female genital organs, removing small growths from the cervix, sometimes attempting hysterectomy, and performing plastic operations in cases of atresia and other conditions; for the speculum vaginæ was in use before the year 79 A. D., in which year Herculaneum and Pompeii were destroyed, for in the ruins of these cities a three-bladed speculum was discovered at the beginning of this century. In obstetrical cases, when the necessity arose, the child was removed by the operation of embryotomy, and Cæsarean section was occasionally practised."

The pages from 240 to 302, inclusive, are occupied by a categorical résumé of the facts accumulated from the quotations given in the preceding part, the various items being dealt with under three sections, viz., the Anatomy of the Female Genital Organs, Physical Examinations of the Genital Organs (including a summary of the history of the instruments and methods employed), and the Diseases of Women, as known to the ancients.

Many subjects of incidental interest are also considered, among them the conditions as regards morals and licentiousness of various ages, particularly the era of Imperial Rome. The author cites Lauder Brunton (*The Action of Medicines,* p. 553) to the effect that Agrippina, Faustina, and Messalina, each one of whom, though inhabiting a palace, yet frequented the brothel and conducted themselves as common prostitutes, were probably plagued with vaginal eczema; and slily prods the "chemical blonde" with the reminder that Messalina wore a yellow wig on her visits to the brothels, in compliance with the Roman law that prostitutes should dye their hair either blue or yellow.

Dr. McKay considers in several places the vexed question of whether venereal diseases were known to the ancients. It is an indisputable fact that in the literature of Greece and Rome no passages exist pointing unequivocally to diseases communicable by sexual intercourse. Speaking of the vice and depravity depicted by Juvenal and Martial as existing in Rome, the author says: "Amidst such depravity we should have expected to find venereal diseases thriving apace, yet, strange to say, no author has left us such a description of gonorrhœa as will enable us to say that that disease really existed in those days." Celsus, it is true, has left us an excellent picture of balanitis, phimosis, and orchitis, but he nowhere states that these conditions were attributable to sexual intercourse. The term *γονόῤῥοια* is used by Rufus, Aetius, and Paulus Ægineta, and, we may add, by Galen—but the context, in some places at any rate, clearly indicates that, not gonorrhœa, but what we now term spermatorrhœa is meant. Various passages bearing upon the question are also discussed from the books of Moses, Herodotus, Juvenal, and Martial, and the author seems to have arrived at what appears to be the inevitable conclusion that venereal disease, or at any rate gonorrhœa, was well known and had its share in the ætiology of women's diseases even then, but, as Celsus says, *invitissimus quisque alteri ostendit.* We know that, even in the present day, many who are shameless in speaking freely and wantonly of vice are very reticent in alluding to its loathsome consequences. In the light of Havelock Ellis's tracing of the relation of modesty to the fear of exciting disgust, this is in no way surprising. Martial (xi, 62), however, speaks of a *morbus indecens.* Moreover, in a papyrus recovered in the last decade of the nineteenth century from an Egyptian mummy case, of which some account was published in the *Lancet* for February 18, 1899, there is a passage, unnoticed by the present author, in a fragment by one Herondas, a Greek poet probably of the period of Theocritus, which seems from the context to bear reference undoubtedly to a venereal disease. In this piece, one Metro seeks to learn, from another woman named Koritto, the maker of a phallus used for masturbation. Koritto discovers that her phallus has been lent by Eubule, to whom she herself had lent it, to another woman, Nossis, whereupon Koritto exclaims indignantly,

"χιλίων εὔντων
ἕν' οὐκ ἂν ὅστις λεπρός 'εστι προσδώσω."

"Though I had a thousand I would not give her another

one, even though it were infected with disease." It may seem that to assign the meaning of *venereal* disease to λεπρός is begging the question; but in view of the context it seems to us pretty clear that the kind of disease meant is such a special infection as would be likely to attach to such an instrument used for such a purpose —surely, a venereal disease.

The author asks for indulgence on the score that the book was "written in a country where every book that one wants to refer to has to be brought from Europe, and often one must wait, not for months, but for years, before some of these works can be procured." We refer to this apology as an evidence of the author's earnestness and modesty; it is entirely unnecessary.

The book is fitly dedicated to the late Lawson Tait, whose untimely death deprived the author of valued criticism and aid in revision, and we cannot refrain from quoting the author's tribute to one of the greatest of great men, a tribute which, we feel sure, will meet with a responsive echo in many hearts on this side of the Atlantic Ocean:

"There is but one sad memory connected with this work. Mr. Lawson Tait, my teacher and friend, had from the outset encouraged me to undertake this task, and, with his usual impulsive generosity, had agreed to read it through, and to write an introductory chapter on the subject with which his name must be forever connected; for who will deny that he has added to the advancement of operative gynæcology more than any one who has preceded him? This man was a genius, and if ever man took a knife into his hand who understood his work, this was the man. He had a brain that was omniscient; he came to his work primed with the experience of the difficulties of 3,000 cases of abdominal section; he dealt with each case with a master's hand, not with the empiric touch that so many display. Those who knew him intimately knew him to be a genius; and when the tongue of envy has ceased, and age has paid its just tribute to this man, then, and not till then, will gynæcologists acknowledge their real indebtedness to this great and marvellous surgeon."

OUR SUBSCRIBERS' DISCUSSIONS.

In our department of News Items, in the article headed Special Notice to our Subscribers, in this issue of the *Journal*, we briefly outline a new feature which, we believe, will be of great value to our readers. Primarily, our object is to obtain a number of expressions of opinion, always on some subject of everyday interest to the general practitioner, from the "rank and file" of the profession, those who do the great bulk of family practice. As a rule, such practitioners have very decided convictions founded on their own personal experience, convictions for which they are able to give very good reasons. They are apt, however, to be too modest and reserved in the matter of bringing their opinions to the attention of their fellow physicians. They are prone to saying that they "know nothing of the art of writing." It is for this reason that, in the friendly competition which we expect to establish, we have decided that literary style shall have no weight in deciding the awards.

There might at the first glance seem to be no good reason for our declining to award the prize to an individual more than once in any one year. There is, however, what we look upon as an excellent reason; it is to handicap those who, possessed of some literary facility and to some extent skilled in the art of "brushing up" in a subject by resorting to libraries, might otherwise have an undue advantage over the plain, practical physicians who, while lacking these facilities, are still likely to be more experienced and better able to interpret their own experience aright. It is for the same reason that we exclude persons engaged in work on medical journals.

The amount of the prize is purposely made moderate. Large prizes have their usefulness—and great it is—in drawing forth essays that can only be the fruit of prolonged and laborious investigation, a minute acquaintance with literature, and very careful thought; to call forth practical expressions from practical physicians—and that is the particular object we have in view in these discussions—we believe a small award, frequently repeated, will be more efficacious.

THE DANGER OF FLANNELETTE.

The *Lancet* for March 30th comments editorially upon the danger of flannelette as a material for clothing in consequence of its extreme inflammability. It is said to ignite "with the most dangerous ease, burning with a hot bluish flame not unlike the flame of burning alcohol and once a-light it is well-nigh impossible to extinguish it." The burning to death of a child, six years of age from the ignition of its flannelette night dress, in spite of the efforts of the mother to extinguish the flames, forms the text for this comment. The *Lancet* has tested the material again and again and finds that "it takes fire instantly . . . a hot blue flame shooting along the surface and increasing most rapidly in size and in intensity." The dangers of celluloid for articles of attire have been frequently pointed out, but it would seem to us that if the *Lancet's* findings are substantiated, flan

nelette, owing to its much more frequent use and the larger masses employed, in some instances enveloping nearly the whole body, is likely to prove a far more generally dangerous article of wear.

RECKLESS CAR SPEEDING.

THE serious accident to a Fifth Avenue stage, in which six persons were seriously, if not in some instances fatally, injured by the crashing into it, on April 30th, of a Madison Avenue car, should direct the attention of the proper authorities to the recklessness with which cars, and other vehicles, for that matter, are constantly driven over the more important and thronged street crossings. It is only fair to say that in the instance referred to the testimony of eye witnesses gives credit to the motorman for doing all in his power to avoid or at least minimize the catastrophe. We do not desire to prejudge the merits of this or any case in which a proper investigation will apportion the responsibility, but we desire to express our strong opinion that some regulation requiring a speed no greater than that of a horse's walk should be officially ordered for all the important crossings, and that the onus should be laid upon some one of enforcing it.

THE PATHOLOGICAL INSTITUTE OF THE NEW YORK STATE HOSPITALS.

IN consequence of legislative crippling of the institute, including the enforced retirement of the director, Dr. Ira Van Gieson, his entire staff of associates have resigned. Nothing could better demonstrate the short-sighted nature of the policy which, against the protest of a great number of medical men and others distinguished in matters of research, has been pursued toward the institute.

THE CHANCE OF SUCCESS IN PRACTICE IN THE FAR WEST.

THE old mistake of taking it for granted that almost any graduate of an Eastern medical school had only to go to the far West to find a remunerative practice awaiting him has, we believe, been well-nigh corrected. It must still be made in a considerable number of instances, however, for Dr. W. James Howells, of Spokane, writes to us cautioning young graduates against it. He says that they will find in the State of Washington a sufficient number of physicians, as many as one for every four hundred inhabitants in the large towns, and that they are men of good attainments who keep pace thoroughly with the progress of medicine. This we do not in the least doubt. At the same time there is always the hope of pitching upon a community that is destined to grow rapidly, and that it is, we take it, rather than any false sense of superiority to his Western brethren, that generally induces a man to go from the East to the far West.

News Items.

Society Meetings for the Coming Week:

MONDAY, *May 6th:* New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association; Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society.

TUESDAY, *May 7th:* New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society; Androscoggin, Maine, County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, *May 8th:* New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Massachusetts, Medical Association (private); Philadelphia County Medical Society.

THURSDAY, *May 9th:* Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y. (annual); South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

FRIDAY, *May 10th:* Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, *May 11th:* Obstetrical Society of Boston (private).

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending April 27, 1901:

DISEASES.	Week end'g Apr. 20		Week end'g Apr. 27	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	22	13	20	7
Scarlet Fever	729	37	669	44
Cerebro-spinal meningitis	0	4	0	6
Measles	280	10	330	9
Diphtheria and croup	272	45	290	58
Small-pox	38	10	56	8
Tuberculosis	248	185	287	204

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for Two Weeks ending April 27, 1901:

ARNOLD, W. F., Surgeon. Detached from duty at Olongapo, Philippine Islands, and ordered to the *New Orleans.*

DENNIS. J. B., Assistant Surgeon. Detached from the Naval Academy, Annapolis, and ordered to the *Chesapeake.*

ROGERS, F., Medical Inspector. Ordered to the *Brooklyn* for duty as fleet surgeon of the Asiatic Station.

SMITH, C. G., Assistant Surgeon. Ordered to the *Vermont.*

STOKES, C. F., Surgeon. Ordered to the Cavite Naval Station, Philippine Islands, to await the arrival of the *Solace.*

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from April 20 to April 27, 1901:

BUSHNELL, GEORGE E., Major and Surgeon, United States Army, is granted leave of absence for fourteen days, to take effect upon the expiration of his present sick leave.

GILL, CHARLES R., Captain and Assistant Surgeon, is granted leave of absence for two months on surgeon's certificate of disability.

GRAVES, LEONARD K., Captain and Assistant Surgeon, is granted leave of absence for one month.

RAYNOR, WILLIS J., Captain and Assistant Surgeon, United

States Volunteers, is granted leave of absence for one month, to take effect on or about May 10, 1901.

VAUGHAN, MILTON, Captain and Assistant Surgeon, will proceed to San Francisco for transportation to Manila.

WILLIAMS, A. W., First Lieutenant and Assistant Surgeon, will proceed to New York to report as to the cause of the death of J. P. Hatch, General, United States Army.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera and plague, were reported to the surgeon-general during the week ending April 26, 1901:

Smallpox—United States and Insular.

Newcastle, Delaware	Apr. 1-15	4 cases.	
Jacksonville, Florida	Apr. 13-20	6 cases.	
Chicago, Illinois	Apr. 13-20	17 cases.	
Cynthiana, Kentucky	Apr. 17	6 cases.	
Lexington, Kentucky	Apr. 13-20	4 cases.	
New Orleans, Louisiana	Apr. 13-20	10 cases.	1 death.
Winona, Minnesota	Apr. 13-20	2 cases.	
Manchester, New Hampshire	Apr. 13-20	7 cases.	
Jersey City, New Jersey	Apr. 14-21	4 cases.	
Cincinnati, Ohio	Apr. 12-19	7 cases.	
Cleveland, Ohio	Apr. 13-20	46 cases.	
Pittsburgh, Pennsylvania	Apr. 13-20	1 case.	
Steelton, Pennsylvania	Apr. 13-20	3 cases.	
Nashville, Tennessee	Apr. 13-20	1 case.	
Wheeling, West Virginia	Apr. 13-20	1 case.	
Manila, Philippines	Mar. 2-9	8 cases.	
San Juan, Porto Rico	Apr. 6	13 cases.	

Smallpox—Foreign.

Prague, Austria	Mar. 23—Apr. 6	8 cases.	
Antwerp, Belgium	Apr. 6	3 cases.	1 death.
Hong Kong, China	Mar. 2-9		6 deaths.
Paris, France	Mar. 31—Apr. 6		10 deaths.
Gibraltar	Apr. 1-7	2 cases.	
Southampton, England	Apr. 6-13	3 cases.	
Glasgow, Scotland	Apr. 6-13		5 deaths.
Leith, Scotland	Mar. 31—Apr. 6	1 case.	
Bombay, India	Mar. 19-26		12 deaths.
Calcutta, India	Mar. 16-23		144 deaths.
Karachi, India	Mar. 9-16	12 cases.	8 deaths.
Madras, India	Mar. 16-22		10 deaths.
Progreso, Mexico	Mar. 31—Apr. 6	4 cases.	
Merida, Yucatan, Mexico	Apr. 11	Prevalent.	
Rotterdam, Netherlands	Mar. 31—Apr. 6	1 case.	
Odessa, Russia	Mar. 31—Apr. 6	13 cases.	1 death.
Corunna, Spain	Mar. 31—Apr. 6		1 death.
Vigo, Spain	Mar. 1-31		1 death.

Yellow Fever.

Panama, Colombia	Apr. 8-15	8 cases.	
Cape Haitien, Haiti	Mar. 23-30	1 case.	1 death.
Coatzocoalcos, Mexico	Apr. 1	Prevalent.	
San Salvador, Salvador	Mar. 31	4 cases.	3 deaths.

Cholera.

Hong Kong, China	Mar. 2-9		1 death.
Bombay, India	Mar. 19-26		4 deaths.
Calcutta, India	Mar. 16-23		65 deaths.
Madras, India	Mar. 16-22		1 death.
Singapore, Straits Settlements	Feb. 26—Mar. 2		5 deaths.

Plague—Insular.

Manila, Philippines	Mar. 2-9		8 deaths.

Plague—Foreign.

Hong Kong, China	Mar. 2-9		16 deaths.
Bombay, India	Mar. 19-26		886 deaths.
Calcutta, India	Mar. 16-23		1,040 deaths.
Karachi, India	Mar. 19-26	239 cases.	192 deaths.
Singapore, Straits Settlements	Feb. 26—Mar. 9		3 deaths.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending April 25, 1901:

GIBSON, L. P., Acting Assistant surgeon. Granted leave of absence for seven days.

GLENNAN, A. H., Surgeon. To proceed to Tallahassee, Florida, for special temporary duty.

KING, W. W., Assistant Surgeon. To proceed to Guayanilla, Porto Rico, for special temporary duty.

MCINTOSH, W. P., Surgeon. To proceed to Ducktown, Tennessee, for special temporary duty.

MATHEWSON, H. S., Passed Assistant Surgeon. To proceed to Ponce and Guayanilla, Porto Rico, for special temporary duty.

MEAD, F. W., Surgeon. Department letter of January 11th, granting him leave of absence for sixty days, is amended so that said leave shall be for one month and twenty-four days.

NYDEGGER, J. A., Passed Assistant Surgeon. To proceed to Cape Charles Venture, Virginia, for special temporary duty.

PETTUS, W. J., Surgeon. Department letter of January 11th, granting him leave of absence for two months, is amended so that said leave shall be for one month and twenty-seven days.

RODMAN, J. C., Acting Assistant Surgeon. Granted leave of absence for seven days from April 24th.

WATTERS, MARK H., Hospital Steward. Relieved from duty at Chicago and directed to proceed to St. Louis and report to the medical officer in command for duty and assignment to quarters.

WERTENBAKER, C. P., Passed Assistant Surgeon. To represent the service at meeting of the Texas Medical Association, Galveston.

Changes of Address.—Dr. Aaron Denenholz, to No. 85 East Tenth Street, New York; Dr. Joseph E. Lumbard, to No. 1945 Seventh Avenue, New York; Dr. Henry S. Norris, to No. 10 West Forty-ninth Street, New York.

A Physician's Bequest for the Temperance Cause.—Dr. Charles Dana, of Tunkhannock, Pa., who recently died in Florida, appropriated the sum of $2,000 to be used in furthering the cause of temperance and aiding the prohibition movement.

The New Bureau of Bacteriology and Pathology.—Commissioner Daniel Lewis, of the State Department of Health, has appointed Dr. George Blumer, of the Bender Laboratory, of Albany, director of the new Bureau of Bacteriology and Pathology. It will be one of the most important bureaus under the Health Commissioner.

French Savant Studying New York's Birth Rate.—Jules Siegfried, ex-Minister of Commerce of France, in this country to study municipal government and industrial conditions, visited the Health Department at New York on April 22d. M. Siegfried was greatly interested in the statistics of births and deaths. The birth rate in France is decreasing to an alarming degree, and inquiry on the subject as to the cause has already been made by the French Government.

A St. Louis Physician Celebrates his Golden Wedding.—On April 22d Dr. and Mrs. Charles Tuckett, of St. Louis, celebrated the golden anniversary of their wedding. The doctor is seventy-five years old and his wife is seventy-three. They are the parents of ten living children. Dr. Tuckett has been a practising physician in St. Louis for over fifty years. He is as active as most men at fifty years of age. He takes a daily ride on his bicycle and is as young in spirit as any of his children.

Special Notice to our Subscribers.—Under the title of Subscribers' Discussions, we are about to introduce a new feature into the *Journal*. As the title indicates, it will consist practically of discussions by our subscribers. We shall announce the topics in advance, for the most part in the form of questions. The question for the first discussion is as follows: *What is the Best Way of Treating the Stump of the Umbilical Cord?* Whoever among our subscribers answers this question in the manner most satisfactory to the editor and his advisers will receive a prize of $25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested

that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers as original communications, but most of them will appear under the head of Subscribers' Discussions.

Only subscribers to the *New York Medical Journal* will be entitled to compete, and all the members of our own editorial staff are disqualified, as are also all persons known to be engaged in medical journalism. Moreover, this prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish. Answers to the first question must reach us on or before June 10th, and we shall announce the award as soon thereafter as practicable. It is our present intention to give out these questions once a month, and they will all be on subjects of interest to the general practitioner. For further information, see the editorial article entitled Our Subscribers' Discussions.

St. Louis Medical Society of Missouri.—At the meeting held on April 20, 1901, papers were read on Pessimism in Cancer, by Dr. G. Wiley Broome, and on Some Complications of Syphilis of the Skin and their Treatment, by Dr. Martin F. Engman.

The Missouri Medical Association will meet at Jefferson City on May 21st, 22d, and 23d. Sessions will be held in the hall of the House of Representatives. Local committees have in preparation several receptions and other entertainments for the visitors.

The Society of the Alumni of the Sloane Maternity Hospital held its fourth annual dinner at the New York Athletic Club, on April 26th, under the presidency of Dr. Samuel M. Brickner. Among the speakers were Dr. James W. McLane, Dr. Edward B. Cragin, Dr. Eugene Coleman Savidge, Dr. James D. Voorhees, and Dr. Charles A. Elsberg. Dr. Walter M. Brickner delivered a mock obstetrical lecture. Dr. H. P. de Forest was elected president for the current year.

The German Medical Society of the City of New York.—The programme for the next meeting, to be held on Monday evening, May 6th, at the Academy of Medicine, includes the exhibition of patients, specimens, instruments, etc.; a demonstration of stereoscopic Röntgen-ray photographs, by Dr. C. H. Jaeger; one of a new amygdalotome, by Dr. Max Toeplitz; one of a case of congenital coloboma of the upper eyelid; one of a case of costopleurectomy and one of a case of melanosarcoma, by Dr. Carl Beck; and one of specimens of gynæcological diseases of general interest, by Dr. F. Foerster; also a paper on Chancre of the Nasal Mucous Membrane, by Dr. W. Freudenthal.

The American Congress of Tuberculosis will hold its second annual meeting at the Grand Central Palace, in the city of New York, on May 15 and 16, 1901, in joint session with the Medico-Legal Society of New York. A dinner will be given to the members and guests. It is proposed to open a museum of pathology, bacteriology, and public health, with an exposition of electrical and other instruments and of all appliances used in any way in arrest or treatment of the disease.

Delegates to the American Congress of Tuberculosis.—The governor of Colorado has appointed the following physicians to represent that State at the congress to be held in the city of New York May 15 to 17, 1901: Dr. J. N. Hall, of Denver; Dr. W. B. Davis, of Pueblo; Dr. B. P. Anderson, of Colorado Springs; Dr. J. Tracy Mellvin, of Saguache; Dr. R. F. Graham, of Greely, and Mrs. W. S. Decker, of Denver. The governor of Kentucky has appointed the following: Dr. J. N. McCormick, of Bowling Green; Dr. M. K. Allen, of Louisville, and Dr. Chester Mayer, of Louisville. The governor of Vermont has appointed the following: Dr. Charles S. Caverly, of Rutland; Dr. Henry D. Holton, of Battleboro, and Dr. Truman R. Stiles, of St. Johnbury. The Nicaraguan Minister at Washington has appointed the following Nicaraguan physicians to represent Nicaragua: Dr. Louis H. Debayle, 21 Irving Place, New York, and Dr. Juan B. Sacasa, Columbus Hospital, New York. The governor of Missouri has appointed the following: Dr. E. L. Priest, of Nevada; Dr. R. L. Wills, of Neosho; Dr. Frank J. Lutz, of St. Louis; Dr. Wm. F. Kuhn, of Kansas City; Dr. J. T. McClanahan, of Boonville; Dr. J. G. Martin, of Kahoka; Dr. G. A. Goben, of Kirksville; Dr. S. A. Proctor, of Doniphan; Dr. C. H. Fulbright, of St. James; Dr. S. H. Rigg, of Middletown; Dr. W. E. Shelton, of Appleton City; Dr. S. C. Davis, of Warsaw; Dr. E. H. Chinna, of Rocheport; Dr. W. B. Davis, of St. Joseph; Dr. C. W. Chastine, of Plattsburg; Dr. R. L. Hamilton, of Richmond; Dr. W. L. Ray, of Fulton; Dr. U. S. Wright, of Fayette; Dr. I. T. Hall, of Potosi; Dr. J. L. Eaton, of Irondale; Dr. Wm. H. Crandell, of Birchtree; Dr. N. J. Petijohn, of Brookfield; Dr. W. L. Crawford, of Sedalia; Dr. A. C. Bernays, of St. Louis; and Dr. J. P. North, of Jefferson City. Georgia also will send twelve delegates; Iowa, eight; West Virginia, five, and a large number of States, three each.

The Indiana State Medical Society will hold its fifty-second annual session at South Bend, Ind., from May 15th to 17th inclusive. The following is the programme: May 15th: 1 P. M., meeting called to order by Dr. G. W. McCaskey, president, Fort Wayne; 8 to 12 P. M., entertainment of visitors by St. Joseph County Medical Society. May 16th: 8 A. M., morning session; 1 P. M., afternoon session; 8 P. M., evening session, address by Dr. G. W. McCaskey, Fort Wayne; address by Dr. John A. Wyeth, New York City; 10 P. M., reception. May 17th: 8 A. M., morning session; 1 P. M., afternoon session. The officers are: President, G. W. McCaskey, M. D., Fort Wayne; vice-president, A. M. Hayden, M. D., Evansville; secretary, F. C. Heath, M. D., Indianapolis; assistant secretary, J. B. Berteling, M. D., South Bend; treasurer, A. E. Bulson, M. D., Fort Wayne. Committee on Arrangements: Chairman, J. B. Berteling, M. D., South Bend; H. T. Montgomery, M. D., South Bend; C. A. Daugherty, M. D., South Bend; Chas. Stoltz, M. D., South Bend; C. C. Terry, M. D., South Bend. Reception Committee, St. Joseph County Medical Society: President, F. P. Eastman, M. D., South Bend; vice-president, G. W. Van Benschoten, M. D., South Bend; treasurer, C. M. Butterworth, M. D., South Bend; secretary, H. F. Mitchell, M. D., South Bend. The New Sheridan Hotel, the Hotel Johnson, and the Columbia Hotel offer special rates of $1.50 a day. The Hotel Nickel is on the European plan.

In Memory of Dr. William H. Draper.—At a special meeting of the medical board of St. Luke's Hospital,

New York city, a memorial notice of the death of Dr. William H. Draper was adopted reciting the facts regarding his connection with the institution for the past forty-four years and concluding with the following eulogy: Dr. Draper possessed intellectual, social, and moral qualities that made him in many ways an ideal physician. He was a careful and thorough diagnostician. His sound judgment gave him the confidence of his patients and his professional brethren, while his kindliness of heart and a peculiar charm of manner won him hosts of friends. His distinguished career will be remembered with pride by the profession which he adorned, but those who enjoyed the pleasure of a long friendship with him will always feel that the man himself was the chief attraction. The sterling principles of his character, his uprightness, his loyalty, and his lovableness were the qualities which made his friends love him even more than they admired his great ability as a scientific physician.

Obituary Notes.—Dr. James S. Carradine, of 45 West Twentieth Street, New York City, died on Tuesday, April 23d, at the age of sixty-two. Dr. Carradine was born at Yazoo, Mississippi, and graduated from the medical department of the University of Pennsylvania. He served as a surgeon in the Confederate Army throughout the civil war, after the close of which he engaged in the practice of his profession in New York city. He was a member of the New York State Medical Association and of the Medical Society of the County of New York.

Births, Marriages, and Deaths.

Born.

IRWIN.—In New York, on Sunday, April 28th, to Dr. and Mrs. S. Nelson Irwin, a son.

Married.

CONGDON—HALL.—In San Francisco, on Thursday, April 18th, Dr. C. E. Congdon and Miss Isabelle Hall.

CURRY—HAMILTON.—In Zanesville, Ohio, on Saturday, April 27th, Dr. Joseph James Curry, United States Army, and Miss Helen Hamilton.

DUKE—WALSH.—In Washington, on Thursday, April 18th, Mr. J. Clarence Duke and Miss Beatrice A. Walsh, daughter of Dr. James F. Walsh.

FINCKE—BROWN.—In Brooklyn, on Thursday, April 25th, Dr. Charles L. Fincke and Miss Mattie T. Brown.

KEENAN—MAGUIRE.—In San Francisco, on Tuesday, April 16th, Dr. Alexander S. Keenan and Miss Laura Maguire.

LAMBERT—GURNEY.—In New York, on Tuesday, April 23d, Dr. Walter Eyre Lambert and Miss Grace Gurney.

MESMER—HOFFMAN.—In Buffalo, on Tuesday, April 16th, Dr. John M. Mesmer and Miss Elizabeth Gray Hoffman.

ROBB—SMITH.—In St. Louis, on Thursday, April 18th, Dr. Malcolm Robb and Miss Teresa B. Smith.

WELLS—HORN.—In Washington, on Thursday, April 18th, Dr. S. J. Wells and Miss M. M. Horn.

Died.

BUCKLER.—In Baltimore, on Saturday, April 20th, Dr. Thomas H. Buckler.

CARRADINE.—In East Orange, N. J., on Tuesday, April 23d, Dr. James S. Carradine.

COGSWELL.—In Haverhill, Massachusetts, on Sunday, April 21st, Dr. George Cogswell, aged ninety-three years.

COX.—In Philadelphia, on Friday, April 19th, Dr. George W. Cox, in the sixty-first year of his age.

GRAHAM.—In Philadelphia, on Tuesday, April 23d, Dr. Percy M. Graham, in the forty-first year of his age.

INGLIS.—In Denver, on Tuesday, April 23d, Dr. Roy Inglis, of Jersey City.

LITTLE.—In Toronto, Canada, on Thursday, April 25th, Dr. T. H. Little, in the fortieth year of his age.

MORRIS.—In Birmingham, Alabama, on Tuesday, April 23d, Dr. Edward Watts Morris, in the thirty-sixth year of his age.

STEWART.—In Peoria, Illinois, on Friday, April 12th, Dr. James T. Stewart.

WOODBURN.—In Indianapolis, on Tuesday, April 23d, Dr. J. H. Woodburn, in the seventy-ninth year of his age.

Obituaries.

WILLIAM HENRY DRAPER, M. D., LL. D.,

NEW YORK.

DR. DRAPER died at his home, in New York, on Friday, April 25th, in the seventy-first year of his age. The immediate cause of his death was pneumonia. He was a native of Brattleboro, Vt., but came to New York early in life. He graduated from Columbia College in 1851, and from the College of Physicians and Surgeons in 1855. He subsequently served on the house staff of Bellevue Hospital. In conjunction with the late Dr. Henry B. Sands, he soon engaged in that subsidiary form of medical instruction known as "quizzing," and Sands and Draper's quiz speedily became renowned among the students of the college of Physicians and Surgeons. Soon after this period Dr. Draper was appointed a physician to the New York Hospital, where his clinical instruction was of the greatest value. In 1869 he was made clinical professor of diseases of the skin in the College of Physicians and Surgeons. In that capacity, too, he was exceedingly instructive to the students and to the many practitioners who attended his lectures. He held the chair for many years, and afterward was made professor of clinical medicine. In addition to his service in the New York Hospital, which he kept up until within a few years of his death, Dr. Draper was connected as a consulting physician with St. Luke's, Trinity, the Roosevelt, and the Presbyterian hospitals. He was at one time the president of the New York Academy of Medicine, and throughout the active period of his professional career he showed a lively interest in the affairs of that body.

Dr. Draper was not a frequent or a voluminous contributor to medical literature, but his writings, like his oral teaching, were marked by an uncommon nicety of diction and by a directness that made his meaning always unmistakable. His voice was pleasant to the ear, his presence was fine, and what he had to say was sure to prove instructive. He was one of the most refined men in the profession, besides being very handsome. His teaching of dermatology is doubtless the best remembered of his work. He was an excellent interpreter of Hebra and his followers, while not neglectful of the St. Louis school; at the same time he was himself an acute observer. Much of his thought during the greater part of his professional life was given to the varied manifestations of gout, and especially to the dietetic treatment of that disease.

Dr. Draper was not a talkative man, but he was one of unusual amiability and very entertaining. He was proficient in music and exceptionally well informed in general literature and the fine arts. Although the demands of his practice were very great, he managed to devote a considerable portion of his time to Columbia University, of which he was a trustee, and to various other institutions with which he was connected in either a professional or an advisory capacity. His life counted for not a little in furthering the welfare of New York in an unobtrusive way, and the influence of his example will long be felt in the medical profession.

Pith of Current Literature.

Medical News, April 27, 1901.

The Study of Internal Medicine. By Dr. William Osler.—The author concerns himself with the question, "How shall a young man prepare himself to rise in the medical profession to a position in which his brethren lean upon his judgment and rely upon his decision?" He endeavors to answer it. In regard to going abroad, he believes that it is not necessary, though it is very helpful. The opportunities afforded in this country are not to be despised. After a few years, when the young physician needs a rest and a change, let him invest six hundred dollars in a summer semester in Germany, working quietly at one of the smaller universities and absorbing the spirit of patient investigation that is the genius of the German mind. "How shall the young man gain even his dry bread during the first few years of his professional career?" By picking up the crumbs that fall from the practice of the older men who can always put something in the hands of an able youngster, by fees from classes, journal work, private instruction, work from the schools, night work, surplus work in busy seasons, by taking poor or chronic patients that the older man cannot spare time to attend, by keeping office hours for the scanty summer practice of the wealthy physician who is taking his holiday; in short, by taking every sort of medical practice that comes to hand, for to see disease is the main thing, and a man must be willing to treat disease where he can find it, even though he barely ekes out a living while he is gaining his experience. At the end of twenty years, the author asserts, the man who has worked wisely and well should have a first-class reputation in the profession and a large circle of friends and patients. He will not have capital in the bank, but he will have interest-bearing funds in his brain pan. He may awake some day perhaps quite suddenly, to find that twenty years of quiet work, done for the love of it, has a very solid value.

The Relation of the Student of Medicine and the Recent Graduate to the Field of Surgery. By Dr. George Ryerson Fowler.—The author details the steps in the rise of the successful surgeon, and he demonstrates that, in the field of surgery, a full and complete knowledge of all the resources of the medical art is essential to the successful practice of this branch. The value of hospital work is enlarged upon, and the desirability of work abroad is impressed upon the aspirant. Sincerity and earnestness of purpose will place a man in the field of surgery, a worker. He may or may not become the originator of difficult or brilliant surgical procedures, but if he attains to good judgment, as based upon a cultivation of powers of observation and proper discrimination, combined with the experience which will certainly come to him, he will be trusted by his colleagues. When the profession trusts him, the public will have confidence in him, and when these have been reached he will have become a surgeon.

The Medical Man in the Navy. By Dr. W. K. Van Reypen.—The author, in an interesting article, gives information of a character that is often sought for. Upon passing the preliminary examinations, the applicant, who must be between twenty-one and thirty years of age, is appointed assistant surgeon, with the rank of lieutenant (junior grade). As a matter of fact, there are always some vacancies. The newly appointed assistant surgeon receives, at sea, $1,650; on shore, $1,402.50, besides which there are allowances of $288 per annum. The newly appointed surgeon formerly entered with the rank of ensign, and by regulation was placed in the junior officers' quarters. Now, entering with the higher rank, he becomes at once a senior officer, with all the privileges incident thereto, including quarters to himself. This makes possible the privacy and comforts so valuable and desirable in life while afloat, and places the medical officer from the commencement of his career in a position consonant with his age, habits of thought, and responsibilities.

The Municipal Health Department System, and more Especially in Reference to its Advantages and Disadvantages as an Opening for the Young Medical Graduate. By Dr. Arthur Guerard.—The author approves of the system, and though he admits that the obstacles in the way of appointment are undoubtedly great, they are not insuperable. In regard to the work itself, he believes that there is nothing which a young graduate can undertake at the present time that will give him a broader field of vision in his profession, especially at the beginning of his career, or more opportunity to do "the greatest good to the greatest number," while certainly benefiting himself, than the study of sanitary science and preventive medicine under the modern municipal health department system.

The Advantages in Examining for Life Insurance. By Dr. Brandreth Symonds.—This work is not for a lazy or careless man. It calls for a high grade of medical knowledge and it demands the strictest integrity. But to the honest, bright, up-to-date practitioner, examining for life insurance offers great inducements. A good examiner must keep himself constantly informed in the progress of medical science, and he should be constantly in touch with the practice of his profession. A physician should never give up his practice simply in order to make examinations for life insurance.

The Outlook for the Young Physician in State Hospital and Sanitarium Work. By Dr. Carlos F. MacDonald.—The author believes that the medical service in State hospitals for the insane, especially in the State of New York, offers to the young physician a most inviting field both for the clinical study of mental disease and in the matter of pecuniary compensation and allowances, which, in comparison with the pay and allowances of medical officers in other eleemosynary institutions, are on a very liberal scale. The salaries range from nine to twelve hundred dollars per annum and maintenance, for junior assistant physicians, up to four thousand five hundred dollars per annum, with maintenance for self and family, for medical superintendents.

The Medical Man in the United States Marine-Hospital Service.

Medical Record, April 27, 1901.

Experiences with Tracheotomy. By Dr. John Rogers, Jr.—In a series of seven cases reported by the author there are four laryngotomies and ten tracheotomies without a death that can be ascribed to the operation, though performed in great haste. Cocaine should always be used when the patient is controllable; but children or patients who cannot be kept quiet require chloroform, and in no instance, according to the author, does it cause trouble. Division of the cricoid, if the cannula has to be worn for any length of time, invariably leads to subsequent bad cicatricial contraction which can be cured only by prolonged intubation. Laryngotomy, ex-

cept for tumor, is absolutely useless. If the stenosis is not chronic, and there is hope of a speedy cure by a simple tracheotomy and the wearing of a cannula for a couple of weeks, and also if a careful dissection is possible, the low operation is to be preferred. But in chronic cases, in which the stenosis must afterward be overcome, and in cicatricial stenosis, the low operation is exceedingly troublesome, and the high operation is preferable.

Recurrent Vomiting of Nervous Origin. By Dr. Louis Fischer.—In a case reported by the author the patient is a female, fourteen years of age. The condition seems to improve under the following therapeutic measures: (1) Lavage, after which she improves for a week or more; (2) morphine or opium in small doses; (3) sodium bromide, ten to twenty grains, repeated every few hours; (4) hyoscyamine hydrochloride, one one-hundred-and-twentieth of a grain for a dose, three times a day. In addition, faradaization, massage, and cold baths, showers, diet, iron, and general restorative treatment, including hypophosphites and cod-liver oil, have been tried. Rich nitrogenous diet (concentrated foods), rest for the stomach, with ice locally, and an abdominal support (bandage), have been ordered.

Tobacco as a Factor in Glycosuria. By Dr. Heinrich Stern.—The author finds that tobacco may influence the pre-established pathological output of urinary glucose in the following ways: (1) By protracting the duration of transitory glycosuria, and by imparting to alimentary melituria a certain degree of chronicity; (2) by increasing the quantity of dextrose in the twenty-four hours' urine, in the transitory as well as the chronic forms of glycosuria; (3) by transforming the lighter degrees of chronic glycosuria into the graver forms. These results he attributes, in great part, to the presence of carbon monoxide in the fumes of tobacco, it being a product of the imperfect combustion. He remarks that, as much less carbonic oxide originates from tobacco smoked in pipes, he has observed tobacco glycosuria only in smokers of cigars and never in those who consume tobacco in pipes exclusively. It is an established fact that, in chronic carbonic-oxide poisoning, glucose is very often found in the urine.

Pityriasis Versicolor of the Face. By Dr. William S. Gottheil.—The patient is a young colored man, and the points of interest about the case are the appearance of the lesions as circular, grayish-white discolorations upon a dark surface, instead of yellowish or reddish-brown stains upon a light one, and that they appeared upon the face only. The patient was rapidly cured by washing the affected area several times daily with 1:3,000 solution of bichloride in tincture of green soap.

An Extreme Case of Simple Anæmia. By Dr. Rolfe Floyd and William J. Gies, Ph. D.—This very interesting article embodies the results of a careful study of the case in question, and a comparison of the case with a typical case of pernicious anæmia. The authors conclude that, to obtain a satisfactory classification of the anæmias, it will be necessary, besides counting and studying the peripheral blood, (1) to understand the life history of the blood cells, which can be accomplished only through study of the physiology and pathology of the blood-making and blood-destroying organs; (2) to investigate more thoroughly the interrelations between the normal and diseased processes occurring in the blood and those occurring in the other body tissues; (3) carefully to correlate the results of such studies with those obtained by clinical experience.

Albuminuric Retinitis in Pregnancy: Premature Labor; Death in Utero of Twin Child; Puerperal Convulsions; Hemiplegia; Acute Mania: Death. By Dr. Joseph N. Study.

Boston Medical and Surgical Journal, April 25, 1901.

Remarks on Anæsthesia—General, Local, and Spinal. By Dr. Maurice H. Richardson.—The author calls attention to the fact that we are apt to forget, in making comparisons, that the dangers of general anæsthesia have been demonstrated in almost countless cases. A danger which is regarded by many of us too great to justify the use of chloroform does not comprise, even in the most unfavorable statistics, more than one death in five hundred cases; in ether, a much smaller ratio. The author does not believe that spinal cocainization will present as small an immediate danger as the general anæsthesia of chloroform—a danger which he regards as prohibitory. When ether is given carefully there is no distressing anxiety as to the outcome, and the author feels that his patient is as safe as he can be.

Experience in Search of a Cure for Asthma in the Far Southwest, with Observations of the Comparative Value of Different Sections in Respiratory Diseases. By Dr. Robert Bell.—A few practical points in sending patients to the far southwest. Be careful to send them in the first stage of their disease. Second-stage and third-stage patients may have life prolonged, but rarely recover. They should spend the early months of their sojourn in resting and living as much as possible in the open air. If a patient is highly nervous, or liable to hæmorrhage, select a place of moderate altitude. It is important that the patient should remain in the West for many months after his cough has ceased, and until he has regained and held his weight.

Chorea during Pregnancy. By Dr. F. S. Sewell.—In regard to the frequency with which chorea complicates pregnancy, the author mentions that a study of the records of the Boston Lying-in Hospital shows that in eleven thousand cases there have been thirteen cases of chorea. Eleven of these cases were in primiparæ, who gave a history of previous attacks during childhood. One of the others was in a multipara in her third pregnancy, and she gave no history of previous attacks, either in childhood, or at the birth of her other children. The last case was in a secundipara, who had chorea in childhood but not in first pregnancy. In ten of the patients the movements entirely disappeared within a week of delivery, and in the other three, the movements were very slight at discharge.

Notes on X-light. By William Rollins.—The author believes that the most important discovery to be made in x-light tubes is to find how to keep the character of the light constant. Meanwhile, the best way to excite an x-light tube is to use surges of millions of volts and many horse power, each surge lasting for not more than a millionth of a second.

A Special Form of Phlegmon of the Neck. By Dr. F. P. Emerson.

Journal of the American Medical Association, April 27, 1901.

Notes on Adrenalin and Adrenalin Chloride. By Dr. E. Fletcher Ingals.—The author's experience bears out his own previous conclusions and those of other au-

thorities on the value of the suprarenal gland in diseases of the throat and nose.

Hypospadias. By Dr. C. H. Mayo.—The author proposes a combined operation for the relief of this condition, with these advantages: (1) A urethral tube of thin elastic skin nearly approaching mucous membrane, yet having no hair surface to occasion later complications; (2) a perineal drain for the bladder, with a self-retaining Jacob's female catheter; (3) a silkworm drain for the urethra; and (4), in being a method capable of application to the worst types of hypospadiac cases.

The Pollution of Streams and the Purification of Public Water Supplies. Comparative Efficiency of Slow Sand and Mechanical Filters. By Dr. George M. Kober.—The author has prepared a table showing the average number of deaths from typhoid fever in several American cities, before and after filtration. From this table it would seem that, while sand filters accomplish a reduction of 78.5 per cent. in the number of deaths from typhoid fever, the establishment and use of mechanical filters have coincided with a reduction of only 26 per cent. in the number of deaths from this cause.

Floating Kidneys in Children. By Dr. I. A. Abt.

Advances in Obstetrics during Last Half Century. By Dr. A. H. Halberstadt.—The author finds that, while medicine and surgery have prodigiously advanced and therapeutics has become almost revolutionized, obstetrics continues in the trend of a former half century. In regard to the use of anæsthetics, the author states that, fortunately, most physicians regard an anæsthetic as directly indicated in unnatural labors, and rarely attempt version or craniotomy without it; but unless some desperate emergency exists, a morbid apprehension of some mythical possibility seems to seize the mind and govern their action, and a humaneness, for which as physicians and surgeons they may be proverbial, deserts them in the very hour when the tenderest sympathy and promptest care should demand the consummation of a possible painless and happy conduct by that boon which, to a parturient, falls but little short of what may well be termed a special therapeutic indication.

When should Patients be Advised to Eat Everything? By Dr. Boardman Reed.—We should not do this until we have thoroughly cured their diseased digestive organs and freed them from the lithæmic condition. Unhygienic habits should be reformed in eating and drinking, as in work and play. Oxygenation must be made to bear its proper ratio to alimentation.

Poisoning from Auto-intoxication. By Dr. T. D. Crothers.—The points the author emphasizes are: 1. Alcohol in any form, taken into the body as a beverage, is not only a poison, but produces other poisons, and associated with other substances may develop toxines. Alcohol is also an anæsthetic and not a tonic or so-called stimulant. It increases the waste products of the body and diminishes the power of elimination. It also destroys the phagocytes of the blood, and thus removes and lessens the protective power of the blood cells. 2. Whenever alcohol is used continuously as a beverage, for its medicinal effects, favorable conditions and soils for the cultivation and growth of poisoned compounds are created. These may be neutralized by other conditions and not be apparent in the derangements of the functional activities which follow. Where disturbance and derangements of the nutrient and functional activities of the body are associated with the use of alcohol, their transient character and disappearance by the removal of spirits suggests the causes. 3. The functional and organic symptoms of derangement appearing in those who use spirits in moderation or excess, which quickly disappear by abstinence and eliminative measures, are clear indications of self-intoxications from this source. Obscure symptoms of the nervous system in persons who use spirits should always be examined in relation to the toxic origin from this source. Also grave nutrient disturbances should suggest the same cause with the same treatment. 4. The treatment of all such cases, in which alcohol is used in any form, should be by antiseptic and eliminative measures, and the supposition should always include the possibility of poison by chemical products formed in the body.

Proposed National Bureau of Materia Medica. By Dr. F. E. Stewart.

Hospital Cars for Railway Service. By Dr. W. L. Estes.

A Rule for Combining Crossed Cylinders. By Dr. Harry S. Pearse.

Philadelphia Medical Journal, April 27, 1901.

Scurvy in Infants. By Dr. Louis Starr.—The author disposes of the question of ætiology by his assertion that the direct cause of scurvy in infants is continued deprivation of fresh food. The different proprietary preparations of infants' foods the author regards as first in potency among the faulty foods. The scorbutic condition is produced gradually after weeks and months of improper feeding. The distinguishing features are, the development in infants from six months to two years old, after the prolonged use of unsuitable food, of extreme hyperæsthesia and immobility of the limbs; swelling of the thigh above the knee-joint and of the leg above the ankle joint; fusiform enlargement of the lower third of the shaft of the femur and tibia; deep purple discoloration, swelling and sponginess of, and hæmorrhage from, the gums surrounding erupted teeth; general cachexia and anæmia; and, finally—the test feature—rapid disappearance of symptoms and complete recovery following the adoption of an antiscorbutic diet, and—the negative symptom—non-involvement of the joints. The essential treatment is the employment of a food composed of cow's milk, cream, water, and milk sugar, properly proportioned to the age of the infant, and given, so far as the cream and milk are concerned, in the natural, fresh state, *i. e.*, not passed through the separator and not sterilized. The juice of fresh ripe fruit, orange juice especially, is a useful addition to the diet. Twenty-six illustrative cases accompany the article.

Notes on Leucæmia, with a Report of Three Cases. By Dr. Charles S. Jewett.—The author believes that, bearing in mind that the characteristic blood changes of leucæmia are qualitative rather than quantitative, it is possible in any well-marked case to determine from the blood examination alone, both the existence of the disease and its variety. In the earlier stages this result may not be obtainable, and certain well-developed cases show, during their progress, as a result of complications or of therapeutic measures, such marked remissions in the leucæmic peculiarities of the blood composition that an examination during one of these remissions would fail to show the true character of the disease. In such cases repeated blood examinations may be necessary in order to clear up the diagnosis. The author believes that many cases of leucæmia in this country are overlooked.

Observations and Tabulated Report of the Results of One Hundred and Fifty Operations for Appendicitis. By Dr. Leon Brinkman.—Operations were performed in the acute cases as follows: 4 within ten hours after onset; 11 after fifteen hours; 11 after twenty-four hours; 4 after thirty-six hours; 5 after forty-eight hours; 13 after three days; 3 after four days; 5 after five days; 1 on the sixth day; 2 on the seventh day; and 1 on the twelfth day. Of the chronic cases, 2 were operated on during an acute exacerbation, and 3 directly after the attack had subsided. The most common complications met with were: Perforation in 33 instances, localized abscesses in 35, abscess in the appendix in 4, and abscesses in the omentum in 1. Ten of the acute cases were followed by hernia and four by fæcal fistula.

Points Connected with the General Ætiology and Pathogenesis of Diabetes Mellitus. By Dr. Heinrich Stern.—The author asserts as a fact that, in the United States, at least, the mortality statistics afford us the most reliable method of obtaining certain general ætiological data of diabetes. In accordance with his belief the author has studied the mortality statistics of New York city, pertaining to diabetes mellitus, for a period of eleven years up to 1891, and in this article are given a few of the data and the conclusions derived therefrom.

Lancet, April 20, 1901.

Carcinomatous Stricture of the Duodenum. By Dr. H. D. Rolleston.—The author reports the case of a man, aged fifty years, who suffered from a carcinomatous stricture of the duodenum. Complaint was made of epigastric pain and vomiting. The vomitus was copious, more fluid being brought up than had been taken by mouth (gastrosuccorrhœa). After such copious vomiting the urine was suppressed. The vomitus contained bile, showing the obstruction to be below the biliary papilla in the duodenum. The urine contained much indol and creatinin. The patient gradually sank, and after developing pyæmia, died of exhaustion. The case presented the features of recurrent attacks of severe vomiting. The abdomen was never distended, so it was assumed that there was obstruction in the small intestine, but as no tumor could be felt at any time the diagnosis was not thought to be sufficiently assured to justify an exploratory operation. That the obstruction was not absolute was shown by the passage of fæces containing bile. At the autopsy there was found a tight stricture of the third part of the duodenum just where the mesentery crosses over it. Microscopically, the growth was a carcinoma with columnar cells. Primary carcinoma of the duodenum is much more localized than sarcoma and usually tends to produce an annular stricture. It is a disease of late middle or advanced life. The first part of the duodenum is rarely affected. The second part of the duodenum is that usually involved, while carcinoma of the third part is the least frequent of all the three varieties.

Autopsychorrhythmia or Repetition Psychoneurosis. By Dr. C. H. Hughes.—Psychorrhythmia is a tendency of the mind, more or less resistless, to repeat continually and nonvolitionally its once volitional actions even at inopportune time and place. It is a habit volitionally induced which has passed into a morbid automatic impulse associated with brain overstrain or excitation. The form of insanity to which autopsychorrhythmia tends is that in which imperative conceptions predominate or have predominated in the initial stage of the mental disease. In aggravated form it is an imperative, resistless impulse to repetition of psychical impression in the form of verbal expression. There may also be a tendency to imitative acts. The pathological lesion is evidently in the mind area of the brain cortex. It is a psychical and not purely psychomotor involvement, a psychical lesion shown in peculiarity of psychomotor expression.

Correspondence between Cholera and the Prevalence of Comma Bacteria in Well Waters of Gujarat during the Famine of 1900. By G. Lamb, M. B.—The author has investigated this subject, his results being as follows: Thirty-three well waters in fourteen different localities were examined. In eight of these localities comma-curved bacteria were found, while in the other six they were absent. In seven of the first-named eight localities, cases of cholera were still occurring daily. On the other hand, in all the six localities where no comma-curved bacteria were detected, there were no cases of cholera occurring at the time when the water samples were examined. The practical advantages to be derived from examinations of the water of any given locality are: 1. In a place vacated on account of cholera, the examination of the water may help to determine the date when it becomes safe to return to the place. 2. In a place where there are only a few sporadic cases of cholera a similar examination may give warning if a serious outbreak or recrudescence is threatening. 3. In a locality where cholera is epidemic the bacteriological examination of the water-supply may reveal those sources which are dangerous.

When to Operate in Perforative Peritonitis. By A. C. Roper, F. R. C. S.—In this article the author reviews the causes and symptoms of perforative peritonitis, and the indications for operation. These last are: (1) The condition of the patient—the pulse, the temperature, and the aspect; (2) the condition of the abdomen; and (3) the presence or absence of a swelling. A condition of profound shock often obtains at the beginning of these cases, during which any operative interference should be avoided. The patient has a better chance for recovery if first rallied with strychnine, brandy, and opium. Such a condition of shock should be the only cause of delay in operating upon a case of perforated gastric ulcer. Opiates should be given to relieve the agonizing pain at the beginning of an attack, but if persisted with, usually obscure the diagnosis and increase the distention. Opium is better than morphine as it is less of a bowel paralyzer.

Recurring Attacks of Catalepsy Alternating with Violent Mental Excitement. By Dr. W. G. Stone.

On the Causation and Treatment of Profuse Epistaxis in People beyond Middle Age. By Dr. G. Coates.—The author reports an interesting series of five cases of profuse epistaxis not caused by a blow or injury, but coming on without any apparent cause in adults aged fifty years and upward. The attacks were sudden in their onset, and profuse, generally lasting from half an hour to an hour or more, and tending to recur for several days. In all, the sequence of events which led up to the epistaxis was essentially the same, namely: (*a*) Long-continued arterial pressure; (*b*) some sudden cardiac failure; (*c*) over-filling of the whole venous system, the weakened heart not being able sufficiently to empty the engorged veins against the high pressure in the arterial system due to contracted arterioles; (*d*) leakage from an over-filled vein. The most scientific treatment is, of course, to empty the over-filled veins; this can be done by relaxing the contracted arterioles and capillaries, for which nitroglycerin is quite effective. When the arteri-

oles are dilated and pervious, then comes the time to administer strychnine or strophanthus. In spite of everything, plugging may have to be resorted to in some cases. It should always be remembered that such profuse epistaxis as is here described is often a symptom of commencing valvular disease.

A Case of Recovery after Operation for Diffuse Peritonitis from Perforation of the Appendix. By C. A. Morton, F. R. C. S.—The author reports the case of a man, aged forty-four years, suffering from diffuse peritonitis, showing how dangerous a recurrent case of appendicular inflammation may be, and that severe peritoneal infection may be present with a pulse hardly raised above normal, a very slight rise of temperature, and a complete absence of vomiting and of those signs of general prostration which are so frequently associated with septic peritonitis.

The Open-air Treatment of Phthisis at Home. A Short History of a Case. By F. W. Bartlett, M. R. C. S. —The author reports the case of a woman, aged thirty-eight years, suffering from pulmonary tuberculosis. At the time that treatment began she had been ill for three or four years; there was well-marked consolidation and cavity formation at the apex of the left lung, and there was an evening rise of temperature. There were also signs of beginning disease of the right lung. The open-air treatment at home was decided upon, and a shepherd's van was placed in the garden of the patient's house. The side of the van facing south was removed, shutters for stormy weather were attached, and a small stove and flue placed in one corner. Treatment was commenced in winter (February) and the patient spent the whole of the time between breakfast and sunset in the van, either on a couch or in a chair, with the exception of half an hour for dinner in the middle of the day. When the weather was favorable, she took short walks. During the first three months one minim of creosote was taken three times a day, and occasionally an anodyne cough mixture was administered. Her condition began to improve within a week of her taking up this outdoor life. In the first seven weeks she gained seven pounds. Twelve months later the patient was plump and well-conditioned; cough and expectoration had almost disappeared; the physical signs of disease over the left lung had greatly abated, and the signs of commencing disease at the right apex disappeared, as had the tubercle bacilli from the sputum.

British Medical Journal, April 20, 1901.

Medical Notes from the Imperial Yeomanry Hospital at Pretoria. By Dr. J. W. Washbourn.

Reminiscences of the Welsh Hospital in South Africa (Springfontein and Pretoria). By J. L. Thomas, F. R. C. S.

No. 6 General Hospital, Johannesburg. By Dr. A. Watson.

Clinical Notes on the Wounded in South Africa. By J. W. Smith, M. B.

The Princess Christian Hospital in South Africa. By G. V. Worthington, M. B.

Veld Sores. By Dr. A. Ogston.—The "veld sore" appears to be a disease peculiar to South Africa. It resembles epidermic vesication, but is not a vesicle. The epidermis is elevated into a semi-translucent swelling, often with ill-defined margins averaging about one-quarter of an inch in breadth. These margins are vesicular only in appearance and do not exude serum when punctured. A small spot in the centre, however, soon forms a blister filled with clear fluid, which at once bursts, and bursts so soon that it is rarely seen entire. Where it gives way an ulcer is seen involving the true skin and increasing in extent as the margins go on spreading peripherally. Around the outermost margins is a halo of diffuse erythematous redness, never very intense and seldom causing inflammation of the lymphatic vessels and glands. The sores occur mostly on the hands and forearms, but also on the feet and legs. Their usual size is that of a shilling or less; they are often multiple. Suppuration is not a characteristic of the veld sore. The vesicular-looking margins yield no pus, and the open centre of the ulcer very little. Crusts from the serous discharge tend to form on the latter. A breach of the epidermis seems to be necessary for the origin of the disease. The fluid from the periphery contains enormous numbers of an organism, a micrococcus resembling the gonococcus in appearance; it is, of course, not one of the pyogenic organisms. No conveniences for cultural study of this *Micrococcus campaneus,* as the author calls it, were obtainable. He thinks it the cause of the disease, and that it is probably an inhabitant of the vegetation and soil of the veld. The cases were treated by clipping away the whole of the epidermis involved, and applying an antiseptic (carbolic) dressing.

Some Observations on Veld Sore. By W. H. Harland, M. R. C. S.—The author's description of the veld sore corresponds, in the main, to that given by Ogston in the preceding article. He states, however, that a certain amount of lymphangeiitis and enlargement of the epitrochlear and axillary glands almost invariably accompanies the sore. Constitutional symptoms, as elevation of temperature, headache, and constipation, are often present. The treatment is simple; incisions are made in the papule or pustule, if necessary, and in most cases the frequent application of boric or carbolic fomentations, with rest of the affected limb, together with the administration of a mild aperient, usually causes the sore to lose its painful character, gives it a healthy appearance, and removes the attendant adenolymphangeiitis and constitutional symptoms. A feature of the lesion is the scarring which ensues, the scar remaining smooth and bluish for a considerable time after healing. No microscopical or bacteriological examinations of the fluid from the sores were made.

Report on 295 Cases of Enteric Fever, General Hospital, Tin Town, Ladysmith. By Dr. D. Melville.—*The Rose Rash.* In about 40 per cent. of cases no rash was found, and in about 20 per cent. the rose spots were found thickly scattered over the trunk and the extremities, while in the remaining 40 per cent. the usual distribution was followed. The cases in which the thick rash was found all seemed to come from one locality. The presence, absence, or excess of the eruption seemed to have no bearing on the severity of the attack.

Diarrhœa. Only 5 cases had any diarrhœa, and, in these, lead and opium pills acted like a charm. Constipation was constant and hard to deal with.

Cerebral Symptoms. As a rule the delirium was of the rambling or muttering type, giving rise to no anxiety. In 2 cases there was violent mania, one case ending fatally.

General Symptoms. These were all of the usual character associated with enteric fever.

Inoculation. Of the 295 cases, 30 were inoculated, the remaining 265 being unprotected. The uninoculated

cases compare very favorably with the inoculated. The complications were more numerous, the duration of the fever longer, and the death rate higher in the inoculated. The death rate of the inoculated was 6.67 per cent.; of the uninoculated 1.89 per cent., giving a total mortality of 2.38 per cent.

Hæmorrhage. This occurred in 17 cases (5.77 per cent.), 16 being in uninoculated cases. In several cases the loss of blood was severe.

Peritonitis. Perforation, which occurred in 3 cases, all of which terminated fatally, was the cause of death in 43 per cent. of fatal cases. In each case it was due to errors of diet.

Pneumonia. This complication became very common in the month of June. There were 11 cases in all, one of which ended fatally.

Thrombosis. This occurred in 5 cases, or 7.4 per cent. of complications. Embolism did not result in any instance.

Relapse. Relapse occurred in 23 cases. In no instance was there a second relapse, and all the patients made satisfactory recoveries.

Malarial Type. There were 5 of these cases, all of which quickly subsided on the administration of quinine.

"Typhoid Toes." There was 1 instance of this curious condition; the history of the case is given in full.

The low death rate in these cases is attributed to the use of carbolic acid internally and to sponging, together with excellent nursing.

Enteric Fever in South Africa: Effective Sterilization of Excreta. By Major H. A. Cummins, R. A. M. C. —The author reports the results of some bacteriological tests of the efficiency of disinfecting typhoid excreta, etc., by boiling in a large cauldron with crude carbolic acid. The experiments show that many bacteria survive for half a minute, while after one minute only one species remained. At two minutes all forms of life had become extinct.

Venesection in the Treatment of Gunshot Wounds of the Chest. By Captain F. J. W. Porter, R. A. M. C. —The author reports the case of a man, shot through the right chest, on whom he performed venesection, drawing off about ten ounces of dark blood from the median basilic vein; the patient's condition immediately improved and he made an uninterrupted recovery. The author thinks the patient would have died but for the venesection. His heart was unable to drive the blood through the undamaged lung, and was relieved by the reduction of the volume of blood in circulation.

Presse médicale, April 6, 1901.

Tuberculosis of the Kidney. By M. A. Brault.

Blastomycetes in Human Pathology.—M. F. Curtis takes issue with M. Wlaeff as to the possibility of producing epithelial tumors, in the histological sense, by means of the *Saccharomyces tumefaciens.* He has never found this blastomyces in a non-ulcerating cancer. He maintains that it is impossible to produce an anticancerous therapeutic serum when the ætiologic factors are unknown.

Anomalous Forms of Paludism.—M. A. Billet says paludism is a protean disease. It shows normally, in the absence of an epidemic, the intermittent type of fever (quotidian, tertian, or quartan), but in times of epidemics, it most often appears as an irregular fever, remittent or continuous, with unusual symptoms, and it speedily brings about paludic cachexia. The hæmatological examination is then the only certain guide to a correct diagnosis. The triple hæmatological characteristics of malaria are: (1) The constant presence of the hæmatozoön of Laveran; (2) the appearance of dark pigment, especially localized in the large uninuclear leucocytes; (3) a more or less pronounced uninucleosis in the leucocytes.

April 10, 1901.

Variable Physical Signs in Mitral Stenosis.—M. Ernest Barié says that the physical signs of mitral stenosis vary with the nature and extent of the anatomical lesions and with the stage of the disease. He analyzes the sounds of the heart in this chart:

Physical Signs.	*First Degree of Mitral Stenosis.*	*Second Degree of Mitral Stenosis.*	*Third Degree of Mitral Stenosis.*
Snapping at opening of mitral valve	None.	Very frequent.	None.
Diastolic thrill.	Deep tone. Harsh timbre.	High pitch. Higher timbre.	None.
First sound.	Striking.	Hard.	None.
Second sound.	Reduplication at aortic recession.	Accentuation of second pulmonic sound.	Reduplication at pulmonary recession.

Progrès médical, April 13, 1901.

Organic Sera in Therapeutics.—M. Edmond Vidal reviews the work done with organic sera developed in laboratories, inoculated into animals, and then tried upon human beings. He says that, with the exception of diphtheria antitoxine, no serum has yet shown results which would permit an extension of their use upon man. The so-called antitoxic sera act upon neither the germ nor upon the toxine developed by it, but upon the cells of the organism which carry on the fight against the bacterial enemy. The sera of immunized animals have therefore not a specific action, but a tonic influence which is exerted generally throughout the body. The therapeutic value of these sera has therefore not yet been definitely determined.

Gazette hebdomadaire de médecine et de chirurgie, April 7 and 11, 1901.

Treatment of Fractures of the Leg. By M. Dujarier.—A clinical lecture.

Local and Circulatory Leucocytic Reaction in a Case of Grave Icterus.—M. Paul Caziot says that in a case of grave icterus, with acute hypertrophy of the liver, he found the hyperleucocytosis, both locally and in the circulation, quantitatively equal. Qualitatively, after the sixth day, a circulating uninucleosis might be demonstrated, while at the moment of death this had changed to a marked multinucleosis.

Wiener klinische Rundschau, April 14, 1901.

Some Phenomena of Hereditary Syphilis.—Professor J. Neumann says that, in his experience, children born of luetic parents, who did not show at birth or within the usual time, evidences of syphilis, have remained free from all evidences of the disease later. He regards it as unproved that grandchildren can show luetic disease from grandparents, as the chances of acquired syphilis in these cases can never be excluded; further, these cases have never presented in adult age those forms of syphilitic disease which are recognized as hereditary.

Hæmorrhage after Tonsillar Operations.—Professor Seifert reports two cases in which the bleeding was completely and promptly checked by tamponing the cavities. Properly carried out, he regards this as the safest method

of treatment, so that operative methods, such as circular suturing of the tonsils or ligature of the external carotid, are not necessary.

Acute Cocaine Intoxication. By Dr. Ernst Barth.

Centralblatt für Gynäkologie, April 6, 1901.

Four Cæsarean Sections with Horizontal Incision of the Fundus.—Dr. L. Heidenhain reports these cases. The horizontal incision of the fundus allowed of easy extraction of the child, and uterine contraction was excellent. The suturing was done with thin silk.

Treatment of Retroflexions.—Dr. A. Schücking describes his method of performing vaginal fixation. He scarifies the angle of anteflexion—artificially produced—passes a ligature through the broad ligament of one side close to the insertion of the round ligament, behind the uterus, and out through the other broad ligament. The ligature is left in place for ten days.

Centralblatt für innere Medicin, April 6, 1901.

Guaiacol Treatment of Acute Gonorrhœal Epididymitis.—Dr. Berthold Goldberg has been much impressed with the analgetic effects of guaiacol in the treatment of this condition. He prepares an ointment as follows:

℞ Guaiacol. . . . . 5 parts;
Lanolin, } of each. . . . . 10 "
Resorbin, }

After a sitz-bath, the salve is applied to the painful parts, which are then covered over with linen, then with absorbent cotton and rubber tissue. A suspensory is worn over this dressing. The patient is instructed to take from forty-five to sixty grains of salol a day. The general condition, the pain and the swelling markedly improve in a short time. No pulmonary or cardiac impairment has been noted.

April 13, 1901.

Demonstration of Mercury in the Urine.—Dr. Bruno Bardach reports a delicate and accurate test, too complicated to be here described.

Centralblatt für Chirurgie, April 6 and 13, 1901.

Treatment of Irreducible Maxillary Dislocations. By Dr. Kramer.

Absorbable Intestinal Button of Magnesia.—Dr. V. Chlumsky reports the invention of a button of magnesia which he has found to be absorbed in from eight to ten days. It is easily and quickly applied.

Wiener klinische Wochenschrift, April 4, 1901.

Ætiologic-bacteriologic Diagnosis. — Professor E. Neusser speaks of the great importance of bacteriological diagnosis, its influence upon prognosis, and the scientific dignity it lends to internal medicine by its aid.

Botryomycosis in Man.—Dr. R. v. Baracz has found, in a case of botryomycosis of the finger, not only the *Botryomyces,* but also the *Streptococcus* and the *Staphylococcus albus* and *flavus.* He therefore differs with Poncet and Dor, who assert that the disease is caused only by the fungus *Botryomyces.* The author thinks the condition should be named polypoid fibroma myxomatodes.

Intestinal Hæmorrhage after Reposition of Incarcerated Hernia. By Dr. Josef Preindlsberger.

Wiener medicinische Blätter, April 4, 1901.

Treatment of Pernicious Anæmia (*conclusion*).—Dr. Alfred Stengel says that the mere administration of arsenic and bone-marrow are not sufficient in these cases. Massage must be employed to stimulate the circulation. Horizontal rest in bed, which makes least demands upon the heart, is also to be encouraged. Rectal infusions of salt water are recommended to stimulate peristalsis and to improve the circulation, and it may be advisable in some cases to administer the salt water subcutaneously or intravenously. The cause of the disease must be attacked when possible.

Drug Treatment of Nervousness. By Dr. H. Siegel.

Münchener medicinische Wochenschrift, April 2, 1901.

Version and Immediate Extraction in Contracted Pelves.—Dr. Walter Albert reviews the results achieved in sixty cases, unselected, occurring in the Dresden clinic in which, in cases of contracted pelvis, version followed by immediate extraction was performed. The mothers ran an uneventful course in 93.3 per cent. of the cases, and 81.3 per cent. of the children were dismissed living. The results are far better than when version is performed and a waiting policy is pursued, or when high-forceps operation is done.

Biological Proof of the Presence of Human Blood. By Dr. A. Dieudonné.

Localized Stasis in Cardiac Disease.—Dr. O. Rosenbach has found experimentally that iodine and its salts are rapidly absorbed, and in large quantities, by transudations, while quite the reverse is true of exudates. He regards this as a valuable "functional diagnostic" measure in distinguishing between the two.

Diseases of Chromic-acid Workers. By Dr. F. Hermanni.

Multiple Fat Necrosis. By Dr. Paul Ostermaier.—A clinical article.

Aneurysm of the Ascending Aorta Treated by Gelatin-injection.—Dr. Karl Barth reports such a case in which the dyspnœic symptoms, the vertigo, and the pain in the chest, back, and arm, became markedly diminished, and the tumor in the right infraclavicular region became much smaller and harder. The difference in the radial pulses also became less marked. He thinks the method has many decided objections.

Riforma medica, March 8, 1901.

Urea and Metabolism in Children. By Dr. Albano Bonfa.—The amount of urea per kilogramme eliminated by children diminishes with age, but always remains larger than the corresponding amount in adults. The total daily elimination of urea remains practically constant from the second to the tenth year, and varies between 8.5 and 10.5 grammes; while, in the adult, it is 21.5 grammes. The average percentage of urea in the urine is lower in children. The proportionate amount of urine is greatest in the first years of life, and always exceeds more than twice the proportional amount in adults. The activity of nitrogenous metabolism in children, as expressed in figures denoting the quantity of urea per kilogramme of body-weight, varies inversely as the weight of the child. The weight of a child varies as the amount of nitrogen consumed in metabolism. In children affected with gastro-enteritis the amount of nitrogen consumed is lower than in normal children. In fever there is an

increase in the nitrogenous metabolism and the amount of urea is increased.

March 9 and 10, 1901.

A Case of Multiple Myeloma (Kahler's Disease?). By Dr. T. Venturi.—Bozzolo gave the name Kahler's disease to a condition in which multiple myelosarcomata in the bones were associated with an abundant amount of albumoses in the urine. Kahler first described a case of this kind in the *Prager medicinische Wochenschrift,* in 1889. The author reports a case of the same kind in a man aged thirty-one years. The sarcomata invaded the spinal cord, and the patient died within three months. The autopsy showed multiple myelogenous sarcomata in the bones of the trunk and cranium, as well as secondary deposits in the cord and in the lungs.

Gazzetta degli ospedali e delle cliniche, February 10, 1901.

On Acute Rheumatic Polyarthritis. By Dr. E. Maragliano.—The author presents the histories of three patients with acute rheumatic polyarthritis and concludes that the joint affections in these instances were due to the invasion of the common germs of suppuration. He discusses the proposition of Singer, of Vienna, who, in 1898, formulated this statement of the ætiology of polyarthritis: "Acute rheumatic polyarthritis is a special variety of pyogenic infection." The author admits that there is a form of polyarthritis caused by pyogenic germs, but this affection has a clinical picture peculiar to itself. Researches conducted in the author's clinic by Dagnino, an American, showed the presence of a special type of staphylococci in the exudates and in the blood of patients with arthritis. Injected into animals, pure cultures of this germ caused arthritis, pericarditis, and endocarditis.

On Flaiani's Disease. By Dr. Cesare Regolo Rabaioli.—Flaiani, a Roman physician, described exophthalmic goître in 1800. The author says that this affection deservedly is known by the name of the Italian observer. (Flaiani's name is very rarely associated with exophthalmic goître, the names of Graves and Basedow, as a rule, being used in its designation.) The author reports a case of this disease in which he used iodides and electricity with fair results. He condemns the use of thyreoid gland extract, which has been given on the theory of hypothyreoidization, and studies the toxicity of the urine in these patients by a series of experiments on animals.

A Contribution to the Study of the Pathogenesis of Delirium in Infectious Diseases. By Dr. Ugo Arturo Betti.

A Method of Treatment for Cases of Acute Rheumatic Polyarthritis. By Dr. Francesco Zagato.—In a case of articular rheumatism with effusion in the knee-joint, the author aspirated the fluid under antiseptic precautions, removing about sixty cubic centimetres, and injected a two-and-one-half-per-cent. carbolic-acid solution into the articular cavity. The fluid did not return, and the recovery was very rapid.

Electrotherapy in Exophthalmic Goître. By Dr. Angelo Lamari.—Galvanization of the vagus and the sympathetic was employed, the anode being placed upon the inner margin of the sternocleidomastoid muscle, the cathode on the sternum. Two or three milliampères were used for from four to eight minutes twice daily. After the fifth sitting a mild faradaization of the thyreoid gland was added. The patient had forty applications of electricity. After thirty sittings the symptoms of exophthalmic goître were very markedly improved, and they disappeared completely at the end of the treatment.

Vratch, March 3 (March 15, New Style), 1901.

Five Hundred Operations on Cataracts. By Dr. S. N. Korginevsky.—The author's results were as follows: In 348 cases, good vision; in 61 cases, fair visual capacity; in 17 cases, weak vision; in 25 cases, no vision. In 22 cases the acuteness of vision had not been noted.

A Case of Recurring Extra-uterine Pregnancy. By Dr. D. D. Sandberg-Debele.—Recurring extra-uterine pregnancy is very rare, and Kuester found only two cases in which a second extra-uterine pregnancy was observed among 107 cases of this form of gestation. The author observed a case in which there were two successive extra-uterine pregnancies, both with rupture, in a woman aged thirty-four years. This was the only case of its kind among 134 cases of extra-uterine pregnancy collected during a period of ten years. Kuester stated that laparotomy and the removal of the ruptured tube were preventives against a recurrence of the extra-uterine pregnancy. This is not always the case, as the author shows, for an extra-uterine pregnancy almost never recurs on the same side. Some French authors have suggested the removal of the appendages on both sides on this account, but this proposition has not met with favor.

A Case of Diabetes Mellitus in a Nursling. By Dr. N. A. Orloff.—The author states that this case is the seventh on record in which sugar was found in the urine of a nursing baby. Of these seven cases the present is nearest to genuine diabetes mellitus. It is difficult to decide whether, in the other cases of glycosuria in infants, there was really diabetes mellitus or only an abnormally large quantity of lactose excreted by the kidney. The infant whose case the author reports was four months old. His urine showed distinctly the presence of sugar. In addition, he had an umbilical hernia, and a crop of furuncles. He lost rapidly in weight and nursed poorly. The child died on the twelfth day of the disease. The autopsy showed an enlarged third ventricle filled with serous fluid, bronchopneumonia, acute enteritis, and œdema of the meninges.

A Case of Diabetes in a Boy Aged Three and a Half Years. By Dr. V. I. Noskoff.

Poisoning by Cream Tarts in Kharkoff (*continued*). By Dr. P. N. Laschenkoff.—The author gives the results of an examination of certain cream tarts which had been bought at a bakery in Kharkoff and had caused poisonous symptoms in a number of people. A bacteriologic examination of the layer of cream covering these tarts revealed the presence of *Staphylococcus pyogenes aureus.* Examinations of the same form of tarts prepared in the same bakery at another time, showed that there were no staphylococci in the cream. The author's conclusion is that the cause of the poisoning by these cream tarts was the presence of germs of suppuration which developed toxines in the intestinal tract and thus gave rise to enteric disturbances. (*To be continued.*)

New Inventions, etc.

AN IMPROVED FORM OF APPARATUS FOR THE IRRIGATION TREATMENT OF GONORRHŒA.

By HENRY P. HAMMOND, A. M., M. D.,
SLINGERLAND, N. Y.

This apparatus is the result of an attempt to devise a more simple and cleanly irrigator, and one more handy and reliable in manipulation, than those in common use.

Apparatus for the Irrigation Treatment of Gonorrhœa.

Attention is especially directed to the shield and cut-. The form devised consists of a four-inch metal ield at the end of a tube five inches long and one-half inch in diameter. A stiff spring, four inches long, nt to fit the hand, is fastened at one end to a lug at-hed to the tube near the shield. Near the other end carries a loop of stiff wire, which encircles the tube. e tube at this point has a transverse slit, one-eighth of an inch wide, cut half way through. A curve in the bottom of the loop fits the curve of the inside of the tube. Rubber tubing from the reservoir passes under this loop, which compresses it, thus shutting off the flow. The tubing carries the usual glass tip. The instrument fits naturally to the hand and responds instantly to pressure on the spring, thus giving perfect control of the flow.

The irrigating basin is triangular, one corner being rounded to fit the curve of the legs when the knees are spread. This corner is about nine inches high and has a hole three inches from the top, to admit the penis. At the other two corners the basin is four inches deep. The rounded corner thus acts as a shield to protect the patient from any spattering, the fluid being caught in the basin below. It is very easily cleaned and is much more convenient than rubber aprons or towels.

A percolator is used as a reservoir, and is supported by an incomplete metal band that has a lug opposite its opening, into which is firmly fastened at right angles a brass tube eighteen inches long. This slips over a rod four feet long, fastened two inches from a wall by two brackets at its ends. The rod has a longitudinal slit behind, in which a pin in the tube runs, preventing its turning on the rod. The percolator being filled and placed in the ring while the tube is at the bottom of the rod, the tube is grasped by its lower end and the whole slid up the tube, where it is held by a catch in the rod resembling an umbrella catch. The reservoir may thus be raised the length of the tube above one's reach.

This apparatus does not differ in its use from those commonly employed, and no description, therefore, need be given.

AN INSTRUMENT TO ENTER DEEP-SEATED PUS CAVITIES.

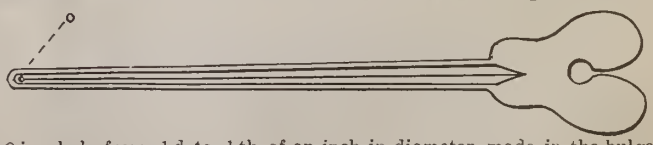
By FREDERIC GRIFFITH, M. D.,
NEW YORK,
SURGEON BELLEVUE DISPENSARY.

In the technique of operations for opening collections of pus in the lungs, the liver, or the kidneys, there is a point at which surgeons hesitate. It is the common practice to locate deep-seated fluid collections with a hollow needle and syringe connected by small rubber tubing containing a glass joint, that the operator may know at once when he has reached fluid.

To enable the surgeon to open the cavity without fear of losing the lead of the needle, I have devised a grooved director with an eyed tip.

The instrument is used by passing the point of the exploring needle through the eye *(O)*.

When the fluid cavity is found, with the needle as a guide, the director can be at once entered. Withdrawing the needle, the opening may be readily enlarged by passing a knife-



O is a hole from $\frac{1}{32}$d to $\frac{1}{16}$th of an inch in diameter, made in the bulge of the tip.

point, scissors, or forceps, along the groove of the instrument. A probe may be also used as a guide for the instrument.

805 Madison Avenue.

Proceedings of Societies.

NEW YORK OBSTETRICAL SOCIETY.

Meeting of March 12, 1901.

The President, Dr. H. J. BOLDT, in the Chair.

Sarcoma of the Ovary.—Dr. BACHE McE. EMMET presented a specimen. The tumor had been removed two weeks before from a multipara, forty-nine years old. A brother of hers had had cancer in the abdomen, and a sister had had a tumor of the lower abdomen. Within the last three or four years the mass had grown until it was of the size of a football. It was attached by its own ligament, and had a few thread-like adhesions. There was no derangement of the general health, and the woman had not suffered. The tumor proved to be of the round-celled variety. As the growth was essentially local, and the attachment so small, the speaker felt like encouraging the patient to feel no apprehension. He was aware, however, of the fact that there might be a return of the malignancy in a few years.

Dr. BRETTAUER remarked that he had seen a case several years before in which he found and removed a tumor of about half the size of the one presented, of the same variety. At the time of operation the patient complained of a hacking cough, and a diagnosis was made of metastasis. The patient recovered from the operation, but died three months later, apparently from the pressure of a large metastatic growth within the chest.

Dr. VINEBERG could recall two cases of spindle-celled sarcoma in which he had operated—one two, the other three, years before. Both patients were now in good health. Last summer he had operated upon a patient, and the tumor had proved to be a round-celled sarcoma. It was now more than nine months since the operation, and as yet there had been no recurrence.

The CHAIRMAN said that one of the patients whose cases he had reported had died shortly after the operation, and that the second had a recurrence in the abdominal wall which he had operated upon a year later.

Dr. WALDO said that the last patient referred to by the chairman was alive and well two years after, without recurrence. He had operated in a case several years before, and during the past year he had opened the patient's abdomen again, but had found the growth too extensive to remove.

Ectopic Gestation.—Dr. GRANDIN presented a specimen removed from a patient twenty-three years old, who had had two children, the latter two years before. She menstruated every four weeks, the flow lasting from seven to ten days. She menstruated last on February 15th, the flow lasting twelve days. On March 1st she again began to flow and continued to do so. There were no colicky pains or any data to suggest pregnancy. There was a mass behind and to the left of the uterus. Under ether anæsthesia the uterus was curetted. There was no enlargement. A posterior vaginal section gave exit to blood and clots. An abdominal section was done for the removal of the ruptured left tube. There was almost a quart of clots and blood in the peritoneal cavity.

Carcinoma of the Intestine.—Dr. WELLS presented a specimen. The history was as follows: A woman, thirty-nine years old, noticed a small swelling in her abdomen a year before, since which time it had increased in size, and the patient had had progressive emaciation and loss of strength. For a week previous to February 14th she had suffered from continuous vomiting. There was at this time a slightly nodular movable tumor of the size of a large orange occupying the lower right quadrant of the abdomen. An operation was considered to be advisable on account of the persistent vomiting, and on the 16th the abdomen was opened and the tumor, a carcinoma at the cæcum, near the ileocæcal valve, was removed, together with nine inches of large and small intestine, glands, and mesentery. After the operation there was no vomiting, whereas before the operation the patient had vomited everything that was introduced into the stomach. When the patient was taken off the operating-table the pulse was 120; the next day it dropped to 94, since which time it had been normal. When the patient entered the hospital her temperature was 100° F.; on the second day after the operation it was 101.8° F.; then it fell to 99° F. and was normal, and remained so, after the fifth day. The after-treatment had been by hot normal saline solution, a pint being given by the rectum every four hours, and a fortieth of a grain of strychnine hypodermically every four hours. As there was no vomiting, or nausea, or distention, she was allowed after the first day one or two ounces of beef juice every two or three hours. On the 18th she expelled gas and a little fæcal matter. On the morning of the 19th she had a motion of over a quart of fæcal matter and, later in the day, one of twenty ounces more. Since that time there had been daily movements of the bowels.

The resection of the cæcum and small intestine was done with the aid of O'Hara's forceps, so easily and so quickly and with after-results so pleasing, that the speaker wished to present the forceps to the attention of the society. There were two straight forceps, made light but strong; one was placed vertically on the intestine at a point where it was intended to make the section, the tips being carried exactly down to the mesenteric border; a second instrument was placed in the same manner at the second point of section; the gut was then divided close to either forceps and removed. The two instruments were brought together and held by a small clamp. This held the intestinal ends in apposition so that the suturing could be done accurately, easily, and quickly. Little handling of the gut was necessary, and there need be no contamination of the peritoneal surface by the intestinal contents. The method employed with these forceps represented a distinct advance in the technique of resection of the intestine. The speaker had used the Murphy button and had operated by other methods, but considered this to be, if not the quickest, the safest and simplest.

Dr. EMMET said that he had had a case similar to that reported almost a year before. He removed the carcinomatous mass and did an anastomosis by the Maunsell method, which he then described.

The Prevention of Postoperative Adhesions of the Peritonæum.—Dr. GEORGE G. WARD, JR., in a paper thus entitled, remarked that one who came into contact with patients after they had been subjected to peritoneal operations must surely be impressed with the fact that we had still much to learn before we could invade the peritoneal cavity without leaving that delicate membrane in a crippled condition in a large percentage of cases, as was shown by continued pain, constipation, and in some cases such bands of adhesion that a subsequent operation was necessary. He called attention to the fact that more was required for the welfare of the patient than simply to be able to open the abdomen, remove an organ or growth, and suture the wound without loss of life from hæmorrhage or sepsis.

It was known that adhesions were frequently found even in simple, uncomplicated cases. Thomson, after careful experiments, had found that omental and intestinal adhesions followed perfectly aseptic cœliotomies, and that parietal adhesions occurred when the abdominal wound healed by first intention. The evil results of the formation of adhesions varied from slight symptoms of no importance to the most fatal of postoperative sequelæ, intestinal obstruction. The danger of this last complication alone would render the prevention of the formation of adhesions of the utmost importance, especially as the condition was not a rare one, as all abdominal surgeons would testify. The proportion of deaths from this cause was between one and two per cent. One was apt to infer that the danger of intestinal obstruction was imminent only during the period of convalescence immediately following the operation, but, unfortunately, there were many cases on record in which the band had caused obstruction months or even years afterward. Then, again, there were cases of obstruction in which the diagnosis of "peritonitis" or "intractable vomiting" was made.

It was a well-observed fact that obstruction rarely occurred except where the loop of intestines had become fixed by adhesions in an abnormal position, the normal relations of the coils having been disturbed by the operation's interference. When obstruction under these circumstances did not occur, severe pain might result, requiring a second laparotomy for its relief.

The amount of pain from an adhesion might be out of all proportion to its size and strength, and frequently patients were treated for disturbances of various organs, the true cause being peritoneal adhesion. Chronic constipation was another annoying sequel, and in a form which admitted of no relief by correction of habits, as the mobility of the bowels was prevented by adhesions. The ætiology of the condition must first be considered, in order that treatment looking toward prevention might be studied. Adhesions between serous surfaces took place by the exudation of plastic lymph which acted as a cement substance, and the production of it had been excited by some disturbance of the normal condition of the membranes.

Adhesions between two raw surfaces, or between a raw surface and a serous surface, were brought about by the natural process of the repair of tissue, there being a cell proliferation from the endothelial and the connective-tissue cells, with the formation of a network of new blood-vessels arising from each of the coaptated granulating surfaces. These adhesions formed rapidly in the case of peritoneal surfaces, quite firm bands being formed in from six to twelve hours. As far back as in 1840 Gross had found that in dogs the intestines could become extremely adherent in a few hours.

Some investigators maintained that adhesions were produced by infection in all cases, while other observers asserted that adhesions could come about without infection, at least experimentally. From a series of experiments Walthard had concluded that long-continued contact with air so damaged the serosa that the superficial layer of cells died, and that, if two serous surfaces subjected to this exposure were in contact for a long time, adhesions formed between them, and, if they were not in contact for a long time, there occurred only a spongy exudation.

As to the way in which the air acted, Walthard's conclusion seemed justifiable, that the damaging influence of the air did not depend only upon its carrying infection and dust, but also upon the fact that air in a state of dryness caused necrosis of the superficial layer of serous cells by cooling, with resultant contraction of the blood-vessels and diminished nutrition. The same author believed that after long contact with air the resisting power of the peritonæum was so diminished that the number of microscopic organisms necessary to bring about a fatal peritonitis was greatly reduced.

Walthard's deductions were, so far as possible, proved clinically in a series of one hundred and forty-six laparotomies for various causes. The serosa at the site of operation was kept moist with gauze wet in hot saline solution. No wiping or drying out of the cavity was allowed, and in no case was there sepsis or pseudo-ileus. Flatulence disappeared on the first or second day, while, when dry asepsis was used, flatulence lasted until the fourth or fifth day. The practical inference from his observations would be that dry asepsis and a dry toilet of the abdominal cavity should be abandoned, and that moist asepsis and, so far as possible, protection of the peritonæum from air contact should be practised.

Causes of adhesion might, then, be divided into two classes, namely, that of sepsis and that of traumatism. Sepsis might be virulent or mild. In the first instance, there was the adhesion formed as a result of general peritonitis with lymph and fibrous exudation. If mild, it might be in circumscribed areas, only sufficient to produce a localized inflammation with a plastic exudate. Likewise in traumatism, there might be severe and mild types. In the former the peritonæum had been stripped off or destroyed, while in the latter the superficial layer of cells only had been destroyed. This necrosis of the endothelial cells might be caused by excessive manipulation, chemical irritation from the use of antiseptic solutions in the abdominal cavity, or desiccation from dry-air contact, cold, and prolonged exposure. We might lay down the statement that the formation of peritoneal adhesions after operation was directly proportionate to the amount of sepsis, traumatism, dry-air contact, loss of heat, and raw surface present.

The fact that denuded surface and pedicle stumps were early recognized as one of the most frequent causes of intestinal obstruction from adhesion had led to many suggestions as to the prevention of this complication. Martin had advocated brushing over denuded areas and stumps with sterilized olive oil just before closing the abdomen, and Stern had covered the raw surface with collodion.

Dr. Robert T. Morris was cited as using aristol to prevent adhesions, because the powder was insoluble in serous fluids and quickly formed a protective covering with the coagulated lymph which could not be brushed off. He based his belief upon experimental work on rabbits. Baum had made experiments in which he covered raw areas with catgut, goldbeater's skin, and prepared animal peritonæum. Kelly advocated the fixing of the uterus by suture in a position of retroflexion, in order to close the cavity of the cul-de-sac of Douglas, and thus prevent prolapses and adhesions of the intestine. Werth advised filling the bladder with boric-acid solution after operating, to prevent the intestines from falling into the cul-de-sac when raw surfaces had been left in that region.

One of the most valued procedures in prevention was the abandonment of the mass ligature for the individual ligation of the vessels in a pedicle, and the covering of its raw surface by suturing the peritonæum over it, as advocated by Stimson in a paper read before the American Surgical Association in 1889. Senn suggested the covering of raw surfaces, wherever possible, with omentum.

As sepsis was a well-known cause, it was scarcely necessary to say that the most absolute adherence to the rules and technique of surgical cleanliness must be followed.

The less we impaired the vitality of the tissues by prolonged exposure, etc., the less infection there would be; therefore, we must avoid traumatism, and keep up the use of moist heat, so that the home-guard army of leucocytes might be kept alive and vigorous, in order that they might be able to repel the bacterial army of invasion which was threatening the organism. The time element in an operation was of the greatest importance, the surgeon's skill being aided by trained assistants and the best environment. Unnecessary traumatism might be avoided in many cases by the Trendelenburg posture, and the intestines should be freely emptied before the operation. The peritoneal surface should be kept covered with gauze sponges wet in hot normal saline solution and the air of the operating-room kept at the highest point of saturation.

The incision should be as small as possible and all blood clots should be removed before closure of the abdomen. The intestines and omentum should be replaced in their normal position as far as possible. The best means of doing this was to fill the abdominal cavity with hot saline solution, which allowed the intestines to float and assume their proper relations and position.

In the after-treatment the most notable measure was the early employment of cathartics to provoke active peristalsis and thus prevent adhesions. This was often hard to do, and the writer made early use of the copious high enema in conjunction with the cathartic. The use of oxygen to inflate the intestines, as recently advocated by Cleveland, must be of great value and should be resorted to as an early rather than as a late measure in the exaggerated Trendelenburg posture. The patient should be encouraged to change her position frequently during the early hours after the operation, in order to break up newly formed adhesions and so that the intestines might be more likely to assume their proper relations. Free motion should not be prevented by a tight abdominal dressing.

Dr. EMMET said that where there was much exposure of the peritoneal surface or abrasion of the peritonæum he used the saline solution as recommended in the paper. He believed in the use of aristol and had had good results with it. He took exception to moving the patient early after the operation, for the reason that he did not believe gases could be dislodged until the bowel had regained its peristaltic tone, and that then it was time to use cathartics and enemata. He thought that early moving of the patient from side to side made her restless and uncomfortable.

Dr. MALCOLM MCLEAN said he had long dwelt upon the importance of moisture in the operating-room and the necessity of a high temperature there. He never operated in a room where the temperature was below 85° F., and usually it had a temperature in the neighborhood of 90° F., with plenty of moisture. He used the cautery merely to whiten or coagulate the tissue, not to char it.

Dr. J. RIDDLE GOFFE believed in changing the patient's position as often as she felt uncomfortable. He thought that gauze in the pelvis prevented adhesion by causing a tremendous outpour of serum, separating and lubricating the surfaces, thus accomplishing the same object as was obtained by filling the abdomen with salt solution. In regard to moving the bowels, he believed that this should be done early, although he was not so insistent about this as formerly. If there were indications that the patient should not be disturbed, he waited three, four, or five days before pushing active measures.

Dr. WALDO believed that in some cases cathartics added to the depression which already existed, and that the bad effects were out of proportion to the benefits received from early peristaltic action.

Dr. JANVRIN said that, in his opinion, raw surfaces should be covered with peritonæum as far as possible, but where this was impossible they should be touched with pure carbolic acid. He believed in small incisions and in handling the intestines as little as possible. He had used hot saline solution in the abdominal cavity for twenty-five years. The late Dr. Peaslee had used what he called "artificial serum," consisting of a drachm of common table salt to a pint of hot water, for washing out the abdominal cavity, fifty years ago, and to him must be given the credit of first using what was now called "normal saline solution." The speaker had simply extended its field of usefulness for the purpose of preventing adhesions. For such a purpose he left in the cavity about two quarts of the solution, as the best preventive of adhesions. He did not rely upon early movement of the bowels by catharsis, as he had done formerly. He rarely found difficulty in getting good results with high enemata. Failing in this, he gave small doses of morphine, which quieted the nervous irritation and pain.

Dr. BRETTAUER said he agreed with the previous speaker that early catharsis was not only not necessary, but often harmful, as it was impossible to prevent adhesions by causing peristalsis. He found that better results followed operating in the summer time, with the temperature often 100° F. or higher.

Dr. WARD said that the use of gauze in the pelvis to prevent adhesion was a surprise to him, as he was of the opinion that gauze was an ætiological factor in its production. He had also seen morphine used to excellent advantage where catharsis had failed. He preferred giving a high and copious enema early in cases in which the patients had been subjected to severe operations, rather than push the cathartics.

Letters to the Editor.

SEPTIC INFECTION OF UTERINE ORIGIN.

751 MADISON AVENUE, NEW YORK,
March 18, 1901.

To the Editor of the New York Medical Journal:

SIR: Dr. Boldt, in reply to my letter in your issue of March 16th, states that he regrets I should make his paper a basis for personal controversy. There was nothing more remote from my intention than to bring a personal element into the discussion. Dr. Boldt well knows that when I have a personal grievance I address the person directly and do not resort to the columns of a medical journal to state it. The matter on which I addressed you, it seemed to me, had a scientific bearing, and in expressing myself I took particular pains to avoid anything which might be construed as being of a personal nature. In my present communication I shall take the same pains to base my remarks solely upon matters which, to my mind, have a scientific interest, ignoring the personal tone that permeated Dr. Boldt's reply.

The doctor states that I had no facts upon which to base my statement, that in the sentence to which I took exception he had reference to "my papers on puerperal sepsis which have appeared in various journals during

the past three years." I admit that the only facts I had were those furnished me by my sense of hearing in the closing remarks of the doctor in the discussion which followed the reading of his paper at the Obstetrical Society. If my papers were not meant, it might be of general interest to know to what papers he alluded, so that the general profession may be warned against their baneful influence and teaching. Or did the doctor resort to the strategy of setting up a man of straw so as to have something to use as a target and to knock down?

I frankly confess being guilty of the charge the doctor makes that the gray matter of my brain is unable to comprehend the meaning of the term septicæmia (for which I have substituted the term acute bacteriæmia) in *his* sense, as it is also unable or unfit to comprehend the logic that prevails in his paper on Septicæmia; Acute Bacteriæmia, etc. That the gray matter of other people's brains has shown the same incapacity was evidenced by a specimen which Dr. Boldt himself exhibited at the very next meeting of the Obstetrical Society following that at which his paper had been read. The specimen was an apparently normal uterus (no microscopical examination had been made), removed from a patient suffering from puerperal sepsis. The indications for the hysterectomy were at total variance with those the doctor himself had laid down in his paper at the meeting before, showing that he did not fully comprehend his own teaching. The patient, moreover, *died in spite* of the doctor; but he thinks my patient "may have got well, not because of her physician, but in spite of him." I have no fault to find with my patients when they get well in spite of me. On the contrary, I am very much grieved and disheartened when they *die* in spite of me. But, to be serious, Dr. Boldt's specimen showed how easy it is to criticise another man's case, and how difficult it is to determine your indications from a bacteriological examination of the blood.

Dr. Boldt finds fault with me for not showing the same scientific attention to my patient, ill with puerperal sepsis, in which I removed a gangrenous tube and ovary, as did Albert de Pourtales in his case, to which I made reference in my paper. I take some pride in the fact that I did not show my patient the same scientific attention (a lengthy post-mortem report), for my patient recovered and I have since delivered her of a healthy female child at full term.

The doctor continues to dwell on the fact that one of my specimens, the septic uterus with retained placental residue, was criticised because it was held by some who saw the specimen that I should have been able to remove the residue with the fingers or curette. Well, as a matter of fact, I had curetted the uterus; but, as was evident after the operation, I did not remove all the placental tissue—an event which has happened to others as well as myself. I did not see the patient until three days later, when all the symptoms pointed to an early fatal termination. I felt confident that the source of infection was the uterus, which I removed, and the patient recovered. On cutting open the uterus, the placental tissue was found at the fundus and at the left horn, and the whole endometrium was in a condition of septic inflammation. The case resembled in every respect that reported by Sippel (*Centralblatt für Gynäkologie,* Vol. xviii, p. 667), which Dr. Boldt quotes in approval. It is evident that distance, in the minds of some, throws a certain halo, also, around things medical.

The most carping critic could not take any exception to my second specimen, which was a puerperal uterus studded with small abscesses varying in size from that of a pea to that of an almond. It was removed from a patient whose temperature was 106° F. and whose pulse was 160. She recovered.

The third specimen was a lacerated uterus removed from a woman over forty years of age, who was suffering from diffuse puerperal septic peritonitis. The uterine walls showed some streptococci, though the organ as a whole showed no marked changes. I stated that I removed the uterus because it seemed to me the best way to carry out thorough drainage, because of the woman's age, and because of the fact that she had a contracted pelvis, necessitating a high forceps operation, with the result of a dead child and a badly lacerated uterus. She also recovered.

My fourth case, also ending in recovery, was the one already referred to, in which I removed a gangrenous tube and ovary, resulting from a sepsis which had originated in the uterus and later extended to the right tube and ovary. Albert de Pourtales's case ran a somewhat similar course, but because it was in Bumm's clinic—the home of bacteriological investigation of puerperal infection—interference was delayed until, after repeated curettings, streptococci were found in the lochia. The patient by this time had become moribund, but was nevertheless subjected to an abdominal hysterectomy, with a fatal termination a short time afterward. Hence the *scientific post-mortem* attention which the patient received and which has called forth such admiration from Dr. Boldt.

Dr. Boldt endeavors to explain his "change of front" in reference to septic peritonitis by seeking cover under the mantle of terms. He tells us now that when he said "diffuse septic peritonitis" he had reference to the chronic form. This is an adjective which he forgot to use in his original paper, written with such evident care and deliberation. Let us read his description of the form of peritonitis in which, according to him, an operation was contraindicated: "I have operated upon a goodly number of women ill with acute puerperal septic peritonitis, hoping to save one or another, but so far in vain. The condition found is a large, flabby uterus, the Fallopian tubes congested, but not containing pus, the ovaries macroscopically normal, the intestines distended and the peritoneal surface more or less congested, no adhesions at any place—in short, a septic peritonitis" (*Medical Record,* April 16, 1898, p. 571). In his recent letter the doctor would make a distinction between "acute septic peritonitis dependent upon the rupture of an ulcer or an appendicular abscess, etc.," and that caused by puerperal sepsis. Wherein lies the difference, he does not tell us. Do similar micro-organisms act differently upon the peritonæum when they enter that cavity through other portals than the uterus? This is a strange opinion, coming from one who speaks as an authority upon bacteriological questions.

As I stated on a former occasion, I am fully in accord with the teaching that each case should be investigated from a bacteriological standpoint when feasible. But this investigation, to be of any service, nay, in order not to be misleading, should be carried out only by an expert bacteriologist, and even then not too much weight should be attached, with our present knowledge in that direction, to the bacteriological findings. So far, my experience with such investigations has not been satisfactory. I have called in the aid of experienced pathologists, and before they could furnish me with definite data, the patients have passed into a moribund state in which it

would have been folly to perform an operation. What the future will determine in this direction is as yet an unknown quantity which Dr. Boldt, enthusiastic bacteriologist as he is, must admit. For the present, the safer teaching is that every case of local sepsis, no matter how mild at the outset, should be carefully watched, for we can never be certain that it will not develop into a serious sepsis (or call it what you will) which may be a menace to life. HIRAM N. VINEBERG, M. D.

Book Notices.

A Text-book of Gynæcology. Edited by CHARLES A. L. REED, A. M., M. D., President of the American Medical Association (1900-1901); Gynæcologist and Clinical Lecturer on Surgical Diseases of Women at the Cincinnati Hospital; Fellow of the American Association of Obstetricians and Gynæcologists; Fellow of the British Gynæcological Society; Corresponding Member of the National Academy of Medicine of Peru, etc. Illustrated by R. J. HOPKINS. New York: D. Appleton & Company, 1901. Pp. xxvi-900.

THIS is a variorum book, but the diversity of authorship has been so cleverly managed by Dr. Reed that there is no overlapping of articles, for he has turned his contributors' words into the third person, at the same time managing not to mask the identity of any one of his collaborators. This seems to us to be a unique and most commendable feature. Another novelty lies in the use of quotations from the text as legends for the illustrations, after the manner of books of fiction. Nearly every one of these legends contains the name of the contributor concerned, so that the reader need never be at a loss to know to whom to attribute the idea illustrated. Nobody but a master of medical writing and a master of men could do these things without muddling the text and giving offense to his collaborators, but Dr. Reed has most skilfully avoided both these errors. The fact that he has succeeded in doing so marks him as a leader, and for that reason, in addition to its other points of excellence, the book will surely take a prominent position among our text-books of gynæcology.

The list of collaborators is as follows: Dr. J. W. Ballantyne, Edinburgh; Dr. J. H. Carstens, Detroit; Dr. Murdoch Cameron, Glasgow; Dr. Henry C. Coe, New York; Dr. John G. Clark, Philadelphia; Dr. F. X. Dercum, Philadelphia; Dr. Walter B. Dorsett, St. Louis; Dr. L. H. Dunning, Indianapolis; Dr. Frank P. Foster, New York (erroneously credited with the title LL. D.); Dr. Samuel G. Gant, New York; Dr. Hobart Amory Hare, Philadelphia; Dr. Malcolm L. Harris, Chicago; Dr. Maximilian Herzog, Chicago; Mr. R. J. Hopkins, New York; Dr. Joseph Taber Johnson, Washington; Dr. Wyatt G. Johnston, Montreal; Dr. Matthew D. Mann, Buffalo; Dr. Thomas Charles Martin, Cleveland; Dr. Lewis S. McMurtry, Louisville; Dr. Dan Millikin, Hamilton, Ohio; Dr. Henry P. Newman, Chicago; Dr. William Warren Potter, Buffalo; Dr. A. Ravogli, Cincinnati; Dr. Charles A. L. Reed, Cincinnati; Dr. Hunter Robb, Cleveland; Dr. James F. W. Ross, Toronto; Dr. A. W. Mayo Robson, Leeds; Dr. J. L. Rothrock, St. Paul; Dr. W. Japp Sinclair, Manchester, England; Dr. Horace J. Whitacre, Cincinnati; and Dr. E. Gustave Zinke, Cincinnati.

Although the work deals largely with operative procedures, as is necessarily the case with any comprehensive book on gynæcology, more space proportionately is devoted to affections that do not call for operations than is common with text-books. For this Dr. Reed is highly to be commended. It shows, like the general tenor of the book, that the editor recognizes the primacy of general practice. At the same time he puts the necessity of specialism in a remarkably clear way. "Specialism in medicine," he says, "has an ethical basis which cannot be ignored. . . . There is no practitioner but knows and does some things better than he knows and does others, and he is to that extent a specialist. If, however, he were to concentrate his attention exclusively upon those things which he knows best and to ignore those things of which he knows least, his intelligence would move only upon convergent lines. This is indeed the inherent mischievous tendency of specialism, and one which the gynæcologist, as other specialists, should never cease to resist. The sphere of the gynæcologist's labors has already resulted in a broadening of his activities. His constant experience with intraperitoneal conditions has resulted in his expansion into an abdominal surgeon, a fact recognized, not alone by the general consensus of the profession, but, specifically, by the creation in medical schools of professorships of 'gynæcology and abdominal surgery' or of 'abdominal and pelvic surgery.'"

Dr. Reed and his collaborators have covered the ground of the diseases peculiar to women quite comprehensively. We note only two omissions, that of vaginismus and that of coccygodynia; but, as we have not read every page, perhaps it is only from the index that they are missing. The book is one of uncommon originality and one destined, we predict, to become a favorite with the profession. From the mechanical point of view, the volume shows the usual excellence of the Appletons' work, and special mention must be made of the satisfactory quality of Mr. Hopkins's drawings.

A Manual of Surgical Treatment. By W. WATSON CHEYNE, M. B., F. R. C. S., F. R. S., Professor of Surgery in King's College, London, etc., and F. F. BURGHARD, M. D., and M. S. (Lond.), F. R. C. S., Surgeon to King's College Hospital, etc. In Seven Volumes. Volume IV. The Treatment of the Surgical Affections of the Joints (Including Excisions) and the Spine. Philadelphia and New York: Lea Brothers & Company, 1900. Pp. xx-370.

THE authors, in answer to criticisms of former volumes, reiterate the statement made in their first preface, that only such methods as have been found best in their hands have been mentioned. The same general plan adopted in the earlier volumes is consistently carried out in the one before us; we further find practically the same arrangement. The first division includes the surgical affections of the joints, and it is subdivided into sections on the injuries of joints and on diseases of joints in general. Under the head of injuries to joints we naturally find the various forms of dislocations described, and the description of their appropriate treatment follows. The introductory chapter opens with remarks and advice of a general nature, applicable to all forms of dislocations; later, each individual dislocation is fully outlined in a succinct and graphic manner. Our attention is particularly arrested by the eleventh chapter, in which we find a description of the dislocations occurring at the shoulder joint. Here the authors ably consider the advisability of operative intervention in cases in which reduction has not been accomplished, drawing sound and just conclusions.

The surgical affections of the spine are fully consid-

ered; yet there are many interesting facts pertaining to fractures of the vertebræ which we do not find mentioned. A separate chapter has been given to the thermal treatment of rheumatoid arthritis, furnished by Dr. Leslie Walsh, which materially adds to the attractiveness of the book. In conclusion we note an appendix on scoliosis, taken by permission, verbatim, from the book of Dr. Percy Lewis on *The Relief and Cure of Spinal Curvature.* We have spoken most highly of the former volumes of this work, and find no reasons for treating the present one less cordially.

Der Stand der Volksheilstätten-Bewegung im In- und Auslande. V. Bericht. Herausgegeben von Dr. med. G. Liebe in Braunfels. München: Seitz & Schauer, 1900. Pp. 85.

This volume constitutes the fifth report of the efforts made for the sanatorium treatment of tuberculosis in Germany and other countries. It is very complete and of interest to those who are occupying themselves with this phase of medical endeavor.

Klinische und pathologisch-anatomische Studien zur Aetiologie des Uterusmyoms. Von Elis Essen Möller. Akademische Abhandlung. Berlin: S. Karger, 1900. Pp. 106.

The author has made an exhaustive clinical study of a large number of cases of uterine myomata. He regards their origin as partly embryonal, but not entirely. Some predisposing "irritation" must start the growth of the tumors. This he finds in a great variety of elements, no single one contributing to the sudden development of the neoplasm. Along these lines, he thinks, the question will ultimately be decided. Close anatomical study of the material has gone hand in hand with the clinical work, and the author touches upon most of the interesting phases of the subject of uterine fibroids. The monograph will repay reading.

Experimentelle Untersuchungen über die Einwirkung des Eserins auf den Flüssigkeitswechsel und die Circulation im Auge. Von V. Grönholm, früherem Assistenten an der Universitäts-Augenklinik in Helsingfors, Finnland. Hierzu 2 Tafeln mit Curven I-XI. Leipzig: Wilhelm Engelmann, 1900. Pp. 620 to 711.

In this monograph, which embraces mainly experimental work, the author concludes that the main influence of eserine upon the normal eye is the diminution of the intra-ocular pressure, preceded by a temporary increase due to the hyperæmia evoked by the drug. The decreased pressure results from the contraction of the intra-ocular vessels. The author goes minutely into the details of his experiments, showing the grounds on which he bases his conclusions.

Miscellany.

Pernicious Anæmia; Its Antiseptic and Serum Treatment.—At a recent meeting of the Royal Medical and Chirurgical Society of London, Dr. William Hunter (*Lancet,* March 30th) related the case of a man (who was exhibited before the society) aged thirty-seven years, whose symptoms—breathlessness, palpitation, and progressively increasing weakness—had come on very gradually two years before. The case had previously to coming under observation been regarded as a case of gastric catarrh on account of the discomfort in the stomach. The most prominent symptoms were a constant pain in the stomach and mouth, which was liable to exacerbations, coming on about every three weeks and lasting two or three days, after which the mouth and tongue became each time very sore and the tongue sore. The gastric symptoms consisted of pain in the stomach, nausea, and retching, which were worse when the organ was empty. A curious tingling and numbness of the fingers was complained of occasionally. The history was a very typical one as regards the oral sepsis, extending over eight or ten years, followed eventually by gastric pains. The gradual onset of the anæmia with weakness and with recurrent attacks of gastric disorder and glossitis were also very characteristic. On admission there were four groups of symptoms: (1) Weakness and extreme anæmia and their usual effects, the red corpuscles were only 27 per cent. of the normal and hæmoglobin only 35 per cent., there was also poikilocytosis; (2) hæmolytic symptoms—viz., urobilinuria and a lemon color of the skin; (3) oral and gastro-intestinal symptoms—viz., sore tongue, dental necrosis, suppuration of the gums at one part (which had existed for ten years), and gastric pains; and (4) toxic symptoms—viz., tingling and numbness of the fingers and irregular pyrexia. The treatment consisted of oral and gastric antisepsis, the teeth were scraped, some were extracted, and a mouth wash was used. Mercuric chloride was administered constantly. On July 9th, 13th, and 23d three injections of antistreptococcic serum were administered. After the first the red corpuscles rose to 36 per cent., after the second to 52 per cent., and in the course of three weeks the red corpuscles rose to 65 per cent., the hæmoglobin to 72 per cent., the hæmolysis (as evidenced by the color of the urine) was arrested, and the patient's health slightly improved. The injections were followed by febrile reaction, that after the first was very marked. The temperature during the first week after admission had been variable, between 99° and 97.5° F., but after the injections it became steadier and about normal. The patient was so much better that he went for a time into the country. On September 26th, liquor arsenicalis was added to the other treatment. The improvement continued, the patient gained over 14 lbs. in weight, and on December 20th the red corpuscles had risen to 94 per cent. and the hæmoglobin to 100 per cent. The only symptom remaining was occasional numbness in the fingers. The case, Dr. Hunter remarked, must be regarded as a typical one of pernicious anæmia in its mode of onset and clinical history and the four groups of symptoms present. The case was the first he had been able to treat on the lines he had recently recommended—viz., complete and long-continued oral and gastric antisepsis. These aimed at the removal of the infective cause of the disease and of the septic conditions of the mouth and stomach which favored its operation. Nevertheless, the infection still remained on the tongue and showed periodic tendency to break out afresh. On several occasions the soreness of the tongue had returned, accompanied each time by feelings of illness and increased signs of hæmolysis in the urine, but each time they were checked by strong antiseptic measures. The results clearly showed the beneficial effects of serum treatment, at the same time confirming the infective nature of the disease. The first two doses were 10 cubic centimetres, afterward 5 cubic centimetres were given. In view of the reaction it would be advisable in future to begin with only 5 cubic-centimetre doses and to see that

the temperature was not variable and erratic at the time of the injection. In reply to criticisms, Dr. Hunter said that he had since seen ten cases exactly like the typical case of pernicious anæmia that he had described. The diagnosis was not to be based upon the blood changes alone, but upon the association of these with four definite groups of symptoms—viz., anæmia, hæmolytic changes in the urine, oral and gastro-intestinal symptoms, and fever with other toxæmic symptoms. As to the separation and identification of the organism, the streptococcus was only an associated bacterium and it was not hæmolytic. He had not yet isolated the true specific organism.

Chronic Renal Disease and Insanity.—Dr. W. Baxter Gow, medical superintendent of the asylum at Wellington, N. Z. (*New Zealand Medical Journal,* February), draws the following conclusions from his investigations:

1. That granular kidneys are more frequent in the insane than in the sane. 2. That in the insane they do not give rise to the usual physical signs and symptoms. 3. That the frequency has a distinct connection with the mental condition of the patients. The condition favoring the occurrence of granular kidney is that of motor excitement. 4. That, according to Dr. Craig, a low blood pressure is found in similar cases, whereas in melancholia and delusional insanity the blood pressure is raised. In these latter a normal or merely congested condition of the kidney is found. 5. That in general paralysis the kidneys are sometimes granular, sometimes congested, but they probably vary with the condition of the blood pressure, which has, up to the present, not been satisfactorily investigated. 6. That the cause of the lowered blood pressure, or the lowered blood pressure itself, is probably the real cause of the increased frequency of granular kidney in cases of motor excitement.

Earth Eating.—We have on more than one occasion referred to the practice of earth eating. In our issue for January 5th we published a letter by Dr. Thomas W. Davis referring to the prevalence of the custom in certain districts of the Southern States, and asking for further information thereon. Dr. Rutherford (*Postgraduate,* April; *Indian Lancet,* Vol. xvii, p. 234), referring to the prevalence of earth eating all along the west coast of Africa, says:

"I met with it first at Babni, where there occurs a deposit of yellow clay, containing about fifty per cent. of iron, a considerable quantity of mica, and some quartz particles, but there is evidently a considerable quantity of organic matter in it. The clay is prepared for consumption by making it up into balls about five inches in diameter, and is then baked over a slow fire. When quite dry and ready for use, a small portion is broken off and placed in the hollow of a smooth leaf, and then reduced to a powder between the finger and thumb. The leaf is then gently shaken, to make the harder and more gritty particles fall aside. These are carefully removed, and the residue is then transferred to the mouth, masticated and swallowed." According to W. Reade, too, says the *Postgraduate,* the Wandingoes of West Africa eat earth, but it is more as a medicine to produce purging. "I saw," he says, "on the thatch of a house pieces of yellow earth which is used for food. . . . I could easily understand it being eatable, as it possesses a most piquant and agreeable odor." On a part of the Gold Coast the blacks eat the red earth from which the giant ant-hills of those parts are made, possibly because it contains a certain amount of formic acid and so tastes very like acid drops.

Marriage—"with Modern Improvements."—The *Lancet* for April 13th says: A medical correspondent forwards to us a mysterious circular which was recently sent to him, as he thinks it might be of interest to us. The circular is printed in three languages—namely, German, French, and English. The English portion runs as follows:

"Since it may be that this circular could render any great service to any person, I publish it in that way.

"A very rich count and of high position, forty years old, looks by special motifs, a lady of high classe and first rate education as wife, strangers preferred. She must have (principal condition).

"He obliges himself either to pay a great fee or to make a considerable donation for the nomination. My name secures the greatest discretion in this earnst matter."

The "principal condition" is, it will be observed, left out; however, an enclosed slip informs us that further details can be obtained from a ship captain giving an address in Trieste. All sorts of explanations might be given of the omitted passage as to the wife. The German version says simply "she must." Possibly the very rich count is like the prince in so many folk tales—generally compelled to go about in the shape of a boar or serpent or some other unpleasant animal and wishes to be certain that his wife should be a lady of equable mind, or, like the gnome in Mr. W. S. Gilbert's story, his beauty and stature may depend upon his not washing. There is, however, a slip of green paper which perhaps explains matters. On this are printed three lines as follows:

In der Hoffnung (auf Kind)
En ciente dun enfant
Interesting state (w. child).

We presume the very rich count wants an heir, if not from his own loins, then from those of some one else.

The Necessity for Drinking Sufficient Water.—Dr. W. T. Moffet (*Illinois Medical Journal,* February; *Woman's Medical Journal,* March), quoting Fowler, who says that the kidneys act as regulators of the water supply of the blood, taking from it any excess, and when there is an insufficiency, demanding only enough to dissolve the solid constituents of the urine and to facilitate their discharge from the body, asserts that it is too often a fact that this regulating function of the kidneys is rendered void by the continued failure to imbibe sufficient water to satisfy the needs of the tissues and fluids of the body. He thinks that many cases of renal inadequacy and self-intoxication, with all the symptoms which may depend upon these conditions, are largely due to a deficient use of pure cold water. With the free use of water elimination will often take care of itself. Drinking cold water increases arterial tension, reduces bodily temperature, increases peristalsis and biliary secretion, and aids digestion. There is a large class of chronic troubles that are associated with constipation, renal insufficiency, and inactive skin. On inquiry it will be found that a large percentage of these cases drink water sparingly, many none at all. All the tissues suffer, toxines accumulate and the whole organism is poisoned—the patient has self-intoxication. Dr. Moffet has known obstinate cases of constipation and eczema to be cured by the free use of water. Most of these patients appear to entertain a distaste for water.

Original Communications.

ATONIA GASTRICA AND A NEW METHOD OF TREATMENT.*

BY A. ROSE, M. D.,

NEW YORK.

A NUMBER of pathological conditions of the stomach are caused by insufficient activity of its muscular fibres, diminished activity of its walls, elongation of the suspending ligament of the lesser curvature, the lesser omentum, and gastroptosia.† These disorders may be associated with insufficiency of motor functions and retention of the contents of the stomach beyond the legitimate time; and all these conditions have one thing in common, they are manifestations of relaxation—relaxation of muscular fibres, of the ligament, of the walls, of the stomach.

Some authors name this disorder myasthenia gastrica, which, translated, means disease of the gastric muscles; others use the term mechanical insufficiency of the stomach, but this latter name indicates only one of the symptoms. There can be no doubt that gastric relaxation, atonia gastrica, is the best name.

The words atonia and asthenia have been employed as meaning weakness, while in reality atonia means relaxation, and asthenia sickness.

Mechanical gastric insufficiency can by no means be rightly used as a synonym for gastric atony. Gastric insufficiency is the disproportion between the capacity of the muscular forces of the stomach and the demand of labor on these forces. Such insufficiency may occur in a healthy stomach in case the mass of the ingested food is too large, or the nature or condition of the ingesta is unsuitable. By motor insufficiency, we may understand such stagnation as is caused by resistance at the pylorus. Atony may cause insufficiency, but atony is not insufficiency itself; atony may exist without insufficiency in cases in which the resistance at the pylorus is below the normal. On the other hand, atony may be caused by insufficiency, which occurs sooner or later in the case of ectasia of the stomach. Here, relaxation develops as a consequence of over exertion.

A healthy stomach maintains the position of its lower border constant in all positions of the body; not so the atonic stomach. The latter changes its position with the different positions of the body. While the patient is in the upright position, the lower border, that is, the larger curvature, as well as the pylorus, is sunk down; in the recumbent position, both will rise, and changes from right to left take place according to different positions of the body. Buch (1) explains this change of position as being due to elongation, that is, relaxation, of the suspending ligament of the lesser curvature, and he thinks that while there is no atonia gastrica without relaxation of this ligament, neither is there any atonia gastrica without gastroptosia.

Dr. G. R. Lockwood (2) says: "The descriptions in the books of the symptoms of gastroptosis are hopelessly obscure and chaotic . . . characteristic and diagnostic points are few and misleading." Indeed, the symptoms in gastroptosia are manifold and numerous, but if we keep in view that there is only one factor, and that this factor is relaxation, we have a characteristic and diagnostic point, and one which, as we shall see, is not misleading, but indicates at once a rational method of treatment, which in most, if not in all, cases, will cause the symptoms to disappear or to become modified. But Dr. Lockwood is right; discussions on gastroptosia have been very lively during recent years, and the opinions of the different authors in regard to its ætiology differ. They also differ with regard to a number of morbid conditions which have been connected, correctly or incorrectly, with gastroptosia. This lively controversy has been the means of enlarging our knowledge in this field. The reader gave a summary of what he thought to be of importance in the literature on this subject, in a paper published about a year ago (3), and he may be permitted to recapitulate from this paper what relates to the relaxation theory.

There can be no doubt that it is of paramount importance to speak first of the ætiology of gastroptosia, for the knowledge of the ætiology in a given case will serve as a guide for therapeutical action. Cases of gastroptosia are of importance in everyday practice. The pathological changes in these cases are subject to special therapy, which is as rational as it is in most instances successful. Gastroptosia may form part of general splanchnoptosia, but it may exist by itself, may happen without coexisting nephroptosia; at any rate, it is gastroptosia which, in most instances, principally demands our attention, and, most fortunately, the therapy directed against gastroptosia is also the therapy of splanchnoptosia in general. The displacement of the stomach and other abdominal organs is often an acquired condition, but recent investigations have furnished evidence that a congenital disposition commonly plays a most essential part.

According to different ætiological conditions, we have to distinguish different forms of gastroptosia. The overlooking of such a distinction between various kinds of gastroptosia of diverse origin has given rise to many differing explanations. The different forms of gastroptosia have, according to their ætiology, distinct significance.

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*Read at the meeting of the Gastro-Enterological Society at Washington, May 1, 1901.

†I write gastroptosia instead of, as I formerly did, gastroptosis. A Greek friend, who had seen my paper with the title Gastroptosis, wrote to me:

Τὰ εἰς—σις—ξις καὶ ψις λήγοντα θηλυκὰ ὡς δεύτερον συνθετικὸν, ὅταν μὲν το 1ο συνθετικὸν εἶνε πρόθεσις, μένουσιν ἀμετάβλητα, οἷον πρόπτωσις, περίπτωσις, διάγνωσις· εἰ δὲ μή, τρέπονται, ἐν τῇ συνθέσει εἰς—σία, οἷον εὐπραξία, ἀπραξία, παλιγγενεσία, ἱερογνωσία οὕτω καὶ γαστροπτωσία·

That is, a feminine noun which ends in sis, xis and psis as the second component remains unchanged when the first component is a preposition, as, for instance. proptosis, periptosis, diagnosis; but if the first component is not a preposition, then in composition the ending is changed into sia, as eupraxia, apraxia, palingenesia, hierognosia, and also gastroptosia.

Gastroptosia in adults of both sexes may be the manifestation of constitutional defects and anomalies, and, first of all, of paralytic thorax, chicken-breast, or funnel-shaped breast. We find displacement of the stomach in men or nulliparæ of tender and lean habit with narrow, long, precociously ossified thorax, wide intercostal spaces, and frequently Stiller's stigma of fluctuating tenth rib; in short, it is found in persons with typical phthisical habit. Indeed, gastroptosia is very frequently present in phthisical patients, and it is rare in strong and robust people except when caused by trauma or by peritonitic adhesions. There are, exceptionally, cases of movable spleen and kidney, even gastroptosia of purely local nature, happening in robust individuals; in such cases the subjective painful symptoms may be missing. On the other hand, gastroptosia is frequent in poorly nourished individuals and among the feeble saleswomen who are forced to be standing for eight hours or more during the day.

The reason why patients with long, narrow thorax are specially subject to gastroptosia is this: In such patients the diaphragm occupies a position lower down than normally, on account of the increased vertical diameter of the lungs. In cases of emphysema of the lungs and exudation in the pleural cavity there is still a lower level of the diaphragm. In these conditions the organs situated below the diaphragm cannot find sufficient space in the hypochondrium and are obliged to descend. In the constitutional form it is not often that the spleen and liver are sunk down. The kidney, in men with gastroptosia of the constitutional form, is less often felt than in cases of the constitutional form in women.

Among my cases there were three in which the symptoms of gastroptosia had been relieved completely; there was no more abnormal splashing sound until the patients had intercurrent diseases; one of them suffered from severe attacks of malaria, and the two others had influenza. When I saw them again after these affections, gastroptosia had developed anew, and the splashing could be easily elicited over a large area, exactly as was the case before their first treatment. In all diseases which cause muscular weakness in general, like typhoid fever, atony of the stomach will develop itself.

Acquired, especially rhachitic, changes of the skeleton may cause relaxation of the abdominal viscera. Stratz (4) has thus described such conditions: When the sacrum is not sufficiently broad, the spinæ ilii anteriores superiores stand too wide apart and the vaults of the ilium are flattened; in some cases the width of the spinæ may be larger than the width of the cristæ, and all this causes the distance between the points of insertion of the abdominal muscles to be greater, and thus their support to be weakened.

The downward displacement of the stomach is associated with change of its form. It assumes in the higher degrees of such displacement, either the shape of a loop with its convexity down, or a vertical position, similar to that of the fœtal period; or, again, a vertical direction has developed by the sinking down of the pylorus to such an extent that the pylorus stands nearly vertically below the cardiac orifice.

Far-down displacement, marked changes of form, and real disfigurements of the stomach, are found in some cases of kyphosis and scoliokyphosis. Fleiner describes a case in which the splashing sound could be produced immediately over the symphysis, while the apex beat of the heart was felt in the axilla. In this case, however, notwithstanding these anomalies in the situation of the viscera, there existed no marked disturbance of the gastric functions.

Next to the constitutional, there are other causes due to local and, as a rule, mechanical disorders, and these disorders may exist in the stomach itself or outside of it.

Permanent motor insufficiency produces gastroptosia, as also do tumors of the pylorus or of the lesser curvature, which are weighing on the stomach. In the latter instances the expelling power of the organ may remain intact.

Gastroptosia may be caused by hernia—hernia of the mesentery, for instance; above all, hernia in the linea alba may give rise to gastroptosia. In these cases also the expelling power of the stomach may remain intact.

Tumors of the spleen and liver may also cause gastroptosia; another group of cases owes its existence to enlargement of the abdominal space. The largest contingent of these is furnished by the postpuerperal types of gastroptosia, and these have been called Landau cases, because Landau first described them thoroughly. This form of gastroptosia may exist without giving rise to symptoms. If a woman has given birth to many children, there occurs a physiological relaxation of the abdominal walls, which leads to a physiological descent of the viscera of moderate degree without symptoms. The Landau form will be well pronounced in cases of women in whom the spine, in its lumbar region, is abnormally curved forward (rhachitic affection), and who, during pregnancy, are obliged—in order to keep the balance—to bend backward while the uterus is forced forward to an abnormal degree.

Men, after having been released from obesity by heroic diet or treatment, may acquire gastroptosia. Gastroptosia, in these instances, puerperal as well as after obesity cure, is the result of adaptation to space.

The activity of the abdominal muscles aids in a manner not sufficiently explained in fixing the abdominal organs in their physiological position. Relaxation of this apparatus forms, therefore, the first ætiological momentum in puerperal and in *post-obesitam* enteroptosia. It is true that relaxation of the abdominal muscles is to a certain degree compensated by increased expansion of the intestine, but a complete compensation is hardly ever established. Women who do not receive proper attention immediately after confinement may acquire or suffer increase of pre-existing gastroptosia.

Glénard's whole theory of splanchnoptosia is based on the relaxation of the suspensory ligaments of the intestines, especially that of the transverse colon, and Stiller, the discoverer of the floating tenth rib, says that splanchnoptosia or enteroptosia is a descent of the atonic dilated stomach, of the colon, especially the transverse portion, the kidney (the right or both kidneys), exceptionally of the liver or the spleen; a descent which has developed mostly in tender age, in consequence of general relaxation, especially of the peritoneal suspensory ligaments in individuals with congenital general dyspeptic neurasthenia, tender muscles, lean habit, and slender bone structure manifested in the higher degrees by a floating tenth rib.

The same author remarks: "Boas takes pains to formulate the diagnosis between splanchnoptosia and nervous dyspepsia, but one can plainly see that he is not successful; the same is the case with his attempt to distinguish gastric motor insufficiency from nervous dyspepsia." Splanchnoptosia and nervous dyspepsia are, according to Stiller, identical, and gastric motor insufficiency is its constant, and often only, symptom. As we have seen, there are cases of splanchnoptosia without dyspeptic symptoms, and these are not so very rare, and thus Stiller's view is applicable only to the great majority of cases, or rather it applies only to cases which have been described as nervous dyspepsia.

The question about the relation of typical enteroptosia to all its nervous and dyspeptic attributes and to the well-known picture of nervous dyspepsia, has been answered by Glénard to the effect that in reality there is no nervous dyspepsia, since the symptoms are produced by anatomical changes of abdominal organs.

For a long time the corset and the strings with which the skirts are fastened around the waist were said to play an important rôle in the genesis of the affection, but now their guilt in causing the evil has been adjudged as being only of moderate measure. In those cases which would be most significant to decide this question as to what part the corset and the skirt strings are playing, *i. e.*, in young girls and nulliparæ, it appears that frequently a tight-fitting corset has never been worn because it could not be tolerated. Certain it is that tight lacing, tight attachment of skirt strings, will aggravate an existing gastroptosia, because the compression of the abdomen from the sides is apt to cause displacement of the right lobe of the liver toward the middle, and thereby to cause pressure on the pyloric portion of the stomach, thus favoring development of gastroptosia.

Our text-books tell us that stasis in the venous circulation of the abdominal cavity, stasis caused by heart diseases, and stasis in the system of the portal circulation, give rise to gastric atony.

As remarked already, it is a well-established fact that there exist cases of gastric atony which, for a long time, give rise to no symptoms. Boas reports the case of a seamstress in whom, accidentally, the clinical symptoms of such atony associated with retention of the contents of the stomach could be established, although this woman did not complain of any suffering. According to Buch, it is not a rare occurrence to find, on autopsy, dilatation of the stomach, the existence of which during lifetime has not been suspected; and Pentzoldt has described and depicted the case of a man who had died from diabetes and pulmonary tuberculosis, but had never complained of gastric disorder; on autopsy, considerable gastric dilation and gastroptosia were found; the walls of the stomach were remarkably thin. In these cases there existed a compensation, thanks to which the contents of the stomach—notwithstanding the high degree of atony—entered the intestine in proper time. The compensation consisted in relaxation of the ring of the pylorus; that is, of its circular muscular fibres. This compensation presents an analogy to the compensation in valvular diseases of the heart. Some individuals may live for years with an abnormally dilated and displaced stomach, complaining of no, or only of slight, symptoms, as do individuals with valvular affections of the heart, of high degree, who are often unaware of their disease, so long as the compensatory hypertrophy of the ventricle is adequate to counteract the fault at the valve.

But some day the compensation fails, and then appear suddenly, or in a surprisingly short time, all the symptoms of gastric dilatation. It is possible that some of the cases described as acute dilatation of the stomach may belong to this category of cases of failing compensation.

Some years ago I examined, together with Dr. Einhorn, in his clinic at the male department of the German Dispensary, New York, one hundred patients as they came along, without regard to diagnosis in general, for splashing sound of the stomach, in order to establish the significance of this phenomenon (5).

In thirty cases no splashing sound could be elicited. In six of these, food had been taken only from half an hour to two hours before examination. In two cases no result was obtained on account of invincible tension of the abdominal wall. In one case the symptom was found six hours; in two, seven hours; in one, eight hours, and in one, twelve hours, after eating. In sixteen cases the splashing sound could be elicited as far down as, or below, the umbilicus. Out of these sixteen cases there were only nine in which gastric symptoms had been complained of. In thirty-three cases with splashing sound there were no gastric complaints. The fact that stasis in the venous circulation of the abdominal cavity, stasis caused by heart diseases, for instance, favors gastric atony, we found to be confirmed. Among the one hundred cases there were twenty-four heart and pulmonary affections; in nineteen of these a splashing sound could be produced.

When the new methods of the examination of the stomach were first introduced, it was assumed that a splashing sound elicited below the umbilicus in dyspeptic

persons meant dilatation of the stomach. This view was severely criticised and discarded. The term dilatation of the stomach was reserved for that condition in which the food stagnates in the stomach in such a way that ingesta taken the day previous, or even days before, are found in the water on washing out the stomach in the morning. And, after all, the first view was correct; a splashing sound easily produced over a larger area than normal is the symptom of dilatation of the stomach, though, of course, not necessarily of such a degree of dilatation of the stomach as to cause stagnation of food over night.

The fibres of the muscles of the stomach contract tonically. A relaxation of this tonus causes elongation of the fibres, and dilatation of the relaxed stomach is as natural a consequence as dilatation of the blood vessels upon irritation of their inhibitory nerves or paralysis of their contracting nerves.

Relaxation of the stomach may be caused by disease confined to muscular fibres, through affection of their innervation. B. Stiller found in a large number of nervous dyspeptics with floating kidney and splashing stomach, that the tenth rib was movable; that is, movable to such a degree as normally the eleventh and twelfth ribs are movable, not being fastened by cartilaginous, but only by ligamentous, structure to the costal arch. He observed that when there is such a floating tenth rib, there is likewise a floating kidney and a displaced stomach. Although this floating rib is not found in every case of enteroptosia, it was never missing in well-pronounced cases. He thinks that the degree of mobility of this rib corresponds with the degree of enteroptosia and the degree of neurasthenia, while the degree of mobility of the kidney does not allow such a condition.

He found children who had floating kidney, with and without a floating tenth rib, and also children with it, but without floating kidney and without gastroptosia. He believes, however, that the latter will, later on, become neurasthenics and enteroptotics.

He further observed that floating rib, nephroptosia, and gastroptosia were seldom looked for in patients of advanced years. This fact is explained by the circumstance that the subjective enteroptotic symptoms improve with advancing years, and that people who formerly had consulted the physician on account of neurasthenia would not visit him any more with complaints inviting examination for enteroptosia.

A great deal has been written on the relation between anæmia and chlorosis in young girls and displacement of the stomach. It is certainly rational to assume that chlorosis is not the result of gastroptosia, but the manifestation of a constitutional anomaly which simultaneously favors the disease of the blood and the development of the displacement. There exists chlorosis without gastroptosia, and there is a probability that chlorosis may have been the primary evil causing reduction of tone of the abdominal muscles, and thereby inducing gastroptosia.

Men afflicted with gastroptosia present symptoms of general nervous irritability less often than women.

The important question of the relation of gastroptosia to nervous symptoms, which latter are of frequent occurrence and of manifold kind, has been touched upon already when Glénard's and Stiller's views were given. It remains now to say a word about the name nervous dyspepsia, which is very convenient to cover a multitude of symptoms, but which is not scientific and is misleading. The symptoms called nervous dyspepsia are brought on by anatomical changes of abdominal organs, the foremost of which is displacement of the stomach. We might call the disorder in question ptoseodyspepsia, because this would exactly signify its pathological nature.

Some authors have spoken of a relation between hyperacidity and splanchnoptosia, but, according to my own observation, there exists no rule; ptoseodyspepsia, if I may use the name which I have suggested, manifests itself similarly to hysteria; the symptoms are inconstant and changeable, some cases present even achylia gastrica, but the probability is that hyperacidity is more frequently found in gastroptosia.

Atonia gastrica and splanchnoptosia are caused, as the foregoing remarks demonstrate, mostly by constitutional weakness and require tonics in general. We have, however, to deal directly with the mechanical derangement, and it is rational to apply mechanical treatment as the first and direct means of relief.

As stated already, the activity of the abdominal muscles aids in fixing the abdominal organs in their physiological position. Relaxation of this apparatus forms, therefore, a momentum in splanchnoptosia, and it is the first momentum we have to consider in therapy.

To strengthen the abdominal muscles, different measures have been suggested. They are, in the first place, a substitute for the loss of tone by means of a bandage; next, hydrotherapy, massage, electricity, and gymnastics. Cold douches to the abdomen and sitz baths of short duration have been tried. Massage executed *secundum artem* in the form of effleurage, pétrissage and tapottement, in connection with Thure Brandt's *Unternierenzitterwirkung* and faradaization of the abdominal walls, intragastric faradaization and galvanization, have also had systematic trial; but the results, at least in far developed cases, were unsatisfactory. In some instances, some of these procedures are not harmless, but what we gain on the one hand by invigorating the muscles, we may lose on the other by irritating the psyche of a hysterical person. We have to take into consideration that we are dealing with the nervous condition of a patient. But, moreover, all these remedies are illusory in the case of patients of the working class. I might, however, speak favorably in such cases of massage with a cannon ball of five or six pounds' weight, which is cheap, con-

venient, and perhaps more effective than massage with the hands. I might also recommend swimming for such cases, when in season and opportunity is offered, and also, as productive of some good, I might think of the podylaton, commonly, but unfortunately, called bicycle.

None of all the remedies just mentioned will I criticise or discard. They may all in their turn serve as adjuvants to the remedy which has given me more satisfaction in grave cases than all the others together.

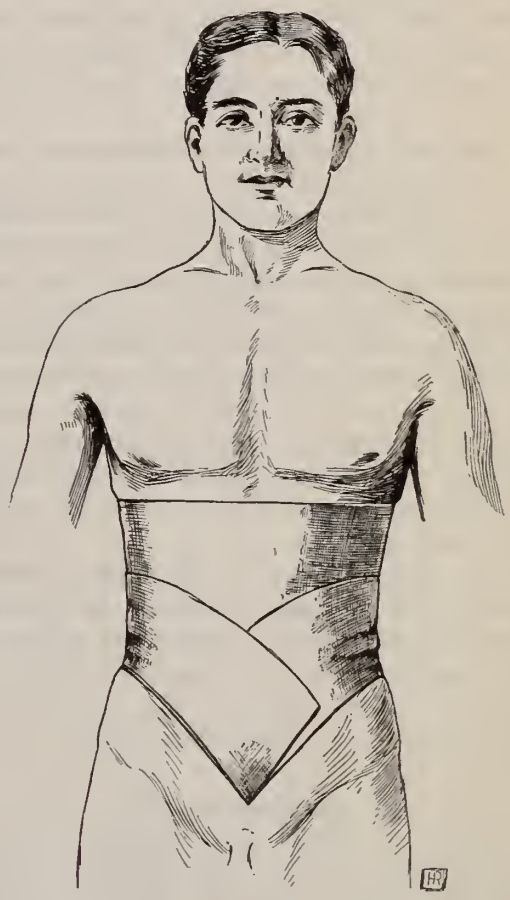
The therapy of gastroptosia consists in the attempt to give tone to the abdominal walls, and, if this cannot be attained, to find a substitute for the loss of tone by means of a bandage. My experience has been scarcely satisfactory with bandages as they are made by the patients or the bandager. Except in Landau cases, it seems difficult to have a well-fitting bandage made. Recollecting how well a broad rubber plaster has served me in cases of umbilical hernia when cut in the shape of the abdominal wall, tapering off behind, and securing to perfection the whole abdomen; recollecting, moreover, how well such strapping has been borne, and knowing of what great service it proves in cases of fractured rib, and in some cases of pleurisy, I have used plaster of the form and in the manner described, in cases of gastroptosia. At first I applied the ordinary rubber plaster only. A piece, of the average size of thirty-six by twelve inches, is cut as follows: The large piece is applied as tightly as possible around the abdomen, drawing it well upward, the two ends meeting or overlapping at the spine. The plaster should not include the crest of the ilium, but should run closely along and above it. The support of the abdominal walls is made perfect by the additional application of the two side pieces of the plaster, extending from the hypogastrium over the inguinal and iliac regions and reaching also to, or near, the spine. In applying the side pieces we may use considerable force.

Most patients have borne this plaster without complaining of irritation of the skin, even during the hot weather; a few have suffered from some itching, especially in warm weather, but not enough to require removal of the plaster; while a very few have complained of eczema to such a degree that the plaster has become unbearable and has had to be removed after a week or two weeks, instead of remaining on for five or six weeks, as in the majority of cases.

Availing myself of a suggestion made by Dr. Leonard Weber, I have protected the skin against such irritation by Unna's zinc rubber plaster, and, which I have found better yet, by Dieterich's india-rubber plaster with zinc. These protective plasters have given great satisfaction; hardly any patient will complain of irritation or ezcema where this plaster is applied.

I have now a record of about 100 cases in which I have made use of this method of treatment.

Most marked and prompt relief has been afforded in such cases of a high degree of gastroptosia in which reflex cough and reflex vomiting were among the symptoms. Patients whose night's rest had been interrupted by almost constant coughing, and whose nutrition had been impaired by frequent vomiting, have enjoyed comfort, after months of distress, at once, the first night after strapping, and have been able to retain at least properly selected food, which they had not been able to do before such strapping. One of the first cases of this kind was that of a woman suffering from pulmonary phthisis associated with gastroptosia. Another case was that of a hard-working woman with gastroptosia, who, notwithstanding her reflex coughing and vomiting, and though forced to attend to housework, was promptly relieved. It is possible that, in this second case, some other treatment in the end might have been successful, but to sub-



ject her to massage, electricity, or hydrotherapy was, on account of the surrounding circumstances, out of the question.

The majority of my patients have been dispensary cases, saleswomen, housemaids, hard-working housewives. In one case of floating kidney, after the plaster had been borne for only six weeks, I observed, for months afterward, that the relief had been permanent, the relaxation of the organs or ligaments suspending the organs, together with the relaxation of the abdominal wall, was no longer found any more; such was, at least, the case when I saw the patient last, six months after the plaster had been removed.

Here is another case:

I. S., twenty-seven years of age, saleslady. Had had

cerebrospinal meningitis, gastroptosia, and nephroptosia, anteversion, descensus of ovaries, gastralgia, hyperacidity, periosteitis of one of the spinous processes of the lumbar vertebræ, and fainting spells. It is true she was subjected at once to treatment of the uterine disorder, the periosteitis, and her enfeebled condition in general, but the principal and decided relief, without which all other treatment might have been of little effect, was given by strapping. Far be it from me to say that the strapping alone is a cure-all in cases of gastroptosia, but it is by all means the most essential in cases of a high degree thereof.

In one case of heart disease complicated with gastroptosia, which I had under observation for two years, I attribute the most excellent results, the marked improvement of the general condition, to the strapping, because, from the time of the first strapping, my patient was able to eat and to digest as he had not been able to do before, in spite of all medical and hygienic measures applied to him.

In one case, a young girl with gastroptosia, was subject to fainting spells several times every day. The plaster was applied in the clinic of the Post-Graduate. No other treatment was resorted to until I had had an opportunity to examine the contents of the stomach. When she came, after having borne the strapping for one week, she reported that her general condition had much improved, and that she had not had her habitual fainting spells. The examination of the contents of the stomach showed achylia gastrica. In this and other cases of women, we have to make allowance for the existence of hysteria, but even so, relief of the gastroptosia cannot be of less importance.

On the whole, in looking up my record, I come to the conclusion that strapping is of great service and gives prompt relief in all cases of gastroptosia of high degree; it is especially valuable where there are complications of lung, heart or uterine diseases.

A case which, in my opinion, is important is the following:

J. M., a boy five years of age, was brought to my office October 10, 1900. Poor appetite, lives on bread and butter and water; absolutely no other food. Has much nausea and vomiting, no pain after eating, and frequently diarrhœa. Enuresis nocturna diurnaque. Is an exceedingly nervous child, very excitable in playing with brother and sister. Well-pronounced gastroptosia. Ordered strychnine and iron, ablution of the whole body with the damp ice-cold sponge. *October 29th*—No improvement. *November 14th*—Still eats nothing but bread and butter, but a little more than formerly. Bowels now regular. Enuresis nocturna less. *March 19th*—Appetite still poor, but has learned to drink milk. Enuresis nocturna diurnaque still continues. Apply rubber plaster bandage. *March 27th*—The bandage has remained well in place and has given no discomfort. The general nervous condition has greatly improved; he is no longer irritable, in playing with other children, as he used to be. Now eats everything, even apples and bacon, although the former caused a slight diarrhœa. Enuresis nocturna now seldom; diurna still exists. Case yet under observation.

How well the plaster is borne was shown by the case of a lady in the higher walks of society, to whom I had applied it to relieve gastralgia remaining after a rest cure for gastric ulcer. This patient wore her plaster bandage for over five weeks, during which time she took her accustomed daily bath. When I removed the plaster, after this period of five weeks, the skin was found in perfect condition.

How the strapping is borne under extraordinary circumstances was demonstrated in the case of an acrobat who performed with heavy iron bars in a variety theatre. Notwithstanding his muscular strength, he suffered from gastroptosia and complained especially of reflex vomiting. He was able to perform with the plaster on, and obtained relief from his distressing symptoms. I lost sight of him. He belonged to a company on the road, a one night's stand, but I learned from the druggist who had sold him the plaster that I applied, that he had written from some distant place for another supply.

It is not my intention to give detailed histories in this paper. The principle of the method of strapping for gastroptosia recommends itself without such histories. All I have to say is that my experience has demonstrated that the strapping, in almost all cases, is well borne, is enthusiastically appreciated by the patient, and, although it has to be renewed in some cases, is invariably of permanent benefit. It is to be hoped that this method will at least be given a chance in cases of floating kidney before they are delivered to the operative procedure of the zealous surgeon.

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WHAT CONSTITUTES SEXUAL INTEMPERANCE?*

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The statements with regard to the customary brutality of man in general, in his sexual relations with the partner of his earthly joys, as published in your issue for January 5, 1901, in an article entitled Sexual Intemperance, by Jennie G. Drennan, M. D., of St. Thomas, Ontario, Canada, which I have just read, while interesting, are certainly worthy of a passing comment or two.

It is not by any means absolutely clear to the one who reads, just what the writer of the article means by "sex-

*A comment on an article entitled Sexual Intemperance, by Jennie G. Drennan, M. D., in the *New York Medical Journal* for January 5, 1901.

ual intemperance." From the text, however, on page 20, it would seem to be implied that only the period when "the physiology of the female generative organs points" to sexual intercourse is the fitting time for sexual union; in other words, that time best fitted for the propagation of the species, and as the author is arguing from analogy with lower animal life, it is presumable that the term sexual intemperance is meant to designate cohabitation at any other time than during ovulation on the part of the female, and certainly during the periods of pregnancy and lactation.

I have no desire to criticise the statements made with regard to sexual union during pregnancy, more especially during the later period of pregnancy described. I only trust that the average husband has more respect for his partner's pleasure and health than thus to risk destroying either. The advice and information on this subject afforded by reputable physicians to-day living, and those long dead, has always been given when asked for, and has been either followed out or rejected. Even in the latter case, I doubt if the asserted results of sickness, insanity, deformity, and imbecility have been very widespread. There is in the majority of men, even when uncivilized, a certain sense of fair-mindedness and decency which is a factor in such matters.

In regard, however, to the propriety or necessity for abstinence of this character during the period of lactation, it would appear that this subject has assumed undue proportion in the eyes of the writer, carried away, as she is, by her principle that ovulation in the female is the only *raison d'être* for cohabitation. What possible injury to the wife or harm to the husband can arise from the rational use of their mutual privileges during this season? I advisedly employ the word use, as I do not imagine any one is speaking of any great sexual abuse; and certainly there is no reference to any sexual perversion in the writer's paper.

The cessation of ovulation in the average woman during the period of lactation was probably originally designed so that she might have, as it were, a space for recuperation and enjoyment after one gestation, before beginning another, and the nature of the human animal—male and female—being, even in those early days, much as it is now, probably it was deemed safest to insure this period of rest by causing sterility, in most cases, in the female during this time.

Allowing, in accordance with the wishes of Dr. Drennan, that married people should abstain from sexual union throughout the woman's pregnancy and the period of lactation following, in all say twenty consecutive months, at the least, does she not think that such periods of debarment from the sexual privileges conferred by marriage would be more than trying to mutual fidelity and affection and would fill the bars of the divorce court even more full than they are at present?

It is possible, perhaps, that I have misunderstood Dr. Drennan when I imagine that she means that the period of lactation should be one of abstinence from sexual intercourse. She implies that it should be abstained from until the infant is "capable of subsisting on other than mother's food"! After all, this period does not literally mean that of lactation and may be said to be at an end as soon as begun. Children, fortunately, are always capable of subsistence by other means than that of a woman's breast.

Dr. Drennan overlooks something when she says: "If in the lower animals there is a time for sexual union, why not so with man?" The genus *homo* is not quite physiologically and psychologically the analogue of the lower animals. In the females of the lower animals—let us take the common domesticated animals for example—there is certainly a well-marked period during which the subject submits or responds to sexual union with her mate (and in the majority of cases fecundation is the result), but it only needs a very casual observer to perceive that there is no such fixed period on the part of the males of the same species. They apparently resemble their human relatives in this respect.

This is a case of the female at certain periods submitting to, allowing, and perhaps responding to, the advances of the male, although it is fair to presume that by both parties the act is attended with—as the writer puts it—"a certain amount of satisfaction," even among the beasts.

In regard to this period—that of ovulation—in women being the proper time for sexual union, it is only necessary to recall the contrary opinion of peoples the world over, *e. g.*, the provisions of the old Mosaic law, although physiologically, and also from analogy with lower animals, this *is* the most favorable period for the propagation of the human species. However, the world has been well peopled so far, and a due regard to the inviolability of women at this period fairly well observed.

But laying aside, in the consideration of the specified period for sexual union of the females of the lower animals, the question of that being the only period when the female will receive the male, the lower animals show another marked difference from the human species, in that this time is also for them the period when the female and the male are most attractive to each other. The courtship of birds and many animals is not at all one-sided, as naturalists know well.

This has, however, no true analogy in the case of men and women, for the woman is at all times, speaking broadly, a subject of sexual attraction for the man, and at all times—save usually at that period of ovulation referred to above, and this by reason of custom and knowledge of the fact that fecundation is more apt to occur then—willing to receive his sexual company; that is to say, that, save in certain not well-defined degrees in sporadic cases, she is equally ready at one time as at another, so far as any physiological process may be concerned, to enter into sexual union with him.

It seems to me, therefore, that it is mainly the *abso-*

lute refusal of the female, together with the lack of attraction on her part for the male, when not ovulating (both reasons may be really essentially the same), which is the barrier to sexual union among the lower animals at other than the fixed periods of the female. Well-regulated morals, superior intelligence, and thoughtfulness for the partner's welfare are certainly not factors in this practically enforced continence.

As stated above, we mortals are, alas! not constructed on these lines. The human female was created with, or has advanced by evolution to, the ability and willingness for sexual union at other than ovulation periods. Why this is so, it would be impossible to conjecture, unless it be that sexual union in the human family might be imagined to have for its purpose more than the one object of the propagation of species.

To the ordinary thinker this would seem to be the case. Dr. Drennan compares the sexual function to that of digestion—functions to be used only for their usefulness in producing certain results; in the one case, offspring; in the other, nourishment.

The taste bulbs and sense of taste are certainly not necessary to the function of digestion, although pleasant adjuncts thereto. Digestion could have been carried on just as well without them, but a great deal of harmless pleasure would thus have been lost to men and women the world over. Gormandizers and epicures from the earliest days may have abused this pleasure, as the drunkard has abused his taste for spirits, but that is no reason why we—the great majority after all—should hesitate before partaking of our "hot bird and small cold bottle" (when we are lucky enough to be able to satisfy our taste), on the plea of palatability not being necessary to digestive procedures.

And in the same way, in the majority of cases, the sexual privileges afforded by marriage, while often not indulged in for the express purpose or with any intention of propagating the species, ought to be quite as harmless morally or physically as the pleasure afforded by the repast referred to. It is a grave mistake to abuse one's digestion, and it is quite as grave a one to abuse one's own reproductive organs or those of others; but it is more than probable that they are hardly abused by either party, or the woman injured, to the extent inferable from the wording of the article under consideration, although as an average thing these same marriage privileges are enjoyed at times other than that designated by the writer, and probably more frequently.

The inference that women are forced—made slaves sexually by their brutal husbands—is, of course, a different matter, and one in which the woman has a just cause for complaint wherever it occurs. There are also men who beat, poison, and otherwise maltreat their wives, but they are *certainly* not in the majority.

Many people, however, are doubtless forced into much that they might have succeeded in avoiding altogether had their wills been a trifle stronger, their influence with the suggester of the unpalatable act a little greater, or their own secret desires a little weaker. *Non omnes dormiunt, qui oculos clausos habent* has been remarked of alleged cases of rape, where the woman alleged that she had been ravished while sleeping. There are more ways of saying "no" than one. The average man is *not* a brute, and has some degree of thoughtfulness for his wife's pleasure, even when balanced against his own sexual desires.

I will not touch on the desire of women "to rid themselves of this function of the propagation of species" or upon the more serious one of abortion referred to by Dr. Drennan, beyond saying that probably to the thoughts of most people entering the married condition this propagation of species and sexual union—although closely allied subjects physiologically—are entirely different matters.

The former is a possible result of the latter, not its end and object, as seen by them. Nevertheless, it has not been the general experience of practitioners that in anything like the majority of cases there is any lasting grievance on the part of the *married* female when fecundation has followed cohabitation.

As is well known, dissatisfaction with maternity among *married* women is an evil more common in what are known as the upper walks of life than in the great masses of the world's population, and even then it would seem that the word maternity is a wrong one to use in this connection; dissatisfaction with *the state of pregnancy* and its attendant inconveniences, and enforced self-denials, especially among young pregnant women would be a truer arraignment against the woman, as there are happily but few mothers who do not ultimately rejoice that "a son is born into the world."

Dr. Drennan is certainly correct in implying that the prevailing ignorance on these matters of physiological structure of the sexual organs, and on the importance of their proper use and abuse, is greatly to be deplored; but it is a dearth of knowledge that, let us hope, will be gradually diminished by the growth of more general information with regard to the structure and *modus operandi* of our earthly tabernacles.

However, that day is yet far away—and it will be a pity, from a moral, ethical, and psychological standpoint (and probably from a physiological one as well), if it ever arrives—when the newly married couple shall commence housekeeping with a calendar marked as to physiologically appropriate dates for sexual union.

But if ever it should arrive, as a result of the great enlightenment of our race, it is fair to presume that, by that date, adaptation in our nature and structure will also have occurred, by which means the human being will have been changed so as to allow of the inception and continuance of such a delectable state of affairs.

Otherwise the aforesaid marked calendar will, by mutual consent of all parties concerned, be relegated to the waste paper basket without delay.

ARGAO, CEBU, PHILIPPINE ISLANDS.

THE PATHOLOGY, DIAGNOSIS, SPECIAL PROPHYLAXIS, AND TREATMENT OF TUBERCULOSIS OF THE SKIN.*

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It is only in a comparatively recent time that cutaneous tuberculosis has been definitely separated from other skin affections with which it is closely allied clinically. The old designation, lupus, which is still used to specify that form most frequently met with, would, in its strict meaning, be equally applicable to certain syphilides and to rodent ulcer. Before the days of exact bacteriological diagnosis these maladies were frequently confounded by the dermatologist as they are now by many practitioners whose opportunities have not afforded them the needed skill in diagnosis.

The number of affections which are now included under the general term of cutaneous tuberculosis has been considerably augmented since lupus vulgaris was found to contain certain tubercle bacilli and to be capable of conveying tuberculosis by inoculation experiments. It now includes acute tuberculous ulceration usually met with about the mouth or anus in patients suffering with pulmonary or intestinal tuberculosis; lupus vulgaris and its clinical varieties; verruca necrogenica or post-mortem wart, and certain conditions called scrofulodermata when the skin is involved secondarily by extension from ulcerating lymph nodes, tuberculous osteomyelitis, or from subcutaneous deposits called scrofulous gummata. The tuberculous nature of all these affections has been definitely established by the usual bacteriological and experimental methods. They differ, however, in their clinical manifestations and pathological anatomy, so that we are perhaps justified in continuing the use of the clinical terms which have been so long associated with the varied conditions. It is not sufficient, therefore, to make a diagnosis of tuberculosis of the skin, but we must define in more exact terms the special form with which we have to deal.

In the acute form of tuberculous ulceration about the orifices, bacilli of a high degree of virulence are inoculated in fissures or in some minor lesion. and produce spreading ulceration with ragged undermined edges and the presence of miliary tubercles. Such lesions are usually painful, show no tendency to heal, and slowly infect the contiguous parts.

Bacilli can readily be detected in the secretion or scrapings from these ulcers. In this respect, and in the virulence of the infecting organisms, this form differs from all other varieties of the affection in question, and notably from lupus vulgaris where the bacilli are very few in number and difficult to detect in sections of tissue.

Lupus vulgaris is characterized by so many distinctive features that it almost deserves to retain its place as a definite morbid entity. In its remarkably slow and indolent course it presents a striking contrast to the superficial serpiginous syphilide with which it is so often confounded. Its ravages are generally limited to the skin and superficial tissues, and, though producing marked deformity of these organs, unlike syphilis or epithelioma, it rarely involves the bones.

The characteristic lesion of lupus is a peculiar yellowish and brownish-red nodule, somewhat translucent, which is situated deeply in the skin. It spreads by the formation of new nodules, which destroy the invaded parts by ulceration or atrophy. The lupus nodule, when obscured by surrounding hyperæmia, may be rendered visible by pressure with a piece of glass, as a microscopic slide, which empties the hyperæmic vessels and brings into clearer view the new formation. The disease may be limited to a single patch and remain as a small localized lesion for many years. On the other hand, numerous lesions may by their coalescence involve large areas of the skin, presenting central scar formation with peripheral active development. The recurrence of lupous nodules in the scar tissue, spontaneously formed or following operative interference, is of common occurrence, and no case can be regarded as cured when such nodules are revealed by the diascopic method to which reference has been made.

As with tuberculosis of other organs, after a period of active extension the process may remain quiescent for a long time. It may again become actively inflamed, ulcerate, and be followed by enlargement of the communicating lymph nodes. It has been noted that scarification or curettage of a lupous patch is sometimes followed by swelling, redness, and other evidence of an acute inflammation similar to the phenomena which appear in lupous tissue after a tuberculin injection. A generalized tuberculosis has been observed by Besnier to follow scarification of lupous patches, and such treatment has been condemned by him for this reason. Secondary infection with pus-producing organisms may give rise to considerable discharge and crusting of the original affection, so that its features are so obscured as to render a diagnosis at first inspection difficult. I have in mind a case of lupus of the arm of some fifteen years' duration in which various diagnoses had been made on account of this complication. After the use of local antiseptics the original condition was brought prominently to view and the proper treatment successfully carried out.

The lupous process presents certain peculiarities which depend somewhat on the locality involved. An excessive development of fibrous tissue may take place around and in the morbid tissue, which tends to arrest the progress of the new growth and to produce the variety to which the name sclerotic lupus has been applied. Frequently recurring inflammation and lymphatic infection of lupus of the extremities result at times in the production of a pseudo-elephantiasis in which the original

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disease may almost disappear, or only be recognized here and there by a careful examination. In lupus verrucosis the epithelial layers of the skin undergo hypertrophy, and this is specially noticeable in the hands and feet, where the epidermis is normally thick.

The bacilli or their toxines undoubtedly have a stimulating effect on epithelial proliferation, as seen in the post-mortem wart and in tuberculosis verrucosa of Riehl and Paltauf. The new development of epithelium tends to circumscribe the lupus nodule and disguise to some extent its true character. In such case the bacilli do not penetrate deeply and the reaction in the derma is rather superficially situated. The prognosis is correspondingly better, as there is less tendency to recurrence after the removal of the affected skin.

This epithelial hypertrophy has a direct bearing on another complication of lupus, viz., epithelioma, which occurs with sufficient frequency as to indicate something more than an incidental relationship.

The morbid condition of the connective tissue permits a more rapid development of the growing epithelium, so that we have a tumor of more malignant type than when independent of such a connection.

The prognosis of epitheliomas which develop in lupus is of greater gravity than that of the ordinary surface epithelioma.

Secondary Tuberculosis of the Skin—The So-called Scrofulodermata.—From a clinical standpoint the so-called scrofulodermata are to be sharply distinguished from the primary forms of skin tuberculosis, which have been defined. They generally follow tuberculosis of the lymph nodes, the lymphatic vessels, tuberculous osteomyelitis, or tuberculosis of the tendon sheaths, bursæ, etc. Adhesions form between the underlying morbid process and the skin, and fistulous openings appear, giving rise to the familiar clinical picture.

A lupus vulgaris of the skin, with its brownish-red nodules, has exceptionally been observed to start from such discharging fistulæ. On the other hand, the cutaneous and subcutaneous lymphatics have become infected by a skin tuberculosis, resulting in secondary abscesses along their course. These are exceptional occurrences, however, as the two types of tuberculosis generally preserve their distinctive features. As in lupus vulgaris, which is imitated so closely by the serpiginous syphilide, so the scrofulodermata find in the syphilitic gummata striking resemblances, and demand more than a passing observation to reveal their true nature.

In addition to the forms of tuberculosis which have been touched upon, and which are of known bacillary origin, there is a growing tendency, especially in the French school of dermatology, to group together a class of dermatoses which occur with more or less frequency in subjects of tuberculosis. These affections, which include lupus erythematosus, lichen scrofulosorum, and various disseminated papular and necrotic eruptions, are considered to be due to the soluble toxines of the bacilli carried to the skin from some extracutaneous focus.

The general term tuberculides, or toxituberculides, has been proposed for this group of cases; the arguments used to support their toxinic origin are the following: In two thirds of the cases there is present a tuberculosis of the lymph nodes or viscera; the lesions themselves, with the exception of lichen scrofulosorum, are free from micro-organisms; inoculation experiments give negative results; and the eruptions are symmetrical in distribution and some of them closely resemble true tuberculous lesions.

In certain rare forms of lupus erythematosus the outbreak on the skin is accompanied by fever, albuminuria, acute pulmonary tuberculosis, bronchopneumonia, and rapid death.

Histological examination of the excised pieces of tissue usually shows, not the ordinary structure of tuberculous tissue, but marked vascular changes, consecutive necrosis, or slow degenerative changes in the connective tissue, leading to its atrophy.

Cultures of tubercle bacilli have been shown to contain a necrotizing substance and the evolution of these various lesions may depend in some way on the action of such a chemical poison on the blood vessels of the skin.

The theory proposed is an ingenious one and affords an explanation of those rapidly fatal cases which have been described by Kaposi and others.

In the majority of cases lupus vulgaris is probably due to accidental inoculation of the tubercle bacilli on the skin or adjacent mucous membrane. The infection may take place on some abrasion, fissure, or some other skin lesion. Direct inoculation has been observed to follow vaccination, tattooing, and accidental pricks with needles or other objects, which had come in contact with tuberculous matter. Latent tuberculous lesions of the nasal cavity may infect the lymphatic vessels and cause the disease to develop in a symmetrical manner over the face.

The possibility of infection through the blood stream is not excluded, for a generalized eruption of skin tuberculosis has followed measles and other infectious processes.

Age is a strong predisposing factor in lupus, for more than seventy-five per cent. of the cases begin before the age of twenty. The more delicate structure of the tissues in the young favors the penetration and growth of the bacilli.

As to the probability of generalized infection following the local disease, the greatest difference of opinion exists. Leloir has reported ten cases of general tuberculosis in seventeen cases of lupus. Other statistics agree in the main with this writer. On the other hand, certain dermatologists have never seen lupus followed by general tuberculosis. We know that it frequently exists for thirty years or longer, and yet exerts no deleterious in

fluence on the general health. It may even confer a certain degree of immunity to the affected individual.

Histology: The structure of the lupus nodule is similar to that of other tuberculous tissue. It consists of a network of connective tissue enclosing numerous collections of cells which have been variously designated epitheloid, plasma cells, and uninucleated leucocytes. Giant cells are frequent in the new growth, which extends deeply in the corium or to the subcutaneous tissue.

In warty tuberculosis epithelial hypertrophy predominates and the tissue reaction is more superficially seated. The cells of the new growth soon undergo degeneration, probably owing to the action of the tubercular toxines; the centre of the invaded tissue clears up, while steady progression takes place at the margins.

Bacilli are few in number and difficult to detect by the ordinary methods. They can sometimes be found in greater numbers by crushing a small piece of freshly removed tissue between two slides and staining as in ordinary sputum examination.

Inoculation experiments are usually successful. It is probable that in lupus we have a form of tuberculosis due to some attenuation or modification of the virus and for this reason its slow clinical course is to be explained.

Diagnosis: A number of chronic affections of the skin manifest themselves by a deposit in the derma, which shows a tendency to clear in the centre while spreading at the edges. Aside from lupus, late syphilis and certain forms of epithelioma progressively infect the skin in this manner and are not infrequently mistaken one for the other. Nodular or gummatous syphilide of the skin is much more rapid in its evolution; it lacks the translucent nodule which is present in lupus. It is firmer in consistence and does not tend to invade the scar tissue. There are usually other concomitant marks of syphilis about the skin or mucous membranes, which assist in diagnosis of doubtful cases. At times we must have recourse to the therapeutic test.

The diagnosis of serpiginous epithelioma is not so difficult, for we are aided by its onset late in life and by the presence of elevated waxy-looking margins due to the proliferating epithelium. A microscopic examination should remove all doubt, which is not always the case when we are looking at lupus or syphilitic tissue. When epithelioma develops on a lupous surface the question of diagnosis is somewhat more complicated. Lupus erythematosus is characterized by symmetrical erythematous patches, sometimes scaly, terminating in central atrophy, but having no lupus nodules. It is also a disease of adult life, but not exclusively so.

Glanders and actinomycosis of the skin are rare conditions which have more of a theoretical than practical interest in connection with the diagnosis of cutaneous tuberculosis. The possibility of their occurrence, as well as of that of sarcoma and leprosy, should, however, be borne in mind in unusual cases.

Blastomycetic dermatitis and skin infections due to a protozoon are late candidates for diagnosis. They have been confounded with forms of skin tuberculosis and with dermatitis due to staphylococcus infection. In these unusual infections, which were first described by Gilchrist, there are epithelial proliferation, numerous miliary abscesses, and giant cells in the skin; in fact, many of the gross as well as the minute characteristics of tuberculosis. The protozoa or blastomycetes are not, however, difficult to detect with the microscope, while inoculations for tuberculosis fail.

Some unusual types of streptococcus and staphylococcus infection of the skin present somewhat similar appearances at times, and can only be distinguished by bacteriological research.

Late syphilis may infect the lymph nodes as a gummatous infiltration, and is difficult to distinguish from tuberculous infection of the same structures. Deep cutaneous or subcutaneous gummata in both infections may closely simulate each other, but can usually be distinguished by carefully estimating all the accompanying conditions. Tuberculosis is here, as in the superficial tissues, a slower process than syphilis.

Little can be said as to the special prophylaxis of cutaneous tuberculosis aside from the general hygienic laws which pertain to tuberculosis in general. Accurate diagnosis of early manifestations when the skin is primarily involved, ought to insure radical treatment and prevention of its extension. As a matter of fact, the cases are usually well marked when they first come under observation, so that early destruction of the lesions is precluded.

When extension from underlying lymphatic structures or bone takes place, the surgical rules which apply to these lesions should be carried out.

The education of the masses as to the infectiousness of tuberculosis, together with personal cleanliness, should be effective in preventing some cases of local tuberculosis.

Treatment: The treatment of tuberculosis of the skin depends on the form in question, the extent of tissue involved, and the locality implicated. Tuberculous ulceration about the orifices is usually preceded by grave pulmonary or intestinal tuberculosis in an advanced stage. We have to content ourselves in most cases with local remedies which alleviate without holding out any prospect of permanent cure. Iodoform is one of the best of these, as it relieves pain besides promoting healing. Should more radical measures be deemed expedient, the Paquelin cautery under local anæsthesia enables one to penetrate deeply without loss of blood.

Anatomical tubercle and other forms of papillary tuberculosis of the extremities are best removed with the sharp curette after local anæsthesia with the chloride-of-ethyl spray.

The morbid process is superficial, being mainly in the epidermis and papillary region, and generally shows less tendency to recur than ordinary lupus.

Numerous surgical and dermatological methods have

been employed in treating lupus vulgaris, the best of which comprise total excision of the patch with skin grafting; destruction of the diseased tissue with chemical caustics, the Paquelin or galvanocautery, curettage, linear scarification, and finally the concentrated chemical rays of light, as proposed by Finsen, of Copenhagen. Lang, of Vienna, is at present an enthusiastic advocate of the excision of lupus tissue, and reports over sixty per cent. of cures in thirty-five cases operated upon. This method is to be recommended in a certain class of cases. It is not, however, applicable to cases of wide extent, or where the affection is seated about the eyes, nose, mouth, etc. Lupus of the face in general is not well adapted to this form of treatment.

Lupus tissue may be destroyed by chemical caustics, such as nitrate of silver, chloride of zinc, arsenious acid, and agents of like character. They are, however, much less frequently employed than in former years, and chiefly after the morbid tissue has been scraped away with the curette.

As the lupus tissue is much softer than the surrounding skin it can readily be removed by curettes of various shapes and sizes, leaving much of the normal skin intact, and preventing the disfiguring scars which result from more active surgical methods.

When the lupus nodules are too small to permit their removal with the curette, the dental burr, as recommended by Dr. Fox, can be made to penetrate to the bottom of the lesion and complete its destruction. There is much less probability of a recurrence of the lesions if a chemical caustic is applied to the resulting raw surface. Chloride of zinc and pyrogallic acid are the best of these. The former may be applied, either pure to a limited surface, or in the form of a paste if a larger surface is to be treated. Pyrogallic acid is a milder caustic, but has a more or less selective action, like arsenic, on pathological tissue. In special localities, like the eyelids or external ear, the Paquelin or galvanocautery is an excellent supplementary measure. The actual cautery may also be used to destroy relapsing nodules, and is chiefly relied on where the mucous membranes are implicated.

Linear scarification is not a favorite method of treating lupus in this country, although its advocates assert that it produces less disfiguring scars than the methods touched upon in this paper. It is tedious, painful, attended with considerable loss of blood, and open to the theoretical objection that secondary tuberculous infection may follow.

Dr. Finsen's method by concentrated light, which has been filtered of its heat rays, is now attracting some attention. It has doubtless cured some cases, but is exceedingly slow in its action, requiring several months to effect a resolution of the disease. Similar results have followed the use of the Röntgen rays.

Tuberculin, though practically discarded in the treatment of lupus on account of the danger of disseminating the disease, has undoubtedly rendered a number of cases in which it has been used more amenable to local treatment, and seems to have prevented recurrences. It has lately been revived by Hallopeau, in France, as a local remedy. Applied to lupus tissue, it is followed by a pronounced reaction and subsequently by a diminution in the infiltration. Used in this way it is perhaps worthy of further study.

The treatment of the ordinary forms of scrofuloderma is purely surgical and is too well known to require further elucidation.

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PRIMARY CHANCRE OF THE SÆPTUM OF THE NOSE.*

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EXTRAGENITAL infection with the syphilitic virus is nothing new, and its occurrence is rather too frequent to be especially noticed. Still, the cases described below offer some unusual features which are of more than ordinary interest.

The primary lesion in and about the mouth is, perhaps, chiefly met with in these cases. The transmission by kissing and through drinking cups is probably the most common means of conveying the disease to the innocent. That these sources of infection can and ought to be avoided there is no doubt.

Cases of initial sclerosis of the tip of the tongue and of the tonsils are also reported here and there. In this connection I might mention a case which I saw only a few days ago. It concerned a man, thirty-two years of age, who was referred to me by a colleague in St. Louis. This young man is a drummer by trade and a fellow who comes in contact with all sorts of men and women, especially when he is drunk. About two months previously to his first visit to me he noticed a sore on the tip of his tongue that steadily grew larger. It is not painful, but he feels it when he eats sugar. On examination I saw an ulceration on the tip of the tongue of the size of a bean. It looked whitish, as he had been using astringents on it. The submaxillary glands of the right side and the anterior and posterior cervical glands were very much swollen; the corresponding glands on the other side were also enlarged, but to a less degree. There was, moreover, a papular eruption on his body. All these together made the diagnosis of syphilis absolutely sure, and it was also beyond doubt that the initial sclerosis had appeared on the tip of the tongue. Where and how he acquired this chancre of the tongue the man avers that he does not know.

The most interesting contribution on this subject was published some eleven years ago by A. Pospelow (1). His experience covered a period of ten years. The total

*Read before the Metropolitan Medical Society, April 23, 1901.

number of extragenital syphilomata observed by him during that time amounted to 198 cases. Of these there were on the lips 49 cases; on the tongue, 3 cases (one in a man and 2 in women); in the pharynx, 46 cases (14 in men and 32 in women); on the mammæ, 69 cases; on the chin, 1 case, in a woman; on the nose, 1 case, in a man; on the eyelids, 3 cases, in men; on the trunk, 10 cases, in men; on the anus, 5 cases, in women; on the upper extremities, 6 cases (3 in men and 3 in women); on the lower extremities, 4 cases, in women. Out of these 198 cases, 145 were in women and 53 in men. The preponderance of women affected is greatly due to their being infected on the mammary glands by syphilitic nurslings. Just half of these cases (ninety-nine) were in and about the mouth. It is beyond doubt, says C. Bruhns (2), that only in the very rarest instances were these primary lesions acquired through abnormal sexual practices. The usual way of infection was by kissing persons with recent syphilitic lesions, or frequently through the use of infected drinking vessels, forks, and other utensils employed in domestic life, as well as in various vocations. To the latter category belongs the syphilis of the glass blowers, which in former years was not infrequent. The practice of passing the blow-pipe quickly from mouth to mouth caused whole endemics of luetic infection in single factories. Pospelow mentions especially that primary chancre in the mouth, due to the common use of domestic utensils, is much more frequent in the lower classes of the population, where absolute ignorance of the above-mentioned dangers frequently goes hand in hand with total lack of cleanliness. These cases are no longer curiosities, but are of great importance from a clinical point of view. "La connaissance de ces contagions insolites excentriques, extraordinaires," says Fournier in his *Leçons sur la syphilis* (1881, p. 43), "n'est pas seulement affaire de curiosité; elle comporte un intérêt sérieux, un intérêt veritablement clinique."

Of even greater interest are the primary chancres of the nose. There are but few cases recorded in the literature, and I shall mention these here briefly. Pospelow (*l. c.*) mentions one case of a man, thirty-six years of age. The sclerosed primary ulcer occupied the whole of the right ala nasi. The submaxillary glands were enlarged and hard to the touch, both conditions being more pronounced on the right side. The infection had taken place most probably through a towel used by several of the patient's roommates, one of whom was without doubt syphilitic. According to O. Seifert (3), however, the first one to report such a case was Spencer Watson.

M. Krelling reports from the poliklinik of Lesser, in Leipzig, the case of a woman, thirty-five years old, with primary sclerosis, also of the right ala nasi.

A. Morel Lavallée (4) saw two cases of primary syphilomata "on the nose." N. S. Speransky (quoted by Pospelow) treated a case in which a hard chancre developed after a bite in the nose. William C. Wood (5) describes an interesting case in which, in a drunken row, a man who had struck a companion on the mouth, just scratching his own skin, or, as he stated it, "hardly drawing blood," had contracted syphilis. Wood was treating the person struck for syphilitic sore mouth, so there was no question about the correctness of the diagnosis.

A paper on this topic would not be complete without mention being made of Dr. L. Duncan Bulkley's valuable book on *Syphilis in the Innocent (Syphilis insontium)*. Bulkley gives a table comprising 7,123 cases of syphilis reported by different authors. Of these, there were 353 extragenital cases, or almost 5 per cent. of the entire number. But he believes that extragenital chancres are much more frequent and that they probably amount to 10 per cent. of all the cases.

In Table III he reports 9,058 cases of extragenital chancres collected from various countries; of these, 95 were on the nose, but Bulkley does not give more particular data regarding the seat of the lesion. Bulkley himself saw one case of primary chancre of the ala nasi.

I have to mention, further, E. Laurent (6), who observed a case of a man who presented a primary hard chancre at the root of the nose two months before the eruption of the skin appeared. A. Jacobi, of Königsberg, Prussia (7), found a primary nasal lesion on the middle turbinated of a married sergeant, the mode of infection being unknown.

Another case, in a woman thirty years of age, was reported in an interesting paper by Joseph A. Kennefick (8). There was a shelving ecchondrosis of the sæptum, and on top of this a "characteristic punched-out ulceration with well-defined border, rounded and elevated, and a dirty yellowish base." According to G. Le Bart, altogether 35 similar cases have been reported.

Perhaps to this same class belongs a case described not long ago by George L. Richards, of Fall River, Mass. (9). He says: "Students of Hajek's Clinic, in Vienna, will recall a case of primary chancre of the nose he was wont to describe. The victim was a physician who had examined a woman *per vaginam*, not knowing at the time that she was syphilitic; subsequently he picked his nose with the finger, and inoculated himself with syphilis, the insufficiently cleansed nail carrying the virus." Dr. Richards does not state on what part of the nose the chancre first showed itself.

I have had under my care a case with exactly the same history, and the location of the initial lesion was so unusual that several prominent rhinologists of this city failed to make a diagnosis. As the patient himself, who is a physician, asked me to publish his case for the benefit of others, I shall now report it.

———, M. D., thirty-two years of age, has always enjoyed perfect health until a few weeks ago, when he commenced to feel a dryness in his nose. It was very difficult for him to breathe during the night. The throat commenced to swell at the same time. One morning he noticed a small "sore" on the right side of his sæptum narium. During the day he had no difficulty in breathing, viz., when he was out attending to his practice, but when

he returned to his steam-heated apartment, he noticed very soon that breathing became difficult. He consulted a nose specialist in this city, who gave him a spray that did not relieve him at all. He used some ointment, on his own judgment, but without any relief. The symptoms gradually becoming worse, after having seen several other specialists he came to me for advice. He complained of frontal headache, and the other symptoms already mentioned. When he was in his apartment for any length of time his nose closed up and he had to syringe it. At night time he had to get up three or four times in order to moisten his nose, which was extremely dry, but nothing helped him. About one month after his trouble commenced he observed that the occipital glands of the right side and those on top of the head began to swell and ache severely. The patient did not suffer from influenza, although he called on me just at the time when it was endemic in this city. Although he had some fever and chills, these passed away very quickly. It is peculiar that during that same winter I had had occasion to notice glandular swellings on the top of the head in several cases of influenza affecting the upper air-passages or the ear. This symptom, together with the fever, made me believe that I had to deal with the sequelæ of a case of genuine influenza, in spite of the fact that Dr. X. himself previously did not believe it. The trouble in his nose I attributed to an extremely dry condition of his mucous membrane. Just at the locus Kiesselbachii there was a small sore that looked exactly like the beginning of a perforating ulcer of the sæptum, which I had seen develop quite frequently in consequence of picking the nose with the finger; and, moreover, the doctor had this habit. There was a whole chain of swollen glands on the right side, extending from the frontal bone down to the neck. I made the usual applications and ordered the usual hygienic measures, expecting the ulcer to heal within a short time. But instead of this it grew larger, although the doctor positively denied having picked his nose again. Now the glands on the other (left) side commenced to swell, the erosion became an outspoken ulcer, the submaxillary glands of the right side became involved, and, finally, the ulcer presented the characteristic appearance of a specific ulceration with its edges elevated above the level of the mucous membrane. The diagnosis was no longer doubtful to me, but the situation rather embarrassing, as the doctor had been happily married six months previously. Still, when I told him my idea of the nature of his trouble he remembered having examined *per vaginam,* in a dispensary some time ago, a woman who afterward proved to be syphilitic. Undoubtedly, while discussing this case with some other colleague, he picked his nose unconsciously with his finger, having forgotten to wash his hands first, and thus inoculated the dangerous virus into his own system. Very soon the secondary eruptions appeared over the entire body, the disease running its usual, and in this case favorable, course. Lately, *i. e.*, two years after the occurrence of the infection, when I saw him again there had not been any symptoms for about a year.

In going over this case we observe that here, as well as in other cases of extragenital chancres, the diagnosis was not easily made. In the first place, the chain of swollen glands did not direct attention toward syphilis. As I have remarked before, the patient became sick at a time when influenza was endemic. During that very period I had seen several such instances in which the glands behind the ear and on top of the head were swollen. As in the above case the first symptoms were fever and swelling of these glands, I naturally attributed both to *la grippe.* It was not until later that the affection of the submaxillary glands, which by Pospelow and the other authors is considered pathognomonic, took place. None of these writers, however, mentions any swelling of the glands of the vertex and the occipital glands, not even in those cases in which primary lesions in the upper parts of the nose (middle turbinated) are reported.

Another factor that made the diagnosis difficult was the location of the ulcer on the sæptum, and at just such a place where the so-called (Voltolini) ulcus sæpti nasi perforans usually occurs. We have to enter a little more into detail regarding these latter ulcerations, as they are of the greatest importance to us in this connection. We know that perforations of the sæptum narium are not necessarily always of specific origin, as was formerly believed. They are often only the result of boring the nose with the finger, or picking with the fingernail. This causes bleeding, excoriations, and ulcerations, which may heal in any stage, or finally go on to perforation.

Now, why do people pick the nose with the finger? The answer to this question is very simple. As a rule, they suffer from a dry rhinitis, with formation of crusts, and in the effort to get rid of these they make use of the finger. Permit me to quote from a paper of mine, published in 1891, a very interesting case belonging to this category:

"Henry L., a carpenter, sixty-five years of age, German, was attacked about seven years ago with pains in the left supraorbital region, which grew worse steadily. They extended toward the nose, and along its left side, and gradually spread over the whole left side of the face. The chief pain was in the region of the canine fossa and the ala nasi, and inside of the gums along the upper jaw. It is evident that we had to deal here with an infraorbital neuralgia. With these complaints he consulted me about two years ago. He is a most nervous and excitable fellow, working constantly with his fingers in or on the nose, and in such a comical way that one can hardly suppress laughter. As described by him, "it itches and tickles, and stings inside," so much that he cannot sleep on account of it. For this reason he could not follow his vocation as a carpenter. He had an atrophic rhinitis and a slight hypertrophy of the left lower turbinal. This was cauterized, but without the least result. The patient soon disappeared. A year ago he returned with exactly the same symptoms, only to disappear again after a short time. About a month ago he returned for the third time, and I was not a little surprised when on examination I found a complete perforation of the cartilaginous sæptum. It was oval in shape and directed toward the right, and from below upward. The opening was larger on the left side than on the right. The mucous membrane on the borders was very thin and smooth—no ulceration. I asked myself whence this perforation came. I naturally thought of syphilis, and gave the patient large doses of potassium iodide, although absolutely no other symptoms were present. But no improvement followed. Inunctions had the same negative

result. As, moreover, tuberculosis was not present, I had to come to the conclusion that I had to deal here with a genuine case of perforating ulcer of the sæptum narium. The patient picked his nose constantly, thus producing an abrasion which, in the course of a year, became an ulcer, and then gradually, in the manner described above, the perforation we have now before us. I should like to mention as characteristic, the peculiar oval defect just in the direction in which he inserted his finger; furthermore, the thinness of the mucous membrane around the perforation, and, finally, the absence of any pathological change in the neighboring parts."

To return to our colleague, he had similar symptoms at the commencement of his trouble. He had a very dry rhinitis, and he had the beginning of a perforating ulcer. This ulcer showed surely no signs of syphilis in the first weeks. It looked very clean, because the doctor sprayed his nose, inhaled, or bathed it almost constantly. Not until later, when the induration appeared in connection with glandular swellings, was the case clear. No doubt, the doctor was in the habit of picking his nose, and the shape of the ulcer reminded me very much of the case of the carpenter cited above. Perhaps, with his atrophic rhinitis as a persistent cause, the doctor would have developed, sooner or later, a perforating ulcer of the sæptum of the nose, but, naturally, not specific in nature.

There is one point more which I should like to mention briefly, viz., Must a lesion of the epithelial layer be necessarily present before a syphilitic infection can take place? It seems that this is not always essential. Most of the cases of extragenital chancres occur in and around the mouth, and in many instances a lesion has not been found at all. We have an analogy in the tuberculous virus. As has been shown by several observers, the tubercle bacilli can penetrate the intact mucous membrane, but the difference in the development of the two infections is very marked. In Wood's cases, cited above, a healthy man struck a syphilitic person on the mouth "hardly enough to draw blood," and developed syphilis. This would never take place in tuberculosis, where the individual must have a *locus minoris resistentiæ*, in order to favor the development of the infectious or contagious virus. "The virus of syphilis," on the other hand, "is one of the most energetic and certain of animal contagions, and exerts its power whenever and wherever it can find a suitable opportunity" (Bulkley).

There are undoubtedly many more cases in which physicians have acquired syphilis in a similar manner, as above stated, but for obvious reasons only few of these are reported. If physicians would remember that they should use ordinary precautions against infection, not only for the sake of their patients, but for their own sakes, such unfortunate accidents could be entirely prevented.

Since writing this paper an interesting article has appeared, by Sendziak, of Warsaw (Ueber luetischen Primäraffekt in der Mund- und Rachenhöhle, so wie in der Nase unde den Ohren. *Monatsschrift für Ohrenheilkunde,* 1900, p. 419), to which I would refer for further statistics.

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SYPHILIS OF THE NERVOUS SYSTEM.*

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Among the manifestations of syphilis, those affecting the nervous system, and particularly the brain and spinal cord, are by no means infrequent. They occur sufficiently often to require the serious attention of the general practitioner, who may often be confronted with them in so marked a form that he is entirely at a loss how to interpret them. Some familiarity with the symptomatology of cerebrospinal syphilis, so called, is therefore essential, especially since the recognition of the disease may enable us to obtain gratifying therapeutic results in apparently desperate and irremediable cases. It is true that these sometimes brilliant therapeutic results are not always of long duration, the tendency to relapse being quite marked in many cases, but this should not prevent us from striving to do all we can. Oftentimes the relief given by appropriate treatment is so great that this alone should make it worth while to use our best efforts, which are commonly rewarded by gratitude on the part of the patient.

We know how difficult it frequently is to get a definite history of past syphilitic affection. In some cases a chancre was present, but no secondary manifestations appeared, making it thus doubtful whether the chancre was of a syphilitic or non-syphilitic nature. In other cases, again, the secondary symptoms may have passed unnoticed. Or the primary affection may have such a

*Read before the Brooklyn Medical Society, also before the Kings County Medical Association.

bizarre or uncommon location that it is unnoticed or misinterpreted. I remind you in this respect of the concealed chancre in the urethra simulating gonorrhœa, and also of primary chancre of the vaginal portion of the cervix; furthermore, you are acquainted with the occasional chancre of the lips and the chancres of the fingers to which physicians and especially surgeons frequently fall victims. Finally, the patient may be in a comatose or delirious condition, or be otherwise mentally deranged and unable to give a history.

Keeping all these points in view, it is evidently very important to obtain guiding lines which may enable us, in a given case, to diagnosticate syphilitic disease of the nervous system independently of a history of syphilitic infection.

DIRECT SIGNS.—In looking for such guiding lines we must bear in mind, in the first place, that syphilis is a constitutional disease, a general infection.. Its manifestations are therefore not confined to a single part of the body or any single organ, but are scattered here and there over the whole organism, affecting one part more, another less. Some of these manifestations disappear, leaving hardly a trace, if any; others leave lasting changes, such as scars, gummata, etc. Consequently one of our guiding lines would be the presence in the organism of changes pointing in a more or less definite manner to a past syphilitic affection. Among these changes we shall have to consider those of the skin, the mucous membranes, the eyes, the heart and blood-vessels, and the internal organs. It is not the purpose of this paper to enter upon all these signs in detail; only those which are of particular diagnostic importance will be mentioned.

The Cutaneous Manifestations.—The external genital organs ought to be first thought of. The presence of a scar of the præputium or labia, etc., should arouse our suspicion; but, while the presence of such a scar or scars is of much positive value, although not a definite proof of syphilitic affection, its apparent absence should not be relied upon as speaking against syphilis, since the primary chancre may leave so little of a scar as to escape detection; moreover, as has been pointed out already, the primary affection may have been located elsewhere.

Among the other cutaneous affections, we have to distinguish fresh, or florid, manifestations and, secondly, the old ones, that is, evidences of a past process. The fresh ones when found are, of course, of great value, their syphilitic nature being recognized either by their character (for instance, a roseola or a papular exanthema) or by their clinical course, especially under antisyphilitic treatment.

However, in cases of cerebrospinal syphilis it seldom falls to our lot to meet with fresh affections, which occur mostly in an earlier stage, and we must therefore rely more upon evidences of past affections, principally cutaneous scars. The secondary cutaneous syphilitic eruptions, such as the roseolar and papular, usually leave no scar, but the tertiary ones, such as ecthyma, rupia, etc., leave scars which are rather characteristic. It is the flat, slightly sunk in or somewhat scooped out white scar which, if found in considerable number, and especially if of symmetrical distribution, is typical of past syphilis. The multiple small scars found on the forearm of blacksmiths will hardly be mistaken for syphilitic scars. Scars from small-pox are also very unlikely to be mistaken for syphilitic ones, being usually much smaller, deeper, and more irregular, and frequently pigmented.

Loss of hair is another important sign and can hardly be mistaken for alopecia areata, in which the areated distribution of the hairless regions is so typical that the two can certainly be distinguished.

As to the manifestations on the part of the mucous membranes, I would call special attention to the importance of examining the pharynx and often also the larynx. While mucous patches are seldom encountered at the stage when organic cerebrospinal syphilis occurs, we may find a gumma of the soft palate or a syphilitic perichondritis of the larynx, or an old stellate scar of the soft palate or larynx. An examination of the rectum, vagina, and uterus may disclose similar manifestations. In one of my cases the diagnosis of cerebral syphilis was corroborated by finding a large white scar of the soft palate and uvula. The autopsy revealed the presence of gummata in the brain. In this case one physician expressed great astonishment at my diagnosis. Had he looked at the soft palate, he might easily have made the diagnosis.

Manifestations on the Part of the Eye.—These may often be of great importance. The presence of a fresh iritis, especially of a fresh plastic iritis, which is almost characteristic of syphilis, or the discovery of adhesions of the iris, pointing to a past iritis, are of great diagnostic help, although they are frequently missing. The pupillary changes caused by old adhesions ought not to be confounded with those pupillary changes which are due to faulty innervation, of which I shall speak later. I mention also interstitial keratitis, very frequently of syphilitic origin.

Ophthalmoscopic examination may lead to the discovery in the fundus of the eye of vascular changes which may give very valuable clues, such as an obliterating endarteritis, or tortuosity of the arteries, or hæmorrhages. In one case which Dr. Coffin saw with me, these three changes were very marked, and Dr. Coffin said that the shape of the hæmorrhages, which were small and wedge-shaped, was almost characteristic of the disease. In that case there was also marked optic neuritis, a symptom which, although found in a great many other affections, yet may often serve to confirm the diagnosis if other symptoms point to a syphilitic brain disease.

Syphilitic Symptoms on the Part of the Heart.—Of these, I wish to point out the tachycardia and the irregularity of the heart's action, often met with, either combined or one alone, and both probably the expression of a syphilitic affection of the myocardium.

Vascular Changes.—On the part of the vascular sys-

tem I have already pointed out the obliterating endarteritis that we may encounter in the blood-vessels of the retina, but other blood-vessels may also be diseased, and I remember one case, in particular, in which the radial arteries were so tortuous and thickened that they could be seized and rolled between the fingers, and yet they lacked the stiffness which is found in advanced senile arteriosclerosis.

The condition of the arteries of the foot may also be of great value in this respect, as those arteries may have the same character as I have described for the radial one. Such arterial changes will prove especially important if found in a person under forty and showing no other cause for arterial degeneration, such as alcoholism, the morphine habit, lead poisoning, or Bright's disease.

Internal Organs.—Of the syphilitic changes of the internal organs, I shall say only that we may have syphilitic pulmonary changes, manifested frequently under the picture of a bronchitis or of incipient phthisis, or there may be alterations in the shape of the liver, especially retractions of the surface or margin, which are pretty characteristic of syphilis, and combined with this we may find enlargement of the spleen.

I have repeatedly been asked the following questions, which possibly should be discussed at this juncture: What does it prove for the brain or spinal cord if we find syphilitic changes in the skin or heart or other parts? May not a syphilitic person present brain symptoms referable to a quite different cause than syphilis? Of course he may, and the possibility must be kept in mind. Nevertheless, it would be wrong to underestimate the value of evidences of syphilis in other parts of the body as a diagnostic aid to the recognition of syphilis of the brain or nervous system in general. We know that in medicine everything is relative, and while a symptom may attain great diagnostic value in combination with others, it may have very little significance as a symptom *per se.* I remind you of the enlargement of the spleen which may greatly help to establish the diagnosis of typhoid fever, yet, considered by itself alone, would be of little diagnostic aid, being met with in a great many other conditions. So it is the concurrence of symptoms, the *ensemble,* that we must rely upon much more than upon one single fact. And if this is considered in this light, we may easily appreciate the diagnostic importance of the discovery of syphilitic changes in other parts of the body in the diagnosis of syphilis of the nervous system, if in addition to these syphilitic manifestations in *other parts* we find a clinical complex and course of *nervous symptoms* that are characteristic or suggestive of syphilis.

We shall now pass to a consideration of the symptoms of syphilis referable to the nervous system, and see what characteristics may be found in the clinical course, quality, and combination of such symptoms to enable us to make the diagnosis of the disease mentioned.

General Course of the Nervous Symptoms.—The distinction between secondary and tertiary symptoms usually made may to a great extent be applied also to syphilis of the nervous system. We speak, moreover, of *metasyphilitic* diseases, such as locomotor ataxy and general progressive paresis, which cannot be called syphilitic diseases in the proper sense, as their clinical picture and course differ essentially from those of the syphilitic lesions. They are degenerative diseases, so called, and the syphilis forms only the basis on which they develop. It is not the purpose of this paper to dwell upon this class of diseases.

As to the nervous symptoms of the secondary stage of syphilis, you are probably all well acquainted with them. The chief triad is headache, insomnia, and loss of hair. Whether the loss of hair is really a nervous symptom may be a matter of some doubt, although it probably is. These nervous symptoms of the secondary stage distinguish themselves from those of the later stages by their comparatively short duration and usually also their comparative mildness. They appear more like the expressions of some toxic state than of inflammatory focal lesions such as are encountered in the later period. They belong more to the domain of the general practitioner than to that of the neurologist, who seldom meets them. However, occasionally cases occur in which the nervous symptoms acquire a grave character pointing to extensive focal lesions of the brain or spinal cord at a very early period.

An instance of this is the following case, which, in order not to tire your patience, I report in a much abbreviated form: The patient was sent to me by Dr. Dillon, who had treated her for specific disease and rightly suspected some syphilitic affection of the brain.

Mrs. M. W., twenty-four years old, of American nativity, gives the following family history: Father died at age of about forty years, of a paralytic stroke. A sister of the patient has for seven years been hemiplegic. This is interesting as showing the hereditary tendency to organic brain affection. Of the patient's own history, I omit the earlier data as unessential. In February, 1899, she got married, but left her husband in April of the same year, and had never approached him since. It is in that period, between February and April, 1899, that the syphilitic infection must have taken place; at least the patient denied any other possibility.

In the beginning of September, 1899, she felt swollen in the region of the labia, but consulted no physician then. About the 20th of September an exanthema, evidently a roseola, appeared, coming and going and lasting three weeks altogether. At that time she had also headache, loss of hair, and sores in the mouth. From the end of September until the earlier part of October her limbs and back felt very weak and painful. In December open sores appeared round the corner of the mouth, and the palms of the hands were dry and scaly.

In January, 1900, she had an affection of the labia, hard lumps underneath the flesh as she expressed it. She had then another period of headache lasting about a month, the pain being occipital, coming on daily in attacks of about two hours' duration. She had again headache from March till the middle of May, almost con-

stantly, then again during a week in June, and finally again from July 25th until August 19th, when she first came under my observation, so that she had had five periods of headache altogether. The last headache attack was very severe; nothing seemed to relieve it. About August 1st her gait began to be unsteady and staggering.

When I examined her, on August 19th, I found a very staggering gait, distinct ataxy of the right upper limb, and marked exaggeration of the knee-jerks. The occipital region corresponding apparently to the exit of the occipital nerve was tender, but the skull was not painful on percussion. Opthalmoscopic examination revealed no changes in the fundus, as was confirmed by Dr. Smith.

The symptom-complex found pointed mostly to a cerebellar affection, in favor of which spoke also the absence of any symptoms on the part of the cranial nerves, except that hearing was diminished on the right side. The syphilitic nature of the brain lesion, presumably a gumma, was made very probable by the history and was confirmed by the result of the antisyphilitic treatment, consisting mostly in mercurial inunction, under which the patient improved quite rapidly, the headache, the disturbance of gait, the ataxy of the right upper limb, and the exaggeration of the reflexes disappearing almost entirely within about four weeks.

In this case I made a special point of ascertaining the date of the infection, which apparently took place from sixteen to nineteen months previous to the onset of the grave brain symptoms. But even if we disregard the patient's assertion that the infection could only have taken place between February and April, 1899, the onset of the focal organic brain lesion within ten or eleven months after the appearance of the roseola clearly shows at what early stage of the disease grave organic changes of the brain may occur. Usually, however, they appear much later, sometimes within three or four, sometimes within ten or twenty years after the infection, although in these very late cases I always feel some doubt as to the correctness of the given date of infection, unless the history seems to indicate the presence of syphilis through all these years by the appearance at longer or shorter intervals of symptoms of the disease.

This leads me to speak of one of the general characteristics of syphilis, namely, its occurrence in attacks of active manifestations alternating with periods of comparative dormancy. On the whole, as the disease progresses, both the dormant intervals and the periods of active manifestations become longer and the symptoms become more severe and more obstinate to treatment. This paroxysmal course applies also to the syphilitic lesions of the nervous system and may help us greatly in establishing the diagnosis. But let me add here that another disease shows this characteristic of paroxysmal development, namely, disseminated sclerosis of the brain and spinal cord. This malady resembles cerebrospinal syphilis also in many other respects, making it frequently quite difficult to distinguish them.

Another characteristic of syphilis, and quite particularly of syphilis of the nervous system, is that, on the whole, its symptoms not only respond to treatment in a high measure, but often recede also to a great extent without medication. In one case under my observation a hemiplegia which had been in existence for several months disappeared almost entirely within one or two days, after the treatment with increasing doses of potassium iodide had been pushed up to the daily use of 600 drops of the fifty-per-cent. solution. This case had been accompanied by headache, vomiting, choked disk, a compression pulse, extreme somnolence, and other symptoms suggestive of cerebral tumor, but the almost complete disappearance following specific treatment proved the syphilitic nature of the disease. As in the case mentioned, so in others, the disappearance of a focal symptom, for instance of a paralysis, is often so rapid and complete that it reminds one much of hysterical paralysis or of other hysterical phenomena, which also may disappear all at once after long duration.

While a paralysis of other organic origin, say a hemiplegia from embolism, for instance, or a paralysis from acute anterior poliomyelitis, may also recede quite considerably, yet one seldom sees such a complete restoration of function after paralysis from organic disease as is seen in the syphilitic cases. I do not imply thereby, however, that all syphilitic lesions of the nervous system are so evidently amenable to treatment, but wish, on the contrary, to call your attention to the fact, justly emphasized by Eskridge in a recent article, that sometimes the nature of the damage is such as to make complete repair impossible. If, for instance, owing to an obliterating syphilitic endarteritis, a blood-vessel becomes entirely obstructed, the effect will be the same as in thrombosis, namely, an irreparable softening focus, unless a collateral circulation can be established.

Closely allied to the great responsiveness to medication, which, as we have seen, has its exceptions, is another feature of syphilis, namely, the great variability of the clinical picture. The symptoms are subject to great change; one may go, while a new one comes, etc. That this variability is especially marked in syphilis of the nervous system, particularly of the brain and spinal cord, is explained by the complexity of these organs, owing to which fact disease of one point of the brain or cord responds with quite other symptoms than that of some other part of the same.

In this point, again, I mean in this variability, there is a great similarity to hysteria, which, as a rule, also presents this characteristic.

After this general outline, I shall now consider under what forms cerebrospinal syphilis may occur, and may then discuss the diagnostic value of some particular symptoms.

1. *Meningitis.*—Frequently cerebral syphilis occurs in the form of a meningitis, which is usually basal. If so, we recognize it by the affection of cranial nerves and the optic neuritis, which will point to the seat of the lesion.

One distinguishing feature from other forms of

meningitis, from the tuberculous variety, for instance, is the fact that in the latter the palsies of the cranial nerves usually appear at a late stage, when coma has already developed, while in syphilitic meningitis they may make their appearance quite early. In the other forms they are mostly bilateral; in syphilis they frequently are unilateral and may affect but one single cranial nerve. I will mention at this place that palsies of single cranial nerves are rather typical of syphilis.

As to the optic neuritis, or choked disk, so called, it is found in all forms of meningitis, but in the syphilitic variety the accompanying vascular and other changes of the eye to which I have called attention may help us out.

2. *Tumor.*—I have already briefly pointed out a case in which the syphilitic cerebral manifestations were those of cerebral tumor, and a case reported in this paper was of a similar kind. To recognize the particular syphilitic nature of a gumma which may also be called a tumor, an exact history and thorough general examination are often essential.

3. *Multiple Focal Affection of the Cerebrospinal Axis.*—If syphilis occurs in the form of multiple foci or patches, distributed over the brain and spinal cord, it may closely resemble disseminated cerebrospinal sclerosis. In one case which I have alluded to in this paper there was a very typical intentional tremor, such as is described as characteristic of multiple sclerosis. The distinction between the two diseases is frequently quite difficult, especially because in multiple or disseminated sclerosis also very marked remissions may occur. And here, again, I think diagnostic salvation lies in a thorough general examination, which may reveal the presence of lesions pointing distinctly to a syphilitic affection.

The presence of pupillary changes, for instance, small size, or irregular shape, or deficient response of the pupils, would speak in favor of syphilis as against multiple sclerosis, in which latter pupillary changes are the exception.

Heretofore the rare occurrence of optic neuritis in multiple sclerosis has been emphasized, but this has been shown to be erroneous by the recent clinical researches of Bruns and Stoelting, who found optic neuritis present in a great percentage of cases of disseminated sclerosis. Therefore the presence or absence of optic neuritis cannot well be used for distinguishing between the two diseases.

One sign that seems pretty reliable is the typical facial expression of multiple sclerosis, the exaggerated mimicry in this disease, which so far I have not observed yet in syphilitic cases.

4. *Hemiplegia.*—This is a form under which syphilis is met with pretty often. It may set in with the relative rapidity of a thrombosis or embolism, or may develop slowly. If not due to a vascular obstruction, leading to a permanent softening on account of cutting off of the blood supply, it may yield enormously to antisyphilitic treatment and disappear almost without leaving a trace.

I had recently occasion to treat a patient at the Polhemus Clinic who had had two attacks of hemiplegia, one on the left, the other on the right side. The first one, that of the right side, set in pretty suddenly, without loss of consciousness, about three years ago, and disappeared almost entirely. The second one came on suddenly, in February of this year, and the patient came under my observation about two months after its onset, when he presented the typical aspect of a hemiplegia of the left side, with marked contractures and exaggeration of the deep reflexes. He was put under specific treatment, namely, with increasing doses of iodide of potassium, and within about two or three months marked improvement began to take place. When I saw the patient a few days ago, the hemiplegia was practically entirely gone. This case is of so much interest as the diagnosis was made by Dr. McGoldrick and myself, each independently, he having been consulted by the patient on account of a persistent cough, and the doctor then discovering a heart lesion the syphilitic nature of which he promptly recognized.

5. *Diffuse Brain Lesions Simulating General Progressive Paresis.*—I have met with some cases in which the mental and some of the neural symptoms were those of general progressive paresis, there being mental enfeeblement, lack of mental concentration, loss of memory, typical speech disturbance, loss of pupillary reaction to light, fibrillary twitchings of the face, etc. But the presence of certain other symptoms, and especially of marked focal manifestations, spoke against general progressive paresis in the proper sense and in favor of syphilis. I mention almost complete unilateral paralysis of the third nerve with vomiting setting in acutely, and a spastic ataxic gait, as I have seen it in one case. I have, unfortunately, not been able to follow this case, but have heard that the man improved greatly and that the extreme ptosis which he had had disappeared.

Since general progressive paresis, although not a really syphilitic disease, very often develops on a syphilitic basis, it may frequently become difficult to decide whether we have to deal with a really syphilitic disease, simulating general progressive paralysis, or with general progressive paralysis in the proper sense.

Spinal Cord Diseases.

6. *Pseudo-tabes, or Syphilitic Tabes.*—The typical tabes, or locomotor ataxia, so called, although developing mostly in individuals who long years back were infected with syphilis, is yet not really syphilitic, but a degenerative disease, and usually is very little influenced by antisyphilitic treatment. There are cases, however, which improve quite considerably under antisyphilitic medication, and I am personally inclined to consider such cases as having a different anatomical basis, being probably due to a syphilitic inflammation of the meninges. Their really syphilitic nature is made very probable also by the relatively much earlier onset, sometimes two or three

years after the infection, while common locomotor ataxy usually develops as late as from ten to twenty years after the syphilitic infection.

7. *Spastic Paraplegia.*—Syphilis of the spinal cord often takes also the form of spastic paraplegia, being as a rule distinguishable from the non-syphilitic type of this disease by the presence of sensory disturbances or disorders in the function of the bladder or rectum, and of pupillary changes, all of which are wanting in typical spastic paraplegia.

8. *Anterior Poliomyelitis.*—If affecting the anterior horns, syphilitic disease of the spinal cord may closely resemble anterior poliomyelitis, and the differential diagnosis would have to be made by the presence or absence of other lesions pointing to syphilis of the nervous system or other parts, and by the result of the specific treatment.

9. *Syringomyelia.*—Although I have not seen a case of syphilis that simulated syringomyelia, a disease characterized by the formation of cavities in the spinal cord, I yet believe that such cases might occur. They would be apt to react to antisyphilitic medication, while actual syringomyelia would not, at least not to any extent.

Peripheral Nerves.

10. *Diseases of the Peripheral Nerves.*—The occurrence of actual neuritis is denied by most authors, and it is thought that when a nerve becomes affected in syphilis this is due to disease of the surrounding tissue involving the nerve directly or indirectly. So we may have a paralysis of a cranial nerve, either from inflammation of the meninges or from inflammation of the periosteum at the places where the nerve passes through or near these structures.

Special Characteristics of Cerebrospinal Syphilis.

In concluding the symptomatological discussion, let us ask whether there are any symptoms typical of cerebrospinal syphilis. We may answer, There are some, although none is absolutely pathognomonic.

Paralysis of single cranial nerves, as has been said already, is pretty characteristic, especially that of the ocular nerves. Recently Sachs has pointed out the irregular shape of the pupils, and especially the irregular manner of contraction of the pupils, in cases of cerebrospinal syphilis, and believes it to be characteristic of that malady. There is no doubt that we frequently meet with it in this disease, but it is also observed quite commonly in general progressive paralysis and sometimes in locomotor ataxy. Although important enough, diagnostically, I do not believe, therefore, that this irregular shape of the pupil is so typical of syphilis as Sachs seems to think. I think that another pupillary sign, namely, the very contracted, or pin-head, pupil is perhaps more characteristic of syphilis than the irregularly shaped pupil.

Vertigo is a sign which ought to make us suspicious of cerebral syphilis, although we know that it is seen in quite a number of other conditions, such as anteriosclerosis, labyrinthine disease, anæmia, etc.

The differential diagnosis has been so far discussed in this paper that I need not enter upon it any more. I shall only repeat here that, while the effect of antisyphilitic treatment is of great confirmatory value if positive, it does not absolutely speak against syphilis if negative.

Prognosis.—I am not prepared to give you any statistical data on the prognosis of cerebrospinal syphilis. My personal experience has been that the single attack of active manifestations, as a rule, proceeds favorably if proper treatment is applied, but the chances of ultimate recovery are not very bright, as the tendency to relapses seems quite marked. That in cases of vascular obstruction from syphilitic endarteritis a permanent and extensive incurable damage may result has been mentioned already.

Treatment.—As you know, the two sovereign remedies in the treatment of syphilis are mercury and potassium iodide. These you will find also serviceable for combating specific disease of the nervous system. As to the choice between the two, the prevalent idea is that mercury is of special value in the secondary and iodide of potassium in the tertiary period. But I believe that Eskridge's view is more correct, that mercury is especially efficacious in the acute and potassium iodide in the chronic manifestations. It is true that this view coincides to a great extent with the one first mentioned, inasmuch as, on the whole, the secondary manifestations are acute and the tertiary ones chronic; but there are very marked exceptions to this rule, and therefore Eskridge's advice holds good. However, no cast-iron rule can be made here, and often the respective value of each of these remedies has to be tested in the individual case. But I cannot omit emphasizing one point, and this is, that failure to obtain any therapeutic results is frequently due to the fact that the medication is not pushed up to a sufficient degree. This has special reference to the iodide of potassium, which in small doses often remains without effect. The wisest plan is usually to begin with small doses and increase rapidly until a physiological effect is reached. For instance, one begins with 5 drops of the saturated aqueous solution in the morning, 10 drops at noon, 15 drops in the evening, and thus goes on increasing five drops with each dose. In so doing one frequently discovers an enormous tolerance of this drug, from 500 to 600 drops daily being many times borne without inconvenience for long periods, and often the therapeutic effect begins only after such a high dose as the one mentioned is reached.

The mercury is best given in the form of inunctions, a drachm or a drachm and a half of the strong mercurial ointment to be rubbed in daily in two sittings. Injections of corrosive sublimate frequently act more promptly and make it possible to keep the patient under obser-

vation, but are often objected to by the latter. A thirtieth or a twentieth of a grain may be used to begin with. The medication must be frequently continued for months, but should at times be discontinued and a general tonic treatment substituted. Hot-air baths or vapor baths to stimulate metabolism may be very useful.

ACUTE STRANGULATED FEMORAL HERNIA ON A PUERTO RICAN HILLSIDE.

By P. R. EGAN,

SURGEON, U. S. ARMY.

On May 10, 1899, when out in an ambulance inspecting the work of the corps of vaccinators employed in various towns of the district of Guayama, my colored driver went into the brush at the top of the hill, about seven miles from Caguas. While there, he developed *de novo* an acute strangulated femoral hernia of the right side. I was without instruments or medicines of any kind. The driver returned bathed in perspiration, complaining of being ill and nauseated, and requested that I leave him on the roadside in the boiling tropical sun, so that he might die easily. The tumor was found to be about the size of the closed hand. He was placed on his back on the floor of the ambulance and an attempt made then and there to reduce the strangulation by taxis. This only failed of success because of his restlessness under the great suffering that he endured. I finally desisted when he declared that he could not stand any more pain and that he knew it was going to kill him, anyhow.

The prospect was not very inviting. I was alone with a very sick man, at the head of a steep hill, zigzagging for about five miles, and bordered by a couple of steep ravines, with an ambulance without a proper brake, and four mules that I did not know how to handle. But there was no alternative. Proceeding very slowly, I was fortunate enough to reach Caguas, and was driving to the house of the English-speaking doctor, when a native cart crossing in front of my mules turned them up a side street, out of which I could not guide them. Leaving the mules and patient in charge of a native boy, I proceeded on foot to the doctor's house. There I learned that there was no such thing as a hospital in that fourth or fifth largest city on the island. Procuring some chloroform, I returned with the doctor to the ambulance. Some natives had very charitably taken him into one of their wretched houses and placed him on a cot.

The tumor was now as large as an infant's head, tense, and of a purplish color. He was covered with cold sweat, and had twice vomited. Under chloroform the doctor tried taxis and gave it up. After about half an hour I was fortunate enough to reduce it. I was also lucky enough to find a truss in the town, which I fitted to him. Inside of an hour he was outside, driving his mules on the road to Aguas Buenas, very much dazed and wondering what it all meant, but free from pain or ache.

From a surgical point of view I know that taxis was maintained too long. But under the circumstances it appeared to me to be, as the result proved it to be, his only salvation. There never was a doubt in my mind that an operation, with his surroundings, meant sure death. So I persisted.

Twelve months afterward he came to see me. He had got a new truss, which supported his hernia perfectly. He had no trouble in pursuing his employment as a government teamster. On the strength of my driving safely down the hill at Caguas he promised me a position as mule-driver in case I failed in my examination for promotion. I was delighted; grateful non-paying patients are such a rarity.

Fort Douglas, Utah.

Correspondence.

LETTER FROM TORONTO.

Small-pox in Ontario.—The Samaritan Hospital, Montreal.—The Health Officer of Hamilton.—Severe Punishment for Failure to Pay Assessments in Ontario.—The Victoria Asylum for Women.—The Toronto Clinical Society.—An Enterprising Cripple.

Toronto, *May 4, 1901.*

Dr. Thomas Henry Little, of this city, died on the morning of the 25th of April of hæmorrhagic confluent small-pox. About ten days prior to his death Dr. Little was summoned to attend a young man, lately arrived from Cleveland, but failed to recognize his malady as small-pox. A case developed in a neighbor's child, which was immediately ascertained to be small-pox by Dr. N. A. Powell, and the child was sent to the isolation small-pox hospital. In searching for the source of infection, Dr. Little's patient was found, and the medical health officer, Dr. Sheard, who was away on his annual holiday in New York, was summoned home. Dr. Little then contracted the disease and was forthwith removed to the pest-house, where he died eight days later. At the time of his death the statement was made that he had never been vaccinated, but this has since been denied by his friends. Dr. Little was thirty-nine years of age and a graduate of Victoria and Toronto universities. He had practised twelve years in this city.

The small-pox situation throughout the Province of Ontario, which two weeks ago was considered to be abating, is as yet far from satisfactory. Within the last few days new centres have been discovered and the disease has appeared among the Indians on the reserve along the Grand River below Brantford. The latest returns show that there have been forty centres and five hundred cases, of which only six have terminated fatally. Up north, in New Ontario, some five thousand people have

passed through official hands on the trains, most of whom were vaccinated. Dr. Bryce, the provincial health officer, has given out figures which will not be palatable reading to the opponents of vaccination. In the late outbreak at Toronto Junction, all who had been vaccinated escaped with but one exception, while, on the other hand, none of those who were attacked by the disease had been vaccinated, but one person, who had a very mild attack. Dr. Bryce thinks Toronto will run considerable danger during the coming summer from tourists from the Pan-American Exposition, and therefore counsels a general vaccination.

The annual report of the Samaritan Hospital, Montreal, shows that during the past year there were 110 indoor patients, with a total number of 2,125 days in the institution. Altogether there were 142 operations. Only five deaths occurred, and three of these followed on operations, which gives a death rate of a little over two per cent. In addition to the foregoing there were 250 out-door patients. At the present time every bed of the hospital is occupied. Dr. A. Lapthorn Smith presented the annual report, he being surgeon-in-chief and superintendent of this institution. This hospital admits only women of irreproachable character who may require medical treatment peculiar to their sex. At the present time there is a large number of suitable young ladies waiting to be trained as nurses, but until a larger building is obtained it will be impossible to increase their number.

The city of Hamilton has recently had some little trouble over the appointment of a medical health officer for that place. Finally one was appointed at the munificent salary of $1,000, although there were many applications for the position at $800. The duties of this officer will be by no means limited, as the by-law setting forth what will be required of him shows. In addition to discharging such duties as are required by the Health Act, he must devote his whole time to his work, attend the inmates of the jail, look after any indigent persons who may chance to become sick, attend policemen and firemen. vaccinate, and do many other things. The multifarious duties of this position have brought forth an unusually brilliant idea from the *Bobycageon Independent,* to the effect that every township and village might have its municipal doctor, and asking why, when a place of the size of Hamilton—Hamilton has a population of 60,000—can obtain one for such a trifling salary, every other city, town, or hamlet might not do likewise. The "thinker" on the editorial staff of the newspaper referred to has an idea that the present system of doctors is all wrong, very unwise, and most inequitable, and that it is high time the municipal doctor became an established fact.

On the 19th of April the Medical Council of the Province of Ontario sent out a circular letter to a large number of practising physicians throughout the Province advising them that their names had been erased from the register of the College of Physicians and Surgeons and that, unless they paid up all assessments owing by them within thirty days, they would be proceeded against in the same manner as if they were irregular practitioners. In a medical population of 2,500 there were some seven hundred delinquents who had not paid the regular $2 annual assessment for some years, but since the notice some one hundred of these have paid up. The remainder of the number sent a delegation the other day to wait on the government, asking that the Medical Council stay its hand and not create any trouble in the profession until such time as the matter could be amicably settled. Dr. Sangster, of Port Perry, himself a member of the Medical Council, headed the delegation, he having been the prime instigator in a similar movement some ten years ago to do away with this same fee. The Medical Council, the governing body of the Ontario College of Physicians and Surgeons, is composed of some thirty members, thirteen of whom are representatives from the medical colleges and from the homœopathic body; and a good many believe they have too much influence and that the profession is not properly represented. Matters will soon become pretty warm, as it is understood that the prosecutor for the council will, after the expiration of the month of grace, begin proceedings against those whose names have been erased from the rolls and who have not become reinstated.

The Victoria Asylum for Women, which is rapidly nearing completion and is situated in the town of Coburg, will be opened by the government about the 1st of September for the reception of patients. Dr. McNichol, of Coburg, has been appointed superintendent, and he is to have associated with him in his work a lady physician, Dr. Harriet Cockburn, of Toronto, the first female physician appointed to any similar position in this Province. Dr. McNichol is at present visiting the various asylums of the Province, to familiarize himself with his duties. Dr. Cockburn has had considerable hospital experience, having been connected for some time with the Dakota State Asylum for the Insane. The appointment was made in response to a demand made upon the government by the National Council of Women. Both physicians are highly recommended and well qualified for their work.

The Toronto Clinical Society held its last meeting of the 1900-1901 season on the evening of May 1st. Dr. H. A. Bruce presented a patient, a man twenty-four years old, who at the age of five years had had otitis media in the right ear. Six months ago he was taken with pain in the ear and an operation was advised. The mastoid was opened and pus found in the cells; moreover, from three to four ounces of pus were drawn from the temporosphenoidal lobe. The patient had very few symptoms except a slow pulse and depressed temperature with some vomiting. Ankle clonus and exaggerated knee-jerks were present. A good recovery was recorded. Dr. F. LeM. Grasett showed a fatty tumor taken from the thigh, just above the popliteal region. Considerable

difficulty had been experienced in separating it from the sciatic nerve. He also reported a case of duodenal ulcer. Dr. George A. Bingham told of an enterprising cripple, a lad of fourteen years, belonging to a northern town, twenty miles away, who, hearing of the good work performed at the Victoria Hospital for Sick Children, Toronto, decided, although he was without means, that he would get there somehow. He harnessed his dog to a sleigh and drove all the way to Toronto in the dead of winter. This lad, who was very much deformed from his knees down, was rewarded for his perseverance, as Dr. Bingham was able to benefit him considerably. The following officers were elected for the ensuing year: President, Dr. J. F. W. Ross; vice-president, Dr. E. E. King; treasurer, Dr. W. H. Pepler; recording secretary, Dr. George Elliott; corresponding secretary, Dr. A. A. Small; executive committee, Dr. H. J. Hamilton, Dr. H. B. Anderson, Dr. W. B. Thistle, Dr. H. A. Bruce, and Dr. George A. Bingham.

Therapeutical Notes.

To Remove Picric-acid Stains.—For those using picric-acid dressings the following solution for removing the stains of that drug, cited by *Arte medica* for April 7th, from the *Journal des praticiens,* and ascribed to Brynk, may be useful:

℞ Boric acid. . . . . 20 parts;
Sodium benzoate. . . . . 5 "
Distilled water. . . . . .500 "
M. This can be applied either to the skin or to linen.

Ointments for Ulcers of the Leg.—O. Schulze (*Münchener medicinische Wochenschrift,* 1901, No. 12; *Wiener medicinische Blätter,* April 11th) gives the following formulæ:

1. ℞ Triturated camphor. . . . . .2 parts;
Zinc oxide. . . . . .15 to 20 "
Lard. . . . . .enough to make 100 "
M.
2. ℞ Triturated camphor. . . . . 2 parts;
Dissolve in
Olive oil. . . . . .50 "
Add
Zinc oxide. . . . . .40 to 50 "
M. The dressing should be renewed twice or three times a day.

A Snuff for Coughs.—The *Agenda-médical* for 1901 attributes the following formula to Guéneau de Mussy:

℞ Powdered gum arabic. . . . . 11 parts;
Powdered belladonna root. . . . . 1 part;
Morphine hydrochloride. . . . . .0.1 "
M. To be used from eight to ten times a day.

The Treatment of Eczema of the Nails.—Dr. Dubreuilh and Dr. Frêche (*Journal de médecine de Bordeaux,* April 14th) recommend in the acute stage emollient applications of marshmallow water, slightly borated, or poultices of potato pulp. With much vesiculation and oozing, powders, preferably talc or oxide of zinc, may be used. But the powder must be alternated with brief washings to obviate crusts.

When the inflammatory phenomena have been subdued, an ointment of zinc oxide, five per cent., with salicylic acid, twenty per cent., may be used. In chronic exudative forms, compresses of two-per-cent. resorcin, or painting with one-in-thirty silver nitrate solution, are of service.

To Aid Post-partum Flow.—Dr. Harriet E. Garrison (*American Medicine,* April 27th) recommends the following for the purpose of keeping the os patulous if there are signs of obstruction or insufficient flow of clear blood:

℞ Fluid extract of cimicifuga racemosa, } of each, 2
Tincture of gelsemium, } drachms.
M.
Sig. Two drops every hour until the flow is normal.

Treatment of Pertussis by Oil of Gomenol.—Leroux and Pasteau (*Bulletin médical,* June 13, 1900; *American Journal of the Medical Sciences,* April, 1901) speak favorably of the use of an oily solution of gomenol, which is an essence obtained by distillation from a variety of *Melaleuca viridiflora,* grown in New Caledonia. From five to ten cubic centimetres of a five-per-cent. oil were injected into the gluteal muscles. The results of treatment in forty cases were generally favorable, the frequency and severity of the paroxysms being shortened and the duration of the disease reduced on an average to twelve to fifteen days. Treatment should be continued for four or five days after the last seizure.

The Treatment of Mosquito Bites.—M. Manquat (*Bulletin général de thérapeutique,* November 15, 1900; *Archives de médecine et de pharmacie militaires,* April, 1901) thinks tincture of iodine and formaldehyde the most serviceable medicaments, while menthol is deserving of consideration. He says that tincture of iodine applied freely to the recent bite of a mosquito (from some minutes to about two hours) causes the effects to disappear in from ten to twenty minutes.

For the face, upon tender skin surfaces, and in very young children, he recommends the following application:

℞ Formaldehyde, 40 per cent. . . . . 5 parts;
Alcohol, } of each. . . . . .10 "
Water, }
M.

It should be applied for only a short period of contact and in repeated light layers, without reaching the smarting point, so as to assure a rapid evaporation of the active principle, and avoid any caustic action.

Four- or five-per-cent. menthol in eau de cologne is useful for light bites.

Sodium Bicarbonate in the Vomiting of Pregnancy.—Monin (*Lyon médical,* January 27th; *British Medical Journal,* April 20th) has been struck by the resemblance which the symptoms presented by certain pregnant women bear to those of hypersecretion. Gastric pain, heartburn, acidity, nausea, and vomiting, occurring especially in the morning and relieved by taking food, are all symptoms commonly observed both in hypersecretion and during pregnancy. As a consequence of the suggestiveness of this observation, satisfactory results have been obtained in the case of pregnant women by administering daily five doses of sodium bicarbonate, each consisting of thirty grains given in a capsule.

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THE PROPOSED PSYCHOPATHIC HOSPITALS.

WHAT we all know perfectly well, while failing to realize its full meaning, may sometimes be put so trenchantly as to crystallize our information into realization much in the same way as a horse ridden over a frozen road skirting a body of water just ready to freeze may lead to the sudden formation of ice on the surface of the water. An instance, we think, is afforded by the following note appended by Miss Louisa Lee Schuyler, one of the vice-presidents of the State Charities Aid Association and the chairman of its committee on the insane, to her recent report to the New York State Commission in Lunacy: "There is no place in New York city (borough of Manhattan)," says Miss Schuyler, "where a person suffering from mental disorder can be received for early or preventive treatment; and there is no place in New York city (Manhattan), since the removal of the Bloomingdale Asylum to White Plains, to which a person seized with sudden and violent mania can be taken, except to the wards for the insane at Bellevue."

In the body of her report Miss Schuyler says that at last relief from the overcrowding of the insane in the State of New York is "in sight," and the time has come when effort should be directed to the prevention and cure of insanity. She accordingly advocates most eloquently the establishment of reception hospitals, or psychopathic hospitals, each to be a branch of one of the large State hospitals. As regards the psychopathic hospital for the city of New York, which would be a branch of the new Manhattan State Hospital in Central Islip, now approaching completion, in it all persons supposed to be insane and all recently committed as insane would be gathered for examination and classification with a view to their suitable distribution. Persons found not to be insane would be transferred to some general hospital, those suffering with paresis or any other decided form of incurable insanity would be sent directly to Ward's Island or to Central Islip, and those as to whose curability there might be doubt would be kept in the reception hospital for a limited period "under the daily care and constant advice of the most eminent members of the profession." Clinical teaching would be provided for, and there would be an out-door department for the examination and treatment of persons not actually in need of constant oversight.

Miss Schuyler's report is dated November 1, 1900. Not long after that date certain occurrences in the lunatics' quarters in Bellevue Hospital made an impression on the public that can be counted on, we should think, to favor the early consummation of her plans. In our issue for January 12th we advocated for the borough of Manhattan the establishment of just such a hospital as those which Miss Schuyler has in mind. Such hospitals have been advocated by Dr. Frederick Peterson and by a number of other prominent alienists, and they are ready, as we learn from the report, to give their services. The time seems ripe, therefore, for New York's redemption from its present poverty of resources for the proper care of the acutely insane and for effective educational work in psychiatry.

PSEUDO-PHYSIOLOGY IN THE PUBLIC SCHOOLS.

WE have commented editorially more than once upon the garbled and inaccurate stuff that, under the guise of physiology, it is sought through the medium of many authorized public school text-books to inculcate in children on the question of alcohol. We are glad to learn that others, even among those who have been promoters of the legislation under which this is sanctioned, are protesting against this vicious abuse of the educational system for the purpose of inculcating the fads of cranks. We are as much alive as they are to the evils of intemperance and in thorough sympathy with all reasonable and legitimate measures for its uprooting, but we do not think that such measures entail the abolition of the proper use of alcoholic stimulants, and especially the reasonable use of light wines with meals; and we are quite sure that, however good any cause may be, it is never permanently aided by organized dishonesty. In a recent editorial in the *New York Times*, the writer says:

"It is a gratifying indication of returning sanity among the friends of temperance that there is a growing protest among them against further teaching in the

schools of alleged facts about alcohol and its effects upon the human system which are demonstrably false and misleading. This is also finding intelligent expression in the educational journals, and many professional teachers of sound judgment and wide experience are taking the ground that text-books which masquerade as physiologies, but are written mainly with a view to attributing to alcohol qualities and effects which are at variance with truth and reason, do more harm than good to the temperance cause. . . . The immediate storm centre of this controversy is Connecticut. The books prescribed by the law of that State for use in schools . . . have called out a forcible protest from so conservative and conscientious an educator as Professor W. N. Rice, of Wesleyan University. Among other things taught the pupils of Connecticut public schools, he finds two statements side by side which are somewhat difficult to reconcile. One is that about one half the commitments to insane asylums are due to overindulgence on the part of the persons so committed in alcoholic stimulation. The other is that more persons become insane through the use of tobacco than because of alcohol. The intelligent pupil will reason that if about one half the insane become so from drinking, and more than one half by smoking, there cannot very well be any other causes at work, and if he speculates where to place the very large proportion of cases due to paresis, religious excitation, melancholia, accident, etc., he cannot very well resist the conclusion that he has been imposed upon by text-book writers who are either ignoramuses or cranks, or perhaps both."

In our opinion, there is more rubbish talked and written in a day on the so-called inherent evils of alcohol and tobacco, as distinguished from those consequent upon the intemperate use thereof, than upon any other subject in a month. But at any rate, whatever is published for adults, who are supposed to take what they are told merely as submitted for the approval of their own reason, it is clear that in teaching children, who are expected to accept what is taught as of authority, a sharp line should be drawn between demonstrable facts and conclusions drawn therefrom by partisans of particular theories, whether adequately or inadequately substantiated, so far as the limitations of imperfect knowledge allow.

THE SALE OF A PRACTICE.

Compared with what obtains in some European countries, the sale of a medical practice is rare in the United States. Still, it is sometimes effected, perhaps oftener now than a few years ago. The thing sold is somewhat vague and intangible—what the chemists might term unstable—easily disintegrated and prone to "vanish into thin air." The transaction has always seemed to us like "buying a pig in a poke," but we are not quite ready to call it "deplorable" and "immoral," as Dr. H. Huchard, of Paris, recently did in a *consultation-clinique* at the Necker Hospital (*Journal des praticiens,* February 9th). A physician cannot sell his *clientèle,* he goes on to say, for a patient is not his property, even if he has remained faithful to him for many years, but is always free to entrust the care of his health to whomsoever he chooses. A physician may sell to a successor his library, his horse, and his carriage, says M. Huchard—and, we may add, his house, his furniture, his stable, and his instruments—but he cannot sell him his patients. One may, therefore, readily ruin himself, or at least sink a considerable sum of money to no purpose, in buying a practice.

M. Huchard seems to realize. however, that the uncertainty of transactions of this sort is not likely to prevent their occurrence, and he makes the very sensible, if not entirely original, suggestion that the purchaser of a practice agree to pay to the physician he buys out a certain percentage of the receipts from the practice for a short term of years—as he puts it, twenty-five per cent. for five years. Perhaps an improvement would be for the purchaser to undertake to pay over an annually decreasing percentage for a greater number of years, for his first year's receipts would no doubt be almost wholly the result of the exchange, but those of each succeeding year as time went on would be more and more the reward of his own professional attainments and personal qualities. It seems to us quite equitable, moreover, that, if at any time the purchaser should tire of his bargain, he should be at full liberty to relinquish the field, with the understanding, of course, that these provisions applied only to the estimated value of the practice itself, the sale of actual property being absolute.

THE FAILURE OF THE ANTIVIVISECTIONISTS IN MASSACHUSETTS.

It is a source of great satisfaction to find a legislative committee with sufficient sense and courage to decline to report favorably on a bill designed to impose upon the community the will of sentimental agitators, especially when the particular fad concerned is that of the antivivisectionists, which has already seriously hampered medical research in Great Britain and is constantly threatening to work the same detriment in various parts of our own country. It is to be hoped that the recent action of a Massachusetts committee in so declining will have a good effect with other legislative bodies.

OUR SUBSCRIBERS' DISCUSSIONS.

LEST some of our readers may have overlooked the Special Notice to Our Subscribers, printed on page 774 of the *Journal* for May 4th, and the editorial entitled Our Subscribers' Discussions, published in the same issue, on page 772, we again call attention to the announcement. The question for the first discussion is *What is the Best Way of Treating the Stump of the Umbilical Cord?* Whoever among our subscribers, barring our own editorial staff and all persons known to be engaged in medical journalism, sends us the most satisfactory answer to this question will receive a prize of $25. The answers must reach us on or before June 10th, and the award will be announced as soon after that date as practicable. Subscribers who are inclined to compete should read carefully both the articles in the May 4th number to which we have referred. We may now add that, since the Army Medical Department, the Navy Medical Department, and the Marine-Hospital Service furnish the *Journal* to the officers of their corps, all medical officers serving in any of those departments, whether commissioned or under contract, are entitled to enter the competition. As many of these officers and some of our other subscribers are living out of the United States, the time to elapse between now and the 10th of June seems too short to admit of their joining in the first competition. We will now announce the second question. It is this: *What is the Best Way of Prescribing Calomel as a Purgative?* We may suggest that the chief points for consideration might be: The large single dose *versus* the small and repeated dose, the size of the various doses, the time of administration (with regard to meals, the sleeping hours, etc.), the frequency of repetition of small doses, the advantages (and the reasons for them) of combining with the calomel some other drug, such as sodium bicarbonate, and the question of giving a saline aperient after the calomel. Answers to this second prize question must reach us on or before July 10th.

Ἄριστον μὲν ὕδωρ.

A STORY is told of two itinerant pill-vendors who engaged in a cut-price warfare. When the patience of one was exhausted, he approached his competitor and asked: "How is it that you can afford to undersell me? I make my pills from bread and only have to coat them." To which the other replied: "I find my pills ready made. There is a rabbit warren at the back of my house." The quack who was recently fined in a New York court for practising without a license, declared that he just put up Croton water in various kinds and sizes of bottles, coloring it with the coloring matter used in making candy, and called each bottle of mixture by a different name. This simple therapeutics must have paid well, since he says that he found it "far better than Christian Science." "Croton water," he said, "is just as good to cure rheumatism, diphtheria, cholera, or any other kind of disease, as anything." No doubt he had the average number of recoveries among his patients. But it must have been rather humiliating for those folks who had been grumbling over their water rate to find that they had been paying high prices for small bottlefuls of the commodity.

THE PARASITOLOGY OF CANCER.

SOME noteworthy work in this field of research has been done during the last two or three years in the New York State Pathological Laboratory of the University of Buffalo by Dr. Harvey R. Gaylord, the director of the laboratory. A partial report was presented to the Medical Society for the State of New York at its annual meeting in 1899, and Dr. Gaylord publishes the first part of a further report in the May number of the *American Journal of the Medical Sciences.* Having adopted Plimmer's method of staining, he has found that investigator's micro-organism, thought to be a protozoon, present in all examples of carcinoma occurring in man.

NEW YORK UNIVERSITY'S MEDICAL PERIODICAL.

THE *New York University Bulletin of the Medical Sciences* is the title of a new quarterly publication devoted to the record of the work done in the Carnegie Laboratory and other departments of the University and Bellevue Hospital Medical College. The first number, for January, contains fifty-six pages of reading matter. Among the articles we note one of considerable interest from the historical point of view, entitled The Development of the Conception of Disease, by Dr. Horst Oertel, instructor in pathological histology and clinical microscopy.

THE PLAGUE AND CATTLE SHIPS FROM CAPETOWN.

THE *Boston Pilot* for April 27th expresses great dread of the introduction of the Oriental plague at some of our ports by the "dirty cattle ships" which, it says, ply freely to and from Capetown, and it gives the government scant credit for its efforts to guard against the "black death." We feel confident, however, that the Marine-Hospital Service is keeping a close watch of all possible sources of infection, and may be counted on to display its customary energy in case of need.

THE REST-TREATMENT IN TUBERCULOUS PULMONARY DISEASE.

NEARLY absolute rest is regarded by many physicians who have met with the greatest success as quite essential in the treatment of the active stage of early tuberculous disease of the lungs. Bernheim (*Zeitschrift für Tuberkulose,* i, 6; *Centralblatt für innere Medicin,* April 20th) says of it that it diminishes the self-intoxication, regulates the temperature, and prevents hæmorrhages and the extension of the bacilli. It should be kept up, he adds, until the evening temperature remains permanently normal.

News Items.

Society Meetings for the Coming Week:

MONDAY, *May 13th:* New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynæcological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, *May 14th:* New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Practitioner's Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, *May 15th:* Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, *May 16th:* New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Atlanta Society of Medicine.

FRIDAY, *May 17th:* New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynæcological Society.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending May 4, 1901:

DISEASES.	Week end'g Apr. 27		Week end'g May 4	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	20	7	22	11
Scarlet Fever	669	44	642	38
Cerebro-spinal meningitis	0	6	0	5
Measles	330	9	319	9
Diphtheria and croup	290	58	288	45
Small-pox	56	8	86	10
Tuberculosis	287	204	283	147

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for Two Weeks ending May 4, 1901:

LAW, H. L., Surgeon, retired. Detached from the recruiting rendezvous, Buffalo, and ordered home.

RODMAN, S. S., Assistant Surgeon. Detached from the *Adams* and ordered to the *Alert*.

WRIGHT, B. L., Assistant Surgeon. Ordered to the *Massachusetts*.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from April 27 to May 4, 1901:

CURLING, JOHN, Captain and Assistant Surgeon, will report at San Francisco for transportation to Manila.

DE WITT, CALVIN, Lieutenant-Colonel and Deputy Surgeon-General, is detailed as a member of the examining board at the Army Medical Museum Building, Washington, *vice* ALFRED A. WOODHULL, Colonel and Assistant Surgeon-General, retired, relieved.

KILBOURNE, HENRY S., Major and Surgeon, is detailed as a member of the examining board at the Presidio of San Francisco, *vice* BENJAMIN F. POPE, Lieutenant-Colonel and Deputy Surgeon-General, relieved.

MASON, CHARLES F., Captain and Assistant Surgeon, will report in person to CALVIN DE WITT, Lieutenant-Colonel, for examination as to his fitness for promotion.

METZGER, JOHN A., Major and Surgeon, will report in person to the commanding general, Department of California, for transportation to Manila.

RAYNOR, WILLIS J., Captain and Assistant Surgeon, United States Volunteers, is relieved from duty at Fort Washakie, Wyoming, to take effect upon the expiration of the leave granted him, when he will proceed to San Francisco for transportation to Manila.

WILLIAMS, ROBERT E., Captain and Assistant Surgeon, will proceed to San Francisco for transportation to Manila.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague, were reported to the surgeon-general during the week ending May 3, 1901:

Small-pox—United States and Insular.

San Francisco, California	Apr. 13-20	2 cases.	
Chicago, Illinois	Apr. 20-27	9 cases.	1 death.
Freeport, Illinois	Apr. 20-27	1 case.	
Evansville, Indiana	Apr. 20-27	1 case.	
Wichita, Kansas	Apr. 13-20	30 cases.	
Lexington, Kentucky	Apr. 20-27	2 cases.	
Fitchburg, Massachusetts	Apr. 13-20	2 cases.	
Holyoke, Massachusetts	Apr. 20-27	1 case.	
Bay City, Michigan	Apr. 13-20	5 cases.	
Detroit, Michigan	Apr. 20-27	1 case.	
At 94 places in Michigan	Present		
Minneapolis, Minnesota	Apr. 16-22	8 cases.	
Omaha, Nebraska	Apr. 13-20	11 cases.	
Manchester, New Hampshire	Apr. 20-27	5 cases.	
New York, New York	Apr. 13-27	94 cases.	18 deaths.
Cincinnati, Ohio	Apr. 19-26	4 cases.	
Allegheny City, Pennsylvania	Apr. 12-19	3 cases.	
Johnstown, Pennsylvania	Apr. 13-20	1 case.	
Philadelphia, Pennsylvania	Apr. 13-27	12 cases.	2 deaths.
Steelton, Pennsylvania	Apr. 20-27	1 case.	
Williamsport, Pennsylvania	Apr. 20-27	3 cases.	
Ducktown, Tennessee	Apr. 20-present		
Memphis, Tennessee	Apr. 13-20	24 cases.	
Nashville, Tennessee	Apr. 20-27	14 cases.	
Salt Lake City, Utah	Apr. 13-20	17 cases.	
Cebu, Philippines	Mar. 12	5 cases.	1 death.
Manila, Philippines	Mar. 8-16	8 cases.	
Aguas Buenas, Porto Rico	To Apr. 10	4 cases.	
Ciales, Porto Rico	To Apr. 10	1 case.	
Isabela, Porto Rico	To Apr. 10	4 cases.	
Manati, Porto Rico	To Apr. 10	1 case.	
Ponce, Porto Rico	To Apr. 10	34 cases.	
San Juan, Porto Rico	To Apr. 10	6 cases.	

Small-pox—Foreign.

Hong Kong, China	Mar. 8-23	23 cases.	10 deaths.
Panama, Colombia	Apr. 15-22	5 cases.	3 deaths.
Guayaquil, Ecuador	Mar. 2-23		3 deaths.
Cairo, Egypt	Mar. 25-Apr. 1.		2 deaths.
Paris, France	Apr. 6-13		7 deaths.
Liverpool, England, Great Britain	Apr. 6-13		2 deaths.
Cardiff, Wales, Great Britain	Mar. 8-30	6 cases.	1 death.
Dundee, Scotland, Great Britain	Apr. 6-13	2 cases.	
Glasgow, Scotland, Great Britain	Apr. 12-19		6 deaths.
Mexico, Mexico	Apr. 7-14		1 death.
St. Petersburg, Russia	Mar. 30-Apr. 6.	14 cases.	3 deaths.
Warsaw, Russia	Mar. 23-30		5 deaths.
Singapore, Straits Settlements	Mar. 2-16		1 death.

Yellow Fever.

Vera Cruz, Mexico	Apr. 8-16		1 death.

Plague—Foreign and Insular.

Adelaide, Australia	Feb. 28	1 case.	
Canton, China	Feb. 28	Epidemic.	
Chan Tsin, China	Feb. 28	Epidemic.	
Fatshan, China	Feb. 28	Epidemic.	
Hong Kong, China	Mar. 8-23	22 cases.	21 deaths.
Singapore, Straits Settlements	Mar. 7-16		2 deaths.
Honolulu, Hawaii	Mar. 29		1 death.
Manila, Philippines	Mar. 8-16	10 cases.	8 deaths.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine Hospital Service for the Seven Days ending May 2, 1901:

CARMICHAEL, D. A., Surgeon. To assume temporary command of the San Francisco Quarantine Station.

GREENE, J. B., Passed Assistant Surgeon. Detailed for temporary duty in the Bureau.

HEISER, V. G., Assistant Surgeon. To proceed to Norfolk, Virginia, for special temporary duty, April 27, 1901. To proceed to Quebec, Canada, and report to the United States Commissioner of Immigration for duty, May 1. 1901.

SCHLAAR, W. F., Hospital Steward. Granted leave of absence for 26 days, March 29, 1901.
WERTENBAKER, C. P., Passed Assistant Surgeon. To proceed to Prescott, Arkansas, for special temporary duty.

The East Side Physicians' Club.—One hundred and seventy-five doctors on the east side, below Fourteenth Street, New York city, have organized the East Side Physicians' Club, with a clubhouse at No. 165 Henry Street, and intend to establish a medical library.

Rumor that the Sultan of Turkey has Killed his Physician.—The Constantinople correspondent of the *Daily Express* (London) says: "It is rumored that the Sultan shot dead a physician who, while attending him for ear complaint and massaging him, unwittingly caused his Majesty intense pain.

Changes of Address.—Dr. Edward Bennet Bronson, to No. 10 West Forty-ninth Street, New York; Dr. Joseph D. Bryant, to No. 32 West Forty-eighth Street, New York; Dr. John F. Erdmann, to No. 60 West Fifty-second Street, New York; Dr. A. Goldhammer, to No. 240 East Seventy-second Street, New York; Dr. Augustus A. Hussey, to No. 409 Stuyvesant Avenue, Brooklyn; Dr. Ogden C. Ludlow, to No. 234 West One Hundred and Thirty-fifth Street, New York.

The Edward N. Gibbs Memorial Prize Fund.—The trustees of the New York Academy of Medicine have the pleasure of announcing the receipt of ten thousand dollars from Mrs. Sarah Barker Gibbs and Miss George Barker Gibbs for the establishment of the Edward N. Gibbs Memorial Prize Fund, the income to be awarded triennially to the physician of regular standing in the medical profession of the United States of America who shall present the best original essay upon the ætiology, pathology, and treatment of the diseases of the kidney.

Banquet to a Richmond (Va.) Physician.—A banquet was tendered to Dr. J. B. McCaw by the Academy of Medicine and Surgery at Richmond, Va., on April 25th, to mark the retirement of Dr. McCaw from the practice of medicine in that city, after an honored and efficient service lasting for fifty-seven years. Dr. McCaw graduated from the University of New York in 1844. During the evening Dr. McCaw was presented with a handsome loving cup. Dr. George Ross acted as toastmaster and Dr. Johnston, Dr. Brock, and Dr. Hugh M. Taylor made addresses.

The Medical Department of the Brooklyn Navy Yard is established in new quarters. The building is two stories high and about forty feet square. The upper floor is being fitted out for a residence for the pharmacist. The lower floor is fitted out with all the implements of surgery and necessaries for the pursuit of the medical profession which there are in the best hospitals in the country. In no other navy yard or naval station in the country is there anything approaching it in newness and excellence of design. Nearly every modern appliance is at hand, and the operating room is also finely equipped.

The Quarantine Station at New York.—The Assembly at Albany, on April 23d, adopted a resolution providing for a special committee of three to investigate the quarantine station at New York and suggest appropriate legislation to the legislature of 1902. One purpose of the committee's work is to learn how the station may be made self-supporting. The appropriation for its expenses was fixed at $1,000. For many years the station has been self-supporting, according to Dr. Doty, Health Officer of the Port, but the introduction of modern apparatus and the establishment of a laboratory have increased the cost of the station, until now it is necessary to ask for an appropriation from the State of from $8,000 to $10,000 a year. The Quarantine Commission, which is separate from the Health Officer's Department, was entirely supported by the State. The investigation will probably include both branches.

Commencement Exercises.—The fourteenth annual commencement of the Gross Medical College was held at Denver, Col., on April 25th. There were fifteen graduates, two of whom were women.——The Baltimore Medical College held its twentieth commencement exercises at Baltimore on April 23d. There were nearly one hundred successful candidates.——The annual commencement exercises of the Omaha Medical College were held at Omaha, Neb., on April 25th. There were twenty-three graduates.——Commencement exercises of the University College of Medicine were held at Richmond, Va., on May 2d. There were eighty-five graduates in the medical class.——The Cooper Medical College commencement exercises were held at San Francisco, Cal., on April 23d. There were 27 graduates.——The Albany Medical College, Albany, N. Y., held its regular commencement exercises on May 1st, diplomas being awarded to twenty-eight students.

The Philadelphia Health Bureau Furnishes an Exhibit for the Pan-American Exposition.—In response to the invitation to furnish an exhibit for the Pan-American Exposition, a large portfolio of literature and photographs pertaining to the work of the Bureau of Health has been completed under the direction of Dr. Welsh, of the Municipal Hospital, Philadelphia. The portfolio contains complete collections of blanks and circulars of instruction issued by the bureau for use in its several divisions, together with extracts from reports showing the sanitary work performed, statistical health diagrams and photographs illustrating the city's facilities for handling infectious diseases. The pictures include interior views of the bacteriology laboratories, a bird's-eye view of the Municipal Hospital and separate pictures of the smallpox and leper buildings, the temporary and emergency buildings, interior views of diphtheria wards, the new deadhouse, the disinfecting plant, and other views of the hospital buildings and grounds.

Scarlet Fever.—Scarlet fever has reached an epidemic form in Pittsburgh and vicinity.——It has also made its appearance at Norwich, N. Y.

Reappearance of Yellow Fever in Cuba.—Yellow fever has appeared in Havana, and the order of the secretary of the treasury suspending the quarantine regulations has been revoked.

"Pink-eye."—An epidemic of "pink-eye" is reported among New York city's school children. It is popularly believed to have some connection with the progress of the excavation of city streets in the spring.

Typhoid.—The epidemic at New Haven is, from all acounts, losing its virulent features. Only a few new cases and but one death were reported during the past

week. The belief is spreading that the diagnosis in many cases may have been wrong.

Diphtheria.—Three children in the family of Christian Scientists at Fanwood, N. J., were taken ill with diphtheria recently. One died on April 18th and then physicians were called in. Despite their efforts, another child died on April 23d. The third may yet be saved. Several other cases were also reported in the neighborhood.——The disease has made its appearance in Bergen, N. Y.; Scotch Plains, N. J., and at Highbridge, in Bronx Borough, New York. Forty cases were reported at the latter place, and the board of health has ordered the closing of the public school there. The cases are of a mild nature.

Small-pox.—The prevalence of small-pox continues. In New York several cases have been discovered in the New York Foundling Asylum and in the Italian colony in Brooklyn. Altogether, so far as the city is concerned, the present epidemic will stand well forward in the list of those which have occurred since the health department began keeping a record in 1868. Nearby places that have been visited are Newark, N. J., where it made its appearance in the Essex County Hospital for the Insane, at Jersey City, College Point, and Southington, Conn. At the latter place is domiciled the wife of a minister, who refuses to see physicians, believing in the healing power of prayer. The patient left New York on April 17th on the New York, New Haven and Hartford Railroad, and other residents of the Connecticut town are extremely indignant. The woman's house in this city was fumigated, and fumigation and vaccination have been lively in Southington. The crisis in the case has not been reached.——Other places where small-pox has made its appearance are in the province of Ontario, Canada; several points in Illinois; at Cleveland, Ohio; Philadelphia, and elsewhere in Pennsylvania.——Suits for damages against New York, through the board of health, are threatened on the part of two residents of Brooklyn Borough, who, it is said, were removed to the hospital for contagious diseases on North Brother Island within the past month, one as a small-pox patient and the other as a suspect. Both, it is stated, were detained under surroundings in which they were likely to become contaminated. The doctors assert that the rash that the men had was suspicious. One had contracted scurvy at Cape Nome, Alaska.——According to tables compiled by the United States Marine-Hospital Service, at Washington, there were 16,734 cases of small-pox in the United States between December 28, 1900, and April 19, 1901, of which 225 proved fatal. For the same period a year ago there were only 8,013 cases, but the deaths numbered 439.——The disease has obtained a foothold in the Lathrop Memorial Home, at Albany, in which there are thirty-five children, and it has been quarantined.——From Bradford, Pa., comes the story of the destruction of a pest house by fire after a mob had prevented the authorities from admitting small-pox patients.——Other points visited were Wheeling, W. Va., Chicago, several points in Minnesota, Michigan and Wisconsin, Cleveland, Ohio; Kansas City, Mo.; Fitchburg, Mass.; Salt Lake City, and Grafton, W. Va. In the latter town a school teacher, afflicted with the disease, kissed every one of her sixty-five pupils, and now the board of education has prohibited kissing in the schools.

A McKees Rocks Medical Society.—Physicians resident at McKees Rocks and district, Pa., recently organized the McKees Rocks Medical Society. The following are its officers: President, Dr. J. A. Barr; vice-president, Dr. P. T. Sullivan; secretary, Dr. Walter Deane, and treasurer, Dr. J. W. Omstott.

The Clinical Society of Maryland met, on April 19th, at Baltimore. The following papers were read: Distribution of Cases of Consumption in Baltimore, by Dr. C. Hampson Jones; Registration of Tuberculosis, by Dr. Lawrence F. Flick, of Philadelphia; and The Care of the Tuberculosis Patient, by Dr. H. Warren Buckler. The subject considered by the society was The State and Municipal Care of Pulmonary Tuberculosis.

The Burlington County (Pa.) Medical Society.—At the annual meeting of the Burlington County (Pa.) Medical Society, on April 16th, the following delegates were elected to the State Medical Society: Dr. Parson, Dr. Dubell, Dr. Flynn, Dr. Stroud, and Dr. I. W. Hollingshead. These delegates were elected to attend the American Medical Association: Dr. Parry, Dr. E. Hollingshead, and Dr. J. D. Janney.

The Medical Association of the Greater City of New York will hold a stated meeting at the New York Academy of Medicine, 17 West Forty-third Street, on Monday, May 13th. The order of exercises includes the reading of the following papers: I. Gliosarcoma of the Base of the Brain, Pressing upon and in Front of the Left Lobe of the Cerebellum, with Remarks on the Localization of Cerebellar Disease, by Dr. Henry W. Berg. II. Remarks on the Surgical Aspects of the Case, by Dr. Howard Lilienthal. III. Discussion by Dr. B. Sachs, Dr. L. Putzel, Dr. Pearce, Dr. Bailey, Dr. George E. Brewer, Dr. Samuel Lloyd, and others.

A Hospital Celebrates its 150th Anniversary.—The Pennsylvania Hospital of Philadelphia will celebrate the 150th anniversary of its founding to-day, May 11th. The institution was the first hospital established in the American colonies.

Hospital Staff Changes.—Miss Agnes D. Randolph, superintendent of the Virginia Hospital, of Richmond, Va., has tendered her resignation.——The entire staff of resident physicians at the Hahnemann Hospital, Philadelphia, with the exception of Dr. Usilton, resigned on April 17th. The staff consisted of Dr. E. N. Huff, Dr. J. G. Blackwell, Dr. F. A. Whiteman, Dr. A. P. Hallowell, and Dr. Usilton. At a meeting of the Board of Trustees on Tuesday it was decided to request the resignation of Dr. Huff, Dr. Blackwell, and Dr. Whiteman, to take effect on May 16th. Upon being served with the notice from the board the three physicians named promptly resigned, and Dr. Hallowell resigned through sympathy with the others. The physicians declare that all the trouble is the result of petty complaints made by Miss Brownlee, directress of nurses.——Miss Sophia F. Palmer, superintendent of the City Hospital of Rochester, N. Y., has tendered her resignation.——Dr. Ralph W. Seiss, for seventeen years professor of diseases of the ear at the Polyclinic Hospital, Philadelphia, has resigned, and Dr. Francis R. Packard, who has resigned the post of dean, has been elected to fill his place. Dr. B. M. Randolph, of Richmond, Va., has been elected dean, in succession to Dr. Packard, and director of the laboratories, succeeding the late Dr. Thomas S. Kirkbride, Jr.——Dr. Samuel D. Risley has resigned his post as senior professor of diseases of the eye at the Phil-

adelphia Polyclinic and College for Graduates in Medicine. As a mark of appreciation of his long service the board of trustees has created an emeritus chair and has elected Dr. Risley to fill it. Dr. William Campbell Posey has been elected to the chair made vacant by Dr. Risley's resignation. Dr. Posey is a graduate of the college and medical department of the University of Pennsylvania.——Dr. Thomas H. Magness, of Baltimore, has been appointed resident physician at the Baltimore University Hospital, to succeed Dr. W. D. Bacon, and Dr. Joseph T. Devine, of New York, was appointed assistant resident physician, to succeed Dr. Edward C. Moriarity. ——Alexander Miquou has been elected superintendent of the French Hospital at San Francisco. Other officers elected are: August Bergez, collector for the society; Dr. Dudley Tait, re-elected surgeon of the hospital; Dr. T. P. Canac-Marquis, gynæcologist; Dr. M. W. Frederick, ophthalmic surgeon; Dr. Louis E. Brun, dentist; Dr. E. R. Berges, resident physician. Dr. M. Krotoszyner and Dr. C. F. Pawlicki have been re-elected.——Dr. A. S. Priddy has been elected first assistant superintendent of the Southwestern Hospital of Virginia, located at Marion. Dr. Priddy is a member of the legislature from Charlotte county and is one of the leading physicians of Virginia.

Hospital Buildings and Endowments.—A charter has been obtained for the Presbyterian Hospital of Atlanta, Ga.——The Board of Public Service of Cincinnati, Ohio, has agreed to allow the Cincinnati Hospital an additional $7,500 on condition that the branch hospital is kept open.——Anson R. Flower, of New York, has presented $24,000 to Flower Hospital for the purchase of adjoining property, to be fitted up for a dispensary and nurses' dormitory. An endowment of $10,000 has also been received from Mrs. H. R. Kunhardt.——Proposed additions to the Rochester (N. Y.) State Hospital will double its capacity. The estimated cost is $350,000.——The treasurer's report of the New York Hospital Saturday and Sunday collection shows that the collections for 1900 amounted to $75,000, an increase of $5,000 over 1899.——The French Benevolent Society has acquired title to the property No. 450 to 456 West Thirty-fourth Street, New York, for a consideration of $43,300. The society will build a hospital on the site. ——Ground has been broken for an annex to St. Vincent's Charity Hospital, Cleveland, Ohio, to cost about $40,000, and to be used exclusively for women patients. ——The will of the late George L. Thorndike, of East Boston, Mass, directs that his estate, so soon as it exceeds in value $200,000, shall be used to construct a hospital in some suitable location in that city, to be furnished free by the city.——The Emergency Hospital of the Pan-American Exposition at Buffalo is reported ready for patients. The staff consists of two physicians and two nurses. Beginning this month, it will be increased as circumstances demand. Thus far, only two men have been killed and a dozen permanently injured at the exposition. The average number of casualties is eight per day.——It is planned to erect a new building for the California Eye and Ear Hospital, in San Francisco, at a cost of $20,000.——The Eclectic Medical Institute at Cincinnati will shortly renovate and equip the old Sexton homestead as a hospital.——Governor Odell has signed the bill appropriating $53,000 for the further construction of the Dannemora Hospital for Insane Convicts at Dannemora, N. Y.——The Franciscan Sisters of the Third Order of St. Francis, whose mother house is located at Lafayette, Ind., have acquired ground at Louisville, Ky., upon which they will erect a large hospital. The building will be L-shaped and four stories high and the additions will be built as the funds are raised by contributions. The same order is building the St. Edward's Hospital in New Albany, Ky.——Mayor Van Wyck has declined to approve Senator Hennessy's bill enabling New York to establish a reception hospital in Bronx Borough at a cost of $300,000.

Foreign Obituary Notes.—Dr. Giulio Bizzozero, professor of general pathology in the University of Turin, died of pneumonia on April 8th, at the age of fifty-five years. Dr. Bizzozero has published a large number of monographs, giving the results of his studies in various lines, each one of which is a model in every respect. He was an admirable and very popular teacher and a clear, forceful and most instructive writer. His latest work, which was published just prior to his death, was concerned with the ætiology and prevention of cancer.——Dr. Max Ring died recently in Berlin at the age of eighty-three years. For the past forty years Dr. Ring has devoted most of his energies to purely literary work, but had throughout his life maintained a close affiliation with medicine and medical men.

Erratum.—In our list of births, marriages, and deaths, published last week, it was announced that a son had been born to Dr. and Mrs. S. Nelson Irwin, whereas we learn now that it was a daughter. The error was not ours.

Births, Marriages, and Deaths.

Married.

ARMSTRONG—FISKE.—In Mount Vernon, New York, on Tuesday, April 30th, Dr. Edward Vanderpool Armstrong, United States Navy, and Miss Gertrude Chandler Fiske.

COLSON—WEEKS.—In Savannah, Georgia, on Tuesday, April 30th, Dr. James H. Colson, of Waldo, Florida, and Miss Eloise Weeks.

DEVLIN—DAME.—In Brooklyn, on Tuesday, April 30th, Dr. James Lawrence Devlin and Miss Florence Eugenia Dame.

HENRY—SLOAN.—In New York, on Tuesday, April 30th, Dr. Nelson Herrick Henry and Mrs. Sarah Rodgers Sloan.

MCARTHUR—KILCREASE.—In Stockton, Alabama, on Thursday, April 25th, Dr. A. McArthur, of Rembert, Alabama and Miss Mary Kilcrease.

MUNSON—PEENE.—In Yonkers, New York, on Wednesday May 1st, Dr. Edwin Sterling Munson, of New York, and Miss Edna May Peene.

SMITH—EDMONDSTON.—In Washington, on Tuesday, April 30th, Dr. Edward Sanford Smith and Miss Blanche Eleano Edmondston.

TROTTER—BARLING.—In Cienfuegos, Cuba, on Tuesday April 9th, Dr. Frederick Eugene Trotter, United State Marine-Hospital Service, and Miss Harriet Everett Barling

Died.

ALMON.—In Halifax, Nova Scotia, on Friday, April 26th Dr. Thomas Ritchie Almon.

CORNELL.—In New York, on Wednesday, May 1st, Dr Clarence W. Cornell, in the forty-sixth year of his age.

GREENLEAF.—In Ipswich, Massachusetts, on Sunday, April 28th, Dr. Robert W. Greenleaf, of Boston, in the forty-seventh year of his age.

LYON.—In New York, on Saturday, May 4th, Dr. Samuel K. Lyon, in the forty-sixth year of his age.

RHOADS.—In Reading, Pennsylvania, on Saturday, May 4th, Dr. M. Albert Rhoads, in the fifty-third year of his age.

ROSSE.—In Washington, on Friday, May 3d, Dr. Irving C. Rosse, in the fifty-fourth year of his age.

THOREN.—In Chicago, on Monday, April 29th, Dr. John T. Thoren, in the thirty-sixth year of his age.

Pith of Current Literature.

Journal of the American Medical Association, May 4, 1901.

The Gyromele in the Diagnosis of Stomach and Intestinal Diseases. By Dr. Fenton B. Turck.—The gyromele, or revolving sound, is a flexible steel cable, terminating in a more flexible steel spiral end. This spiral end is provided with a metallic pellet, and covered by a sponge, lamb's wool, or cotton. The flexibility of the sound is of such a degree as to adapt it accurately to the site, shape, and size of the organ. By means of the revolving apparatus to which the sound is attached, vibrations are produced which can be palpated and auscultated externally, thus giving exact information of the presence and locations of the revolving cable. The situation of the metal sound can also be verified by means of the x-rays. The fluoroscope and the skiagraph give excellent results. Percussion of the inflated stomach is rendered more facile and exact when the border-line of the stomach has been established beyond doubt, by means of the introduced cable.

A New Operative Method to Expose the Seminal Vesicles and Prostate for Purposes of Extirpation and Drainage. A Preliminary Report. By Dr. Eugene Fuller.

Myasthenia Gravis Pseudoparalytica (Asthenic Bulbar Paralysis). By Dr. J. R. Buist and Dr. E. G. Wood.

Limitations of the Laryngologist in the General Treatment of Nose and Throat Diseases. By Dr. H. W. Loeb.—The limitations, according to the author, are these: (1) Acute conditions of the nose and throat, influenced by remedies which have an immediate local effect; (2) rheumatic nose and throat conditions which exhibit a positive and early relief under appropriate treatment; (3) syphilis of the nose and throat, where general treatment may be best observed by watching its effect upon the local lesion, and where the local process is rapidly destructive. Even under these conditions, the author believes, the patient's chances might be improved by assistance from one whose attention is less directed to localism.

Absolute Increase of Measurement from the Anterior Superior Spine to the Malleolus as a Sign of Hysteric Hip Disease. By Dr. James Jackson Putnam.—Though a search through the literature of hysteria shows that this sign has not been wholly unnoticed, it has not, so far as the author knows, been recognized as a characteristic of hip disease.

A Case of Transient Motor Aphasia, Complete Anosmia, nearly Complete Agraphia and Word Blindness Occurring in a Left-handed Man, with Special Reference to the Existence of a Naming Centre. By Dr. Charles S. Potts.

The Pharmacology of the Nitro-sugars. By Dr. C. R. Marshall.

The Classical Cæsarean versus Porro Cæsarean. By Dr. George M. Boyd.—The author believes: (1) That the life of the infant alone, under certain conditions, justifies the Cæsarean section; (2) that the classical Cæsarean has as low a mortality as an easy ovariotomy; (3) that the classical Cæsarean is less mutilating than the Porro Cæsarean, and, with the patient in good condition, is therefore the operation of choice; (4) that the Porro Cæsarean has about the same mortality as has hysterectomy for fibroids, and should be performed when the patient demands it, or when infection or a neoplasm of the uterus makes it necessary; (5) that the physician should always be prepared to perform the Cæsarean section on a multipara with the history of one or more dead children.

Ocean Climates, their Effects and the Cases they Benefit. By Dr. John A. Robison.

Adhesive Rubber Dam for the Prevention of Possible Infection at the Site of Operation. By Dr. J. B. Murphy.

The Present Status of Spinal Surgery. By Dr. Samuel Lloyd.

Boston Medical and Surgical Journal, May 2, 1901.

Contusions of the Abdomen. By Dr. Charles L. Scudder.—The problem presented to the surgeon when he meets with a case of contusion of the abdomen is definite in its demands, but often difficult of solution. These questions must be answered: Is operation necessary? Are there lesions of viscera? Two classes of cases should not be operated upon at first: (1) That class in which little or no shock is present and in which there are absolutely no localizing signs; and (2), that class in which profound shock, amounting perhaps to collapse, exists. Immediate operation is demanded in persistent, moderate shock, with or without localizing signs; also, in cases of progressing hæmorrhage, and in cases of peritoneal infection. Having determined that definite lesions exist in any of the viscera, the form of treatment to be adopted is pretty generally accepted.

Observations on the Use of Antistreptococcus Serum in the Treatment of Puerperal Sepsis, with a Report of Five Cases. By Dr. Frank A. Higgins.—In general, the author believes that the serum treatment has no place in the routine treatment of puerperal sepsis, that it should only be used in desperate cases after failure to obtain improvement by other and usually more efficient methods, and that if no improvement is shown after use for two, or at most three, days and the injection of from forty to sixty cubic centimetres, it should be discontinued. He believes, moreover, that its use is not free from danger, that it usually lowers the pulse and temperature, but at the same time that it has a correspondingly depressing effect upon the patient, and that it has not apparently lowered the mortality of the disease. With regard to the general treatment of puerperal sepsis, early curettage of the uterus, carefully performed as soon as the diagnosis is established, is of the first importance. Following curettage, and sometimes in place of it in the mild cases, intra-uterine douches have proved to be of much value. For constitutional treatment: Stimulation, tonics, and forced feeding, with moderate diuresis and catharsis.

A Case of Cæsarean Section in a Face Presentation, Complicated by Uterine Fibroid. By Dr. Emma S. Call.

Notes from the Neurological Department of the Massachusetts General Hospital: Exophthalmic Goître and Fright. By Dr. E. W. Taylor.—In each of the three reported cases the association of a definite emotional disturbance with the symptoms which came on immediately afterward is too close to be disregarded. Some unknown predisposition, as in all other diseases, must be assumed; but the exciting cause, reasonably enough, may be regarded as fright. The manner of development of this perfectly characteristic disorder from such a cause is naturally, as yet, quite beyond our power of comprehension. If clinical experience, however, bears out the ætiological relationship, it must none the less be accepted and seriously regarded, even though our knowledge as yet is

purely empirical. From every point of view, it is desirable that cases should be reported, to the end that more light may be thrown upon a problem which is of the most intimate concern, not only to the physician, but to the public at large.

Medical Record, May 4, 1901.

The Operation for Radical Cure of Inguinal Hernia, at the End of the Century, as I Saw it Performed by Bassini, Lucas-Championière, De Garmo, Coley, and Broca. By Dr. Campbell Ford.—The author gives an interesting description of the methods of each of the operators mentioned in the title. He considers Bassini's use of silk indefensible, as few at the present time will question that kangaroo-tendon may be satisfactorily chromicized and reliably sterilized. The use of silk for ligating and tying off the omentum is far less defensible than its use for suturing; yet the author agrees with De Garmo, that if for any reason he should be compelled to give up kangaroo-tendon he would go back to silk. He believes that De Garmo's method of suturing the external oblique and the pillars of the ring by taking a wide stitch is a good one.

Varicella in Adults. By Dr. Alvah H. Doty.—The author concerns himself in the matter of the practical distinguishing of chicken-pox from small-pox. In all circumstances it should be borne in mind that this distinction is made by the appearance of the eruption: its character, the manner in which it appears, and its distribution or location. Constitutional symptoms should not be given undue prominence in diagnosis; they are important as corroborative evidence, but they should be considered after the eruption has been studied. He strongly condemns the use of the term "varioloid," which is variously accepted as indicating a mild, less dangerous, or distinct type of small-pox. The use of this term, he asserts, unquestionably tends to carelessness, as in these cases there is commonly a relaxation in the usual precautions taken to prevent the extension of small-pox. Therefore, cases of "varioloid" are apt to be of special danger to the public health. Although "varioloid" represents a mild attack of small-pox, it is capable of producing in others the most malignant form of this disease.

A Plea for the Conservation of Breast Milk in Whole or in Part. By Dr. Thomas S. Southworth.—The author agrees with Dr. Koplik, who advocates the utilization of part breast feeding when possible. He combats the impression that so soon as a child digests several feedings daily from the bottle, it is a matter of little consequence how soon the weaning is completed. Early weaning to the bottle is fraught with very serious dangers to the child. The career of the infant whose food is, in part at least, breast milk, is much more likely to be uneventful. The direct and indirect danger of digestive disturbance and varying grades of malnutrition in those who receive the bottle alone can scarcely be set forth too strongly.

On Bandages for Nephroptosis. By Dr. George M. Edebohls.—The author divides bandages for movable kidney into two general classes: 1. Simple bandages and apparatus embodying the feature of a special kidney pad. 2. Simple bandages that act by supporting the entire contents of the abdomen, sustaining and more or less immobilizing the movable kidney or kidneys on top of the intestinal mass. 3. All the relief to be got from bandages in cases of movable kidney is obtainable from one of two devices, either from an elastic bandage, encircling and sustaining well the lower two thirds of the abdomen, or from a long and low-reaching corset, fitted and adjusted with the same end in view. 4. The relief obtainable from bandages in any case of movable kidney will depend upon the presence and the degree of any associated enteroptosis. The greater the degree of associated general enteroptosis, the better the prospects of relief from a bandage or corset. When movable kidney exists without general enteroptosis, no form of apparatus will prove satisfactory. 5. All forms of apparatus with special kidney pads or trusses are to be absolutely rejected because they are impotent to fix and sustain a movable kidney, and because any pressure they may exert is injurious to either the kidney or to neighboring organs, especially the vermiform appendix, or to both. 6. In all cases in which relief of symptoms cannot be obtained from either a proper simple bandage or a corset, nephropexy is indicated.

Version: Indication, Technique, Limitation. By Dr. S. Marx.

Axis-traction Forceps. By Dr. Egbert H. Grandin.—The author asserts that one needs only to understand the use of the axis-traction forceps to value them highly. With them there will be fewer impossible forceps deliveries, far less avoidable damage to the maternal parts, and fewer intracranial injuries laid to the door of one of the most useful and beneficent instruments ever devised.

Cæsarean Section. By Dr. Edwin B. Cragin.

Medical News, May 4, 1901.

Medical Department of the University of Pennsylvania. By Dr. Charles W. Dulles.

A Report of Twenty-four Operations Performed during Spinal Analgesia. By Dr. William Seaman Bainbridge.—Though twenty-four cases are given in detail, fifty cases are considered by the author in drawing his conclusions, as follows: 1. Cocaine is far more satisfactory than eucaine. The latter is less potent, more evanescent, the areas of analgesia are frequently "patchy." Cocaine produces no more unpleasant after-effects than eucaine and is decidedly more reliable. 2. Analgesia to the level of the diaphragm can be depended upon in all cases where a moderate dose of a potent solution of cocaine has been introduced by lumbar puncture. 3. Complete analgesia, including the eyes, mouth, and throat, has occurred. It does not entail more severe after-effects than when the lower extremities only are involved. 4. The preparation of the patient as for a general anæsthetic diminishes all the unpleasant effects of cocaine and eucaine and often prevents them altogether. 5. By moderate doses of bromides before the injection the initial vomiting is frequently avoided and the liability of headache lessened. 6. In neurotic patients there are often hysterical symptoms directly following the completion of the injection, but, as a rule, in a few moments a calm follows and the patient lies perfectly still. 7. Initial nausea and vomiting often occur soon after the puncture, but last only for a moment or two, and usually do not recur during the operation. 8. Analgesia lasts for from thirty minutes to four hours. 9. Depression after the puncture is inconsiderable. 10. The preparation of the patient, the use of nitroglycerin by hypodermic injection, or the employment of coal-tar products with caffeine, controls the headache which is in many instances an after-effect of spinal puncture. 11. In a few cases there may be motor paraplegia or vertigo. Both are temporary. 12. Spinal puncture has not affected normal or

diseased kidneys. 13. Usually the tactile power, muscular sense, and the ability to detect heat and cold are retained. 14. Usually the patient sleeps the first night. 15. There is often a rise of temperature of a few degrees within eight or ten hours of the operation. Whether this is the direct result of the puncture or the effect of psychic disturbances is not determined. The circulation and respiration are not seriously embarrassed.

Some Sources of Error in Laboratory Clinical Diagnosis. By Dr. Theodore C. Janeway.—The author considers that the first requisite for a diagnostician is not technical skill, but a judicial mind capable of weighing the value of evidence. Laboratory errors he divides into two classes: Those due to the methods used or to faulty technique, and those due to inaccurate reasoning from accurate results. In connection with tests for albumin in the urine, he mentions, as the most conspicuous error in technique, failure to filter the urine. In ring tests there must be a sharp line of demarcation between the solution and the reagent. The presence of bile or of urates in large amount renders Heller's test almost useless. Heller's reaction may take as many as fifteen minutes to develop, and the tubes should not be discarded within that time. In the author's opinion, the heat and acetic-acid test in a proper light is the most delicate and the easiest of application. The absence of any haziness with this test is absolute evidence of the absence of albumin. A very slight haziness is probably due to nucleoalbumin and is of no significance. Fehling's solution is the most delicate test for sugar and certainly the most useful for just one purpose—to exclude its presence. No reduction with Fehling's solution invariably means no sugar, a reduction merely indicates the necessity for applying further tests. Quantitative urine analysis demands a sample of mixed twenty-four-hour urine, and even the most ordinary test is of little value if made with the urine passed at one time alone. In the use of the urinometer one must not neglect to make the correction necessary for changes in temperature. The Ehrlich diazo-reaction should only be considered as corroborative evidence of typhoid when found in the first week or ten days of a febrile affection. No error could be greater than to consider any urine examination complete without the use of the microscope. In the examination of sputum for the tubercle bacillus, any of the common staining methods needs only to be used accurately to give satisfactory results, but careless staining is a simple waste of time.

Philadelphia Medical Journal, May 4, 1901.

Puerperal Polyneuritis and Poliomyelitis. By Dr. James Stewart.—An interesting clinical and pathological article, which must be read in its entirety to be of value.

Localization of Sound and its Bearing on Hearing, Especially in Unilateral Deafness. By Dr. B. Alex. Randall.

The German Clinics of To-day. By Dr. John C. Hemmeter.—The author regards as one of the predominant features of the therapeutics in the German clinics the fact that the personality of the patient, not the conception of the disease, is put in the foreground of treatment. Another feature is the tendency to make use of a large variety and many methods for the relief of suffering and the cure of disease. In no other civilized nation in the world is diet treatment or nutritional therapeutics made the object of such thorough scientific investigation as in Germany. Among newer tendencies issuing from the German clinics is the participation of internal medicine in the humane and social duties of our present age. Great interest is manifested in hydrotherapeutics, also in aerotherapeutics, the treatment by hot and cold air, by gymnastics, and massage. The representative German clinic of to-day is no longer under the ban of pathological anatomy, but its highest aim is the perfection of treatment, to help and to heal.

Volvulus and Intussusception of Meckel's Diverticulum. By Dr. Joseph McFarland.

Deaths from Anæsthetics. By Dr. D. H. Galloway.—The author asserts of deaths from anæsthetics that the profession regards them with an apathy which seems born of a belief that they are inevitable, and that there are no means at hand for lessening the number of such deaths. He gives a number of instances in which almost criminal carelessness was shown in administering the anæsthetic, and he makes the assertion that, though many operations are practically devoid of danger, no anæsthetic is ever administered without jeopardizing the life of the patient. He believes that the responsibility for these deaths lies in part with the surgeons, and in part with the medical colleges, which fail to lay stress upon the importance of the anæsthetizer's duties.

Esophoria, or Latent Squint. By Dr. Francis Valk.

Strangulated Hernia. By Dr. Walter Lathrop.—In these cases, according to the author, the mortality is due to delay in operation, and to unnecessary taxis. Taxis is never free from danger, and its use should be discouraged save in emergencies. Strangulated hernia is invariably fatal, unless relieved, and early operation will nearly always succeed, and life be saved.

Ammonium Persulphate Solution. A New Decolorizing Fluid for Staining Spores and Sputum. By Dr. Robert L. Pitfield.

Lancet, April 27, 1901.

The Sometimes Successful Treatment of Cases of Apparently Incurable Blindness. By Dr. C. B. Taylor.—The author states that it has been his good fortune on many occasions to restore sight to persons who were believed to be incurably blind, this end being obtained by means not usually adopted in such cases. The cases comprise patients who have recovered after many years of apparently hopeless blindness, others who have suffered from, and under treatment have recovered from, the effects of neuroretinitis, iritis with diffuse scleroderma, hyalitis, detached retina, atrophy of the optic disk, and the results of destructive inflammatory and degenerative changes. As to remedies outside the usual routine, he places, first, electricity—static, faradaic, and galvanic; second, mercury, either alone or in combination with other drugs; third, derivatives, vascular, nervous, or both; and, lastly, persevering treatment on these lines, with such operative procedures as may be indicated in each individual case, so long as there is the least chance of benefit or any eye left to be operated upon. Mercury may be administered by the mouth, the skin, or by subconjunctival injections. For the last purpose the author prefers the cyanide, the injection of which may be rendered painless by the addition of a small portion of acoine. Among the derivatives, the author gives first place to bloodletting; he holds that venesection has fallen into ill-deserved disuse. He also recommends the use of counterirritation in the form of setons, blisters, etc.

On Two Cases Bearing upon the Question of the Limitations of Enterectomy. By A. E. Barker, F.R.C.S.—The author reports two successful cases of enterectomy, which bear upon the question of the limitations of that operation. The first case was that of a woman, aged fifty-eight years, who was operated upon for annular carcinomatous stricture of the colon, four and a half inches of the gut being removed. The interest of the case lies in the fact that the patient suffered from diabetes, the urine containing 6.6 per cent. of sugar at one time. Yet she recovered perfectly from the operation, the only complication being slight sloughing of the omentum. The second case was that of an extremely feeble old woman, aged seventy-six years, suffering from a strangulated ventral hernia. At the operation, five and a half feet of gangrenous small intestine were removed. The patient made an uninterrupted recovery notwithstanding her extreme debility. The article closes with a list of cases (twenty-seven in all) of successful resection of the bowel, which the author has collected from the literature. In twenty cases more than one metre of gut was removed, in five more than two metres, and in two more than three metres. It would appear that about two metres of small intestine, say six feet, may be removed without any serious damage to the subsequent assimilative powers. In younger patients a compensatory hypertrophy may take place in the small bowel left behind.

On Hour-glass Stomach, with List of Six Cases Operated upon by the Writer, and a Tabulated List of All Cases in which Operations have been Performed. By B. G. A. Moynihan, F. R. C. S.—By "hour-glass" stomach is understood that condition of the stomach in which the viscus is divided into two cavities, usually of unequal size. It may be congenital or acquired, but, while most authorities hold the former variety to be the more common, the author states that congenital hour-glass stomach is certainly rare and not improbably mythical. The acquired form may be caused by: (1) Perigastric adhesions, the results of a perforated gastric ulcer, hepatic bands, and other causes; (2) ulcer with local perforation and anchoring of the stomach to the anterior abdominal wall; (3) circular ulcer with subsequent cicatricial contraction and induration; (4) cancer of the stomach. The characteristic signs which may, singly or in association, be present, are: (1) Disappearance of fluid introduced through the stomach tube; (2) after cleansing of the stomach by lavage, a sudden gush of putrid, sour food; (3) "paradoxical dilatation," succussion splash in pyloric cavity after siphonage of the cardiac loculus; (4) distention of cardiac loculus; its gradual subsidence, and concomitantly the distention of the pyloric loculus; (5) during this period a gurgling, forcing sound heard over, or near, the middle of the stomach; (6) on distention with carbonic acid a large increase in the thoracic area tympanitic on percussion, and a slight distention of the pyloric loculus; and (7), rarely a sulcus may be seen on inflating with carbonic acid.

The following operations are practised in cases of hour-glass stomach: (1) Gastroplasty, with or without resection of the ulcer; (2) gastrogastrostomy or gastroanastomosis; (3) gastro-enterostomy; and (4), partial gastrectomy. The author gives a table of thirty-two cases collected by him from the literature, and also reports a series of six cases operated on by himself, all of which were successful and resulted in recovery.

Reversed Pulsus Paradoxus Due to Aneurysm of the Aortic Arch. By J. Hay, M. B.—The author reports a case of aneurysm of the aorta, in which the radial pulse was markedly affected by the patient's respiration. There was a marked diminution of the volume of the pulse with expiration, and the sphygmogram showed the presence of a definite anacrotic wave, the position of which in the upstroke of the tracing varied with the respiratory variation. The rhythmical variation in the pulse was considered to be due to a mechanical cause, probably some kinking of the innominate artery during expiration, as the chest wall descended.

Case of a Parasite—"Argas (or Ornithodorus) Mégnini" (Dugès)—in Each Ear. By Dr. J. C. Simpson. (*With a Note on the Anatomy of the Specimen.* By E. G. Wheeler.)—The authors report the occurrence in both ears of a patient, of a tick of the above-mentioned genus. The parasites were attached to the tympanum, and were easily killed by the use of pledgets of cotton soaked in chloroform. There was no visible injury to the drum of either ear.

A Case of Belladonna Poisoning; Morphia Used as an Antidote. By P. D. Strachan, M. B.—The author reports the case of a boy, aged five years, whose mother had given him by accident a large tablespoonful of glycerin of belladonna. The child soon became wildly delirious and violently restless, but the movements were at no time convulsive. The face was flushed, the respiration rapid, and the pupils widely dilated. The stomach was washed out and a quarter of a grain of morphine given hypodermically. The delirium continued through the day, and the morphine was repeated in eight hours. The next morning the child woke apparently well. The case illustrates the tolerance of the child for belladonna and the efficiency of morphine as an antidote. One tablespoonful of the glycerin of belladonna contains one grain of atropine. No rash at any time appeared upon the body and there was no peeling of the skin. Treatment was not begun until five hours after the poison was taken.

Dermatitis from Arsenic in Stockings. By Dr. F W. Tunnicliffe and O. Rosenheim, F. C. S.—The author report two cases of dermatitis of the legs, in both o which they were able to detect arsenic in the black stock ings worn by the patients. Sodium arsenate is exten sively used as a fixing agent for mordants, in dyein processes. In Sweden, Austria, and Germany, there ar laws regulating the use of such arsenical mordants.

Tetanus Puerperalis. By Dr. K. Das.—The autho has collected from the literature sixty-eight cases o puerperal tetanus; of these only five recovered. In re gard to treatment, the following points must be looke to: (1) The destruction of the bacteria at the seat of in fection by thoroughly antisepticizing the parturien canal; (2) the elimination of the toxines already ab sorbed, by purgation and intracellular injection of salin solutions; (3) the overcoming of the symptoms induce by the action of toxines—this is accomplished by isol tion, quiet, and large doses of chloral; and (4), the ne tralization of the poison already absorbed and immun zation of the body after local infection has taken plac While antitoxine treatment has reduced the mortality c tetanus as a whole from ninety to forty per cent., yet th puerperal cases, taken separately, show no improveme in the percentage of recoveries.

Mercury and Iodide of Potassium Internally Given with Pilocarpine Hypodermically in Disease of the Eyes. By Dr. G. H. Burnham.—The author advocates this combined form of treatment in cases of inflammatory sclerokeratitis and sympathetic ophthalmia, and cites two illustrative cases. The treatment may be said to owe its efficacy to its power of arousing to excessive activity, in a vigorous and sustained manner, the normal physiological processes in diseased tissues.

British Medical Journal, April 27, 1901.

Traps and Pitfalls in Special and General Practice. By Dr. J. D. Grant.

Remarks on the Training of Ophthalmic Surgeons. By Dr. A. F. Fergus.

On the Advisability of the Inclusion of the Study of Anæsthetics as a Compulsory Subject in the Medical Curriculum. By Dr. D. W. Buxton.—The author advocates that the study of anæsthetics be included in the medical curriculum, and suggests the following: 1. That all medical students, before applying for final examination, be compelled to furnish evidence (*a*) of having studied the practice of some recognized anæsthetist, and the theory of anæsthesia, its physiology, pharmacology, and practice; (*b*) of having actually administered nitrous oxide gas, ether, and chloroform; (*c*) of having obtained a certificate of proficiency from some recognized teacher. 2. That the final examination of students should include one by which their knowledge of anæsthetics can be tested.

On Certain Practical Applications of Extract of Suprarenal Medulla. By E. A. Schafer, F. R. S.—The author suggests that a trial should be made of the extract of suprarenal medulla in all cases in which it is desired to strengthen or to induce uterine contraction. His observations show that it has a far greater power in causing contraction of the muscular tissue of the uterus, whether pregnant or non-pregnant, than any other drug. Since the active principle is unaffected by the gastric juice, it can be given by the mouth, but in *post-partum* cases it would be better to inject it directly into the uterine cavity. The solution recommended is an infusion of dry medullary substance, thirty grains to the pint of water. Another class of cases in which the extract may prove of the greatest value is those of sudden cardiac failure. In these cases the sterilized decoction, five grains to a fluid ounce, should be slowly injected into a superficial vein. Remarkable results have been seen to follow the application of this method to animals in which the circulation had apparently entirely ceased. The material used consisted of the separated, healthy medulla of the suprarenal capsules of the ox or sheep, rapidly dried in thin layers at a temperature of not more than 50° C., then powdered and kept in well-stoppered bottles. A dose of five grains of the dry medullary substance may be introduced into a vein without fear of deleterious results.

Suprarenal Gland Extract in the Epistaxis of Hæmophilia. By Dr. D. McKenzie.—Since suprarenal extract checks hæmorrhage by inducing contraction of the unstriped muscle fibres in the walls of blood vessels, it would be reasonable to suppose it to be of little value in hæmophilia, which is associated with congenital hypoplasia of the vessel walls, including, of course, the muscular elements. Yet the author reports a case of typical hæmophilia, occurring in a boy aged thirteen years of age, and having a well-marked family history of hæmophilia, in whom a severe epistaxis was immediately checked by the application of suprarenal extract, after all other remedies had failed.

The Dietetic Value of Sugar. By Dr. H. W. Gardner.—The author calls attention to the great change that has taken place in our views as to the value of sugar as a food. Formerly it was looked upon with great disfavor; it was supposed to injure the teeth, to be constipating, productive of flatulence, etc. Nowadays, sugar has come to be looked upon almost as a necessity, and certainly as one of the most valuable articles of diet. The great increase in our consumption of sugar is due to its cheapness. Great Britain consumes annually eighty-six pounds of sugar per head of population; the United States comes next, with sixty-five pounds; in fact, the Anglo-Saxon may be distinguished as the sugar-eating race. The chief points about sugar as a food are: (1) It is easily digested and absorbed; (2) it is readily stored up as glycogen, forming a reserve of force-producing material; (3) it is in this form readily available when required; (4) it becomes completely oxidized without any waste and leaves no residue. Under certain circumstances it can also be converted into fat and stored away for future use.

It has been found that the addition of sugar in generous quantity to the diets of athletes and soldiers enables them to do more work with less exhaustion. It does not seem improbable that the increasing height and weight and the improving health of the English people during the last half century are at least to some extent due to that greater consumption of sugar that has been rendered possible by its cheapness. Alimentary glycosuria must always be borne in mind. If given in too large quantities, sugar can no longer be assimilated, and appears in the urine. Cane sugar is also apt to cause an undue secretion of mucus which may cause trouble. It has been the custom to countermand sugar in rheumatism, but the author is not at all sure that this is not merely prejudice. In gout the indication is more clear; those who are gouty and fat must avoid it like poison, but those who are gouty and thin may take sugar within certain limits.

A Preliminary Note on the Hibernation of Mosquitoes. By Dr. H. E. Annett and J. E. Dutton, M. B.—The authors have investigated the subject of the hibernation of mosquitoes, and state that they have been able to find adult mosquitoes (*Culex* and *Anopheles maculipennis*) in damp barns and cellars throughout the winter. Among the large numbers of mosquitoes of both genera collected by them, a male has never been found; moreover, all the females had been fertilized. When such adult females were fed upon blood in a warm room, they invariably laid eggs between the fifth and the eighth day. The authors' observations differ markedly from those of Wright, who has been unable to find adult mosquitoes in winter, and who attributes the continuance of the species solely to the great resistance to cold exhibited by the larvæ, which remain alive all winter. A number of the adult anopheles collected by the authors were kept in a damp cage for a month at a temperature of 5° to 10° C.; although no food was supplied, only two or three of them died. During the coldest weather the attitude both of culex and anopheles was peculiar and characteristic. The under surface of the thorax and abdomen was applied closely to the walls, the legs being stretched straight out, at right angles to the body. The character-

istic attitude of anopheles (at an angle to the surface) was entirely absent. Many of the culex were wholly enveloped in a thick mould, thus fixing them in the described position.

Centralblatt für Gynäkologie, April 13, 1901.

Cure after Operation for Carcinoma of the Uterus.—Dr. J. Pfannenstiel reviews this subject exhaustively. The involvement or not of the parametrium and the character of the neoplasm must be considered when operative cases present themselves. The soft and early forms of the disease offer a better prognosis than the hard and older forms. Pregnancy or its future possibility must not be considered in the face of so serious a disease; but since metastasis in the ovary from a cancer of the cervix is unknown, the ovaries had better be retained in women who have not yet reached the menopause. The proportion of women who remain well after vaginal extirpation of the uterus is between seven and ten per cent. of all cases. Cancer of the body of the uterus gives the best prognosis. Cervical cancer, too, offers a better prognosis than that of the vaginal portion. By the use of clamps, the prognosis has been somewhat improved, since it allows of more thorough extirpation of diseased tissue in the circumvaginal and parametric tissues. Concerning the newer abdominal operations, the author says importance must be attached not only to the removal of glands, but also to the cleaning out of the parametrium, especially the parametric tissues lying in the neighborhood of the cervix. Pfannenstiel believes in limiting laparotomy in these cases to those instances in which the vaginal operation cannot be carried out in the ordinary manner. He thinks that the future cure of uterine carcinoma lies more in the early diagnosis of the disease than in improved technics, and he emphasizes the fact that it must not be forgotten that cancer of the uterus is not a disease of old age only, carcinoma of the vaginal portion, especially, occurring not infrequently between the twentieth and thirtieth years.

Expulsion of the Placenta by External Manipulation.—Dr. W. Zangemeister uses this method of expelling the placenta. In an interval of pain, the uterus is squeezed by the fingers at different places on the sides, anteriorly and posteriorly, sufficiently strongly to make indentations. This is repeated during two or three intervals. By this means the placenta becomes loosened from its site so that it can be easily expressed after two or three good contractions during a pain. Inversion is impossible by this method, as the indentations are not made at the top of the fundus, but at the sides, in front and behind only.

Münchener medicinische Wochenschrift, April 9, 1901.

Blood Transfusion.—Professor August Bier has been employing the transfusion of lamb's blood in cases of malnutrition from various causes. He uses this blood, defibrinated, because of the intense reaction it occasions. It is injected into an artificially distended vein by means of an aspirating syringe. The action of the transfused blood is to produce hyperæmia resulting from capillary stasis, and a serous filling of the entire body. This is probably most intense in the diseased organs. It, further, stimulates metabolism and the appetite. The high "transfusion fever" the author regards as important and favorable. The changes in the composition of the blood occasioned by the transfusion, the author regards as therapeutically valuable. He has used it satisfactorily in cases of sacro-iliac tuberculosis, tuberculosis of the bladder and testicles, of the lungs, of the knee-joint, and of various internal organs, in lupus, and in cachectic cases generally. There was always a temporary improvement.

Treatment of Gunshot Wounds of the Abdomen.—Dr. Walther Petersen says that in every case the mere suspicion of perforation should lead to immediate operation, since delay is much more dangerous than an exploratory operation. Expectant treatment should be allowed only when the most experienced observation is possible.

Experiences in the Boer War in Bullet Injuries and Asepsis.—Dr. Eduard Sthamer reports his success in the field with aseptic measures only in wounds due to bullets. Antiseptic treatment was found to be inferior.

Multiplicity of Primary Malignant Tumors. By Dr. Nehrkorn.

Studies on Inflammation of Serous Membranes. By Dr. R. Heinz.

Two Cases of Embolism of the Abdominal Aorta.—Dr. C. Bührer reports two cases of mitral stenosis with thrombosis of the pulmonary artery and embolism of the abdominal aorta.

Value of Glutoid Capsules in the Diagnosis of Intestinal Disease. By Dr. Friedrich Fromme.

Bismuth Poisoning.—Dr. F. Mühlig reports the case of a young man whose burns were thoroughly powdered with subnitrate of bismuth. A week later the entire mouth was of a bluish-gray color, swollen, and ulcerated in places. Fœtor was marked and the mouth could be opened only with difficulty. He advises caution in the external use of the drug.

Casuistic Contribution to the Study of Benign Stenotic Diseases of the Œsophagus. By Dr. R. Schütz.

Treatment of Pertussis.—Dr. Gustav Spiess recommends the use of orthoform in an insufflator for the purpose of anæsthetizing the mucous membrane of the larynx and respiratory passages to reduce their irritability.

A Case of Unilateral Dislocation of the Lower Jaw. By Dr. M. Karehnke.

Riforma medica, March 12, 13, 14, 15, and 16, 1901.

Experimental Researches on Serumtherapy in Tetanus. By Dr. Guido Tizzoni.—The author compares the efficiency of his own serum against tetanus with that of Behring's and with other similar preparations. His conclusions are as follows: The curative value of antitetanic serums varies to a great extent. The first in point of efficiency is Tizzoni's, then comes Behring's, and then, at a great distance, comes the English serum. The French preparation must be given the last place. The difference between the author's serum and the other preparations is as follows: As compared to Behring's, the efficiency of Tizzoni's serum is as 2:1, as compared to the English serum as 10:1, and as compared to the French serum the difference is still greater. The curative value of a serum has no relation to its antitoxic power *in vitro*. This article is a contribution to the controversy between Tizzoni and Behring, as to the therapeutic value of the Italian and German antitetanic serums.

March 19 and 20, 1901.

Researches on Nephrectomy. By Dr. Antonio Zapulla.—Experiments on dogs show that these animals can continue to live when one half, or even more, of one kid-

ney has been excised and the other kidney completely removed, either before or after the resection of the first. Life continues in these circumstances "in the best conditions." The author announces his intention of publishing histological studies upon the question as to the nature of the regeneration of renal tissue after such resections.

March 21, 1901.

On the Time Relations between the Cardiac Murmurs and the Sounds of the Heart. By Dr. Giuseppe Polacci.—In insufficiency, the murmur occupies the entire phase of the cardiac cycle to which the abnormal sound belongs, and then indicates an advanced state of the regurgitation. When a murmur occupies only a part of the phase (systole or diastole) to which it belongs, it should be distinguished by the terms (suggested by Rummo) protosystolic, mesosystolic, and telesystolic; protodiastolic, mesodiastolic, and telediastolic, according to the portion of the systole or diastole which they occupy. Mesosystolic and telesystolic, and mesodiastolic and telediastolic murmurs always indicate a mild form of insufficiency, while protosystolic and protodiastolic murmurs always stand for advanced stages of endocarditis. The time relations of a murmur should therefore be minutely observed, for they indicate more clearly than the intensity and the transmission of the sound the stage of endocarditis with which we are dealing.

Gazzetta degli ospedali e delle cliniche, February 17, 1901.

On the Variations in the Alkalinity of the Blood in Fever. By Dr. Giuseppe Brunazzi.—Accurate chemical analyses and a comparison of his own results with those obtained by Malinconico furnish a basis for the following conclusions on this subject: The diminution in the alkalinity of the blood begins at the onset of fever and continues to progress with the rise of temperature, although it is not exactly proportional to the degree of pyrexia. This diminution is, therefore, not the result of the rise of temperature, but of metabolic changes which take place in the tissues in fever.

Some Changes in the Blood Resulting from Chloroform Anæsthesia. By Dr. Giovanni Benassi.—The author has found that chloroform anæsthesia produces certain changes in both red and white blood cells. The number of both erythrocytes and leucocytes is diminished, but the diminution is not in proportion with the duration of the anæsthesia, nor with the quantity of chloroform administered. The proportion between the red and the white cells is altered after chloroform narcosis, the white cells being diminished in greater numbers than the red. The alterations in the form of the red cells are proportionate to the duration of the administration and to the amount of anæsthetic used. The length of time required for the disappearance of all the alterations caused by the inhalation of chloroform is also in proportion to the duration of the anæsthesia and with the amount of anæsthetics employed. The changes in shape on the part of the red cells are manifold in character, the cells assuming stellate, cylindrical, or muriform outlines.

The Treatment of Pityriasis Capitis. By Dr. Andrea Rossi.

A Typical Case of Uterine Cough. By Dr. Salvatore Satullo.—In this case the cough is supposed to have depended on a uterine affection, for it disappeared so soon as the lesions in the uterus were removed by treatment. The patient was a primipara, aged twenty-nine years, who had been suffering from a hard, dry cough for five months. The cough was very troublesome, and was occasionally accompanied by vomiting. The thoracic organs were found to be perfectly normal, as were also the larynx, pharynx, and ear. The patient had had menorrhagia for five months, a purulent discharge from the vagina, and attacks of pains in the back and loins. This attracted the author's attention to the genital organs, and he found that there were erosions upon the cervix, and that a uterine polyp, of the size of a nut, protruded from the os. The uterine mucosa was the seat of a chronic endometritis.

Journal Akouscherstva i Gienskich Boliesney, January, 1901.

On Accidental Wounds of the Urinary Tract in Operations on the Pelvic Organs of Women. By Dr. A. P. Goubareff.—The author treats of the operative procedures required in cases where the surgeon accidentally wounds the ureter during an operation on the female pelvic organs. A knowledge of these measures is necessary in order to get out of the scrape without injuring the patient. Formerly the first impulse was frequently the removal of one kidney, or the sewing of the ureter into the vagina, or even into the abdominal wound. In some cases the injury to the ureter only becomes apparent after the operation, and it must be remembered that blood in the urine drawn by catheter does not necessarily mean a wound of the ureter. The modern surgeon, however, sutures the central end of the ureter into the bladder, when possible, or unites the cut ends of the ureters in one of a number of ways, which are described by the author.

Evolution and Determination of Sex. By Dr. N. Schipoff.—The author attempts to apply the laws of evolution to the study of the causes determining the sex of a fœtus. A highly interesting article, but one, unfortunately, not suited for abstracting.

Uterine Stones. By N. I. Ratchinsky.—A description of three specimens of uterine calculi, together with notes on the cases. In the first case the stone was of the size of two fists, and belonged to a patient aged sixty-one years. It was lodged above the posterior fornix, and pressed upon the rectum so as to hinder defæcation considerably. The stone was removed by Ott in 1896. This stone was connected with the uterus by means of a thin pedicle of connective tissue and muscle, and it was necessary to perform laparotomy in order to remove it, as it was too hard to be crushed. The tumor was a mass of connective tissue impregnated with lime salts. The second specimen was a submucous uterine fibroid impregnated with calcium salts, about the size of a hen's egg, adhering to the uterus by a thin pedicle, and discovered at an autopsy. The third specimen was an enlarged uterus discovered at an autopsy, which, on palpation, seemed to be filled with a number of stones rubbing against one another. These stones varied in size from that of a pea to that of a walnut; they were grayish-brown in color, and spongy in structure, resembling corals in shape. The inner wall of the uterus was irregular and faceted to correspond with the stones. At the fundus there was an opening in the uterine wall,

closed by a thin membrane of inflammatory exudate, through which a stone protruded.

An Old Case of Inverted Uterus Treated by Piccoli's Method; Recovery. By Dr. A. A. Dranitzine.—The patient was a woman, aged fifty-one years, who had been suffering from inverted uterus for over six years. In 1896, a fleshy tumor appeared externally, and the protrusion reached the size of a newly born child's head. The diagnosis of uterine polyp was made, and the growth was successfully removed. Soon afterward, another protusion appeared, smaller in size, together with a continuous bloody discharge. The diagnosis was inversion of the uterus due to the polyp. Piccoli proposed an operative method for the reduction and fixation of an inverted uterus, which was employed in this case. After disinfection, the uterus was brought down by means of forceps and the cervix held by assistants exercising traction upon five silk sutures that had been passed through the ring. The posterior vault was opened with a broad incision, the index finger introduced, and the adhesions fixing the inversion separated. The posterior wall of the uterus was then incised from cervix to fundus, along the index finger which had entered the funnel from the peritoneal side. The uterus was then reinverted by traction of the internal finger and pressure of the external hand and the incision closed with interrupted sutures, and the pouch of Douglas tamponed with gauze. The results were satisfactory, and no recurrence of the inversion was noted.

On Fixation and Manual Dilatation of the Cervix in Chronic Inversion of the Uterus as Compared to other Methods of Treatment. By Dr. A. A. Dranitzine.—The treatment of uterine inversion may be summed up as follows: First, manual reinversion must be tried, and if this fails the colpeurynter and tampons must be resorted to, in order to secure slow reposition. If these fail, the conservative operation (see previous abstract) must be resorted to, and, in case of failure, hysterectomy may be performed as a last resort. The author concludes from a consideration of clinical data that the manual method is adapted to the reduction of the great majority of inversions, and that in case of need, it may be combined with colpeurynsis. Even if colpeurynsis or tamponing fail, the manual method should again be tried, for the gradual dilatation of the vagina and pressure upon the inversion are good preparatory processes for manual reinversion. In this connection the knee-chest position renders valuable services. The only contra-indication to manual reinversion is the presence of purulent inflammation in the uterus or in the other pelvic organs. The author reports a case of inversion in which the uterus was reinverted by manual reposition, but only after the cervix had been fixed by sutures held by assistants.

Autoplastic Method of Suturing a Vesico-vaginal Fistula. By Dr. A. A. Abrajanoff.

A Case of Vaginismus Secondary to Condylomatous Growths on the External Genitals of a Newly Married Woman. By Dr. N. E. Akatzatoff.

Vratch, March 10, 1901 (March 22, New Style).

Cases of Sudden Unconquerable Somnolence (Narcolepsy). By Dr. S. J. Seltzer.—This rare condition was first spoken of by Thumen and Fricker in 1841, but the first detailed description of cases was given by Gelineau in 1880. The latter gave the name narcolepsy to a peculiar state in which the subject was seized with sudden somnolence that could not be overcome, notwithstanding every effort of the will. The author presents the histories of four such cases, and concludes as follows from a study of these cases and of the literature of the subject: Sudden unconquerable somnolence may occur as an independent disease. As such it may originate under the influence of violent emotions, such as great joy, or, more frequently, great grief. It occurs for the most part in individuals with a limited mental development, and in persons who have been weakened by some other disease; possibly under the influence of the mental depression caused by a consciousness of the gravity of the disease. A change of scene and of the mode of life contributes to the recovery of such patients.

A Case of False Arteriovenous Aneurysm. Application of Suture to the Vein. By Dr. V. I. Lisiansky.—In this case there was an aneurysm of the femoral artery at its lower third, on the inner side of the lower portion of the thigh, and the aneurysmal sac communicated with the femoral vein. The aneurysm was exposed, the artery separated from the vein, and ligatures applied above and below the sac. The opening in the femoral vein was then closed by means of five interrupted sutures of fine silk, the distance between the sutures being about 0.3 centimetre. An ordinary surgical needle was employed, and the whole wall of the vein was pierced at each puncture. The aneurysmal sac, represented by the thickened sheath of the sartorius muscle, was then excised, and the wound sutured with interrupted sutures, leaving space for drainage. The recovery was perfect.

Cases of Extra-uterine Pregnancy. By Dr. B. A. Fratkine.—The author reports five cases of extra-uterine pregnancy, four of which occurred among six hundred pregnant women during the past two years and a half. From an analysis of the statistics of extra-uterine pregnancy collected by other authors, he concludes that this anomaly of gestation is more frequent now than it was ten or fifteen years ago. This increase cannot, in his opinion, be attributed entirely to improvement in methods of diagnosis. The indications for operation in case of rupture of the sac and hæmorrhage into the peritonæum are as follows: If the diagnosis of rupture is made, but no blood tumor is found, laparotomy is always indicated. If a hæmatoma is distinguished, and if it shows signs of increase, there is no choice but to operate. If the hæmatoma remains small, however, the operation becomes a matter of choice, although it shortens the duration of the disease to a great extent. An operation is also indicated in the presence of signs of suppuration or sepsis. Laparotomy is to be preferred, as a rule, to the vaginal route. An important point is the immediate compression of the uterine end of the salpinx so soon as the uterus has been drawn into the wound.

Poisoning with Cream Tarts in Kharkoff (*concluded*). By Dr. P. N. Laschienkoff.—The author's experiments showed that these tarts contained a highly virulent form of *Staphylococcus pyogenes aureus*. On investigation, the process of preparing the cream for these tarts was found to be anything but aseptic. The author recommends that confectioners be required to heat the cream for such tarts, with the requisite additions, to 80° or 90° C. for at least half an hour, and that the preparation and sale of cream tarts should be prohibited in warm weather.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.
SECTION IN PÆDIATRICS.

Meeting of March 14, 1901.

Dr. W. L. Stowell, Chairman.

The Pathology of Typhoid Fever.—Dr. Martha Wollstein read a paper on this subject. She said that milk was a very important factor in the transmission of typhoid fever to children. The gastro-intestinal tract was the most frequent point of entrance for the typhoid bacillus, but the fœtus had been known to be infected by the passage of the bacilli through the placenta. The bacilli had been found in the urine, in the blood, and in the rose spots. It was convenient, as regarded the intestinal lesions, to divide cases of typhoid fever in children as follows: 1. Cases without characteristic lesions. 2. Cases presenting few and limited lesions of the solitary follicles and Peyer's patches. 3. Cases presenting intestinal lesions fully as extensive as in the severest forms in adults. The red blood corpuscles steadily diminished from the onset of the disease to defervescence or the first week of convalescence. Inflammatory complications were associated with leucocytosis.

The Value of the Widal Reaction.—Dr. John Lovett Morse, of Boston, read this paper. He said that, while the tendency abroad was to make use of a high dilution and employ a short time limit for the Widal reaction, in this country the preference was for a low dilution and a longer time limit. Out of 253 cases of clinically diagnosticated typhoid fever observed last autumn at the Boston City Hospital, there had been ten cases in which the reaction had not been obtained. Two of these had evidently been typhoid fever, for one presented intestinal hæmorrhages, and the other the typical lesions of typhoid fever, at the autopsy. The dilution employed was one in ten, and the time limit half an hour. He thought one was justified in asserting that the Widal reaction was present in at least ninety-five per cent. of all cases, but that it seldom appeared before the second week of the fever, and might be delayed until convalescence. Typhoid fever could not, however, be excluded by a single negative test or even, absolutely, by repeated negative tests. If a positive reaction was obtained, it was proof of typhoid fever unless the person had previously had this disease. The most convincing proof of all of the presence of typhoid fever was a negative reaction followed by a positive reaction, a dilution of one in fifty being used. Of 164 cases of typhoid fever in children between the ages of two and thirteen years, 77 had given a positive Widal reaction. The reaction appeared to occur somewhat earlier in children and to disappear more quickly. This reaction was not quite so important in early infancy, because of the possibility of a previous fœtal typhoid. Proof was not wanting of the transmission of the agglutinating power to the infant through the mother's milk, but it was quite evanescent in the infant when so transmitted.

Dr. W. P. Northrup referred to the case of an infant of nine months, seen by him in hospital practice, in which no Widal reaction had been obtained, notwithstanding the fact that in the same hospital at that time there were three other members of the family sick with typhoid. No typhoid bacilli could be found in the urine. The speaker added that, although 22,260 children belonged to the New York Foundling Hospital, and about 1,200 were farmed out in the suburbs of the city, not a single case of undoubted typhoid fever had been seen among these children in the many years of service of Dr. O'Dwyer, Dr. J. Lewis Smith, and himself.

Dr. David Bovaird, Jr., thought the different opinions expressed regarding the prevalence of typhoid fever among children could be reconciled on the ground that the prevalence of this disease among adults varied greatly in different localities.

Dr. James J. Walsh said that he had seen typhoid fever in two children of twelve and fifteen years respectively. Both had given the Widal reaction, one on the twenty-sixth and the other on the twenty-eighth day, and both had had relapses. He thought the Widal reaction was rather one of immunity than one of infection.

Dr. E. Libman said that he had done much work with the Widal reaction, and in three years had seen about seventy cases of typhoid fever in children, as determined by this reaction. The Widal reaction had proved especially useful in distinguishing between typhoid fever, pneumonia, and meningitis. He had made use of a dilution of one in twenty and a time limit of fifteen minutes, and since he had adopted the plan of growing the bacilli at 86° F. there had been a much larger proportion of Widal reactions noted.

Dr. Morse said that he would hesitate to make the diagnosis of typhoid fever if there was an increase in the white blood corpuscles. He had not observed any special relation between the time of the appearance of the Widal reaction and the occurrence of relapses.

Letters to the Editor.

URETHRAL IRRIGATION.

Westfield, Mass., *April 15, 1901.*

To the Editor of the New York Medical Journal:

Sir: Having read with interest a paper written by J. R. Eastman, M. D., published in your issue for April 13th, I wish to take exceptions to his remarks on Valentine's apparatus, with which he particularly finds fault.

1. The "force" is not regulated by raising and lowering the apparatus, but by the stopcock. Here let me say he has a new device for a stopcock.

2. I see nothing to be sterilized in the Valentine apparatus but the nozzles; these he sterilizes most thoroughly, and, furthermore, he never uses the same nozzle in a second case, before sterilizing. They are made of glass.

3. If the doctor knew that permanganate of potassium spoils in twenty-four hours, in solution, he would not speak of a "stock solution"; if the tablets are used and thoroughly "rubbed up" in a graduate, the objection the doctor finds will be fully dispensed with.

4. In reference to only irrigating the anterior urethra, if the doctor will lightly compress the urethra with the little finger, he will soon learn (by feel) when the fluid is at the "cut-off" muscle.

5. To gauge the pressure, this can be done by the pushing to and fro of the stopcock.

6. It requires about five seconds to fill the percolator, which, in my opinion, is quick time.

I can find no improvement in the doctor's apparatus

over Professor Valentine's. It reminds me of the old-time pocket-syringe treatment, the trouble-producer and, in fact, good for the specialist.

Being a former senior assistant to Professor Valentine, watching his untiring labors and efforts to produce an apparatus for the rapid cure (also positive) of gonorrhœa, I can speak with full knowledge of his apparatus. In conclusion, I wish to say that Professor Valentine will be pleased to send the doctor such literature as he has on the subject, and show his usual hospitality to the doctor if he is ever in New York. I wish to ask the professor's pardon for any error I may have made in my remarks as to his willingness to do as said above.

Fred. P. Lowenstein, M. D.

Book Notices.

Aetiologie und Prophylaxe der Lungentuberkulose. Von Dr. J. Ruhemann, Arzt in Berlin. Mit 13 Kurventabellen. Jena: Gustav Fischer, 1900. Pp. 88.

The author regards other bacteria than the tubercle bacillus as concerned in the initiation of pulmonary tuberculosis, especially the influenza bacillus, although, of course, these cannot start the disease without the aid of the tubercle bacillus. They furnish complications and keep them active, thus prolonging a disease which might, under suitable conditions, yield to treatment.

The first four chapters of the book deal with the ætiology of the disease in a striking and convincing manner. The last chapter treats of its prophylaxis, and is eminently readable by reason of its vigorous style and excellent condensation.

Burdett's Hospitals and Charities, 1900. Being the Yearbook of Philanthropy and the Hospital Annual. By Sir Henry Burdett, K. C. B., etc. London: The Scientific Press (Limited). New York: Charles Scribner's Sons, 1900. Pp. 1051.

This volume sustains the reputation of its predecessors and affords information that is nowhere else available. It is the ambition of the editor of this unique publication to include data from all English-speaking countries, and he has occasion to say that "there is in the United States of America a literature of the highest value which is confined entirely to pamphlets. Some of the ablest writing in the English language we have found in pamphlets of the sort we have in mind, and we should immensely appreciate the cooperation of any residents in the United States who would kindly procure and dispatch every pamphlet of the kind which comes under his notice, so that the collection we have commenced may ultimately be as complete as possible." It is to be hoped that those of our readers who may have such pamphlets, or who are connected with hospitals that publish reports, will comply with this request.

Inorganic, General, Medical, and Pharmaceutical Chemistry. Theoretical and Practical. A Text-book and Laboratory Manual containing Theoretical, Descriptive, and Technological Chemistry; Class Exercises in Chemical Equations and Mathematics; and Practical Manufacturing Processes for Five Hundred Chemical Preparations, with Explanatory Notes. By Oscar Oldberg, Pharm. D., Professor of Pharmacy, Northwestern University, Chicago, etc. In Two Volumes. Chicago: Chicago Medical Book Company, 1901. Volume I, pp. xii-522. Volume II, pp. viii-655.

These two volumes form a practical guide to the study of inorganic chemistry, the first dealing with the theoretical and descriptive part of the subject, the second forming a complete laboratory manual. The work appears to be thorough and entirely modern in its views, and it will no doubt become popular with students when its merits are known.

Ueber die vom Processus vermiformis ausgehende diffuse eitrige Peritonitis und ihre chirurgische Behandlung. Von Dr. Ali Krogius, Dozenten der Chirurgie an der Universität Helsingfors (Finland). Mit 43 Kurven im Text. Jena: Gustav Fischer, 1901. Pp. 240.

It is interesting to note the gradual acceptance by Continental, especially German, writers of the American views on appendicular inflammation. It has been, indeed, a slow process; but it is gradually bearing fruit and at the present day the resistance to operation is growing less and less as the subject is more thoroughly understood. In the present volume the author lays down authoritative rules for surgical intervention, although he has limited himself somewhat generally to the treatment of peritonitis as a sequel of inflammation of the vermiform appendix. The work opens with a long historical account of the entire subject of appendicular inflammation and its treatment, in which our own writers are, naturally, frequently cited. The author favors unreservedly the operative treatment of diffuse purulent peritonitis which results from a ruptured appendix, although the mortality in his fifty cases is extremely high, not so high, however, as if the operation had not been performed. The book is a good example of thoroughness and is worth careful perusal. The chapters on classification, diagnosis, and ætiology are carefully prepared and mark the work as complete.

The Treatment of Fractures. By W. L. Estes, A. M. M. D., Physician and Surgeon-in-Chief of St. Luke's Hospital, South Bethlehem, Pa. New York: International Journal of Surgery Company, 1900. Pp 216.

It is always refreshing to find a work by the hand o an author whose wide experience has qualified him to pre sent to his readers an original treatise which is so excep tionally free from padding and unnecessary detail, an yet leaving us nothing ambiguous to ponder over, but i its stead supplying us with all the essential and desirabl information possible in so small a volume. The write states in his preface that he has drawn freely from mod ern authorities for ideas and suggestions, but furthe says that the methods and measures laid down have bee the result of a large hospital experience extending ove the past fifteen years. It is noteworthy that the writer ha given space to the mechanics of fractures in general onl where it has been found necessary to elucidate the treat ment, the latter, as suggested by the title, being the mai object of the book.

The author has been most judicious in the arrang ment of the work. He first considers the "first aid an transportation," a subject to which, as a rule, too litt space is given. The importance of it is well illustrat in this chapter. We find under the same heading me tion of a number of simple and clever devices for the pr vention of further injury to the affected part and furth suggestions leading to the greater comfort of the patie

during his transportation. The advice to immediately apply a permanent splint whenever it is practicable, preferably plaster-of-Paris, is worthy of special comment; as the author states, there is nothing to fear from the secondary swelling if the splints have been properly applied.

Among the many interesting chapters may be mentioned that on fractures of the vertebræ; here the author has the opportunity of exhibiting his intimate knowledge of these fractures, permitting his reader to derive the benefits from his invaluable experience and mature judgment. Almost equal interest will be found in the chapters that follow, each of which makes manifest the desire of the author to place at the disposal of his readers only such subject-matter as is pertinent and desirable.

BOOKS, ETC., RECEIVED.

The Theory and Practice of Military Hygiene. By Edward L. Munson, A. M., M. D., Captain, Medical Department, United States Army. Illustrated by Eight Plates and nearly Four Hundred Engravings. New York: William Wood & Company, 1901. Pp. xii-971.

A Text-book of Mechanotherapy (Massage and Medical Gymnastics) Especially Prepared for the Use of Medical Students and Trained Nurses. By Axel V. Grafstrom, B. Sc., M. D., late House Physician, City Hospital, New York, etc. With Eleven Pen-and-ink Sketches by the Author. Philadelphia: W. B. Saunders, 1900. Pp. 5 to 139.

Vorlesungen über die pathologische Anatomie des Rückenmarks. Unter Mitwirkung von Dr. Siegfried Sacki, Nervenarzt in München. Herausgegeben von Dr. Hans Schmaus, a. o. Professor u. i. Assistant am pathol. Institut in München. Mit 187 theilweise farbigen Textabbildungen. Wiesbaden: J. F. Bergmann, 1901. Pp. xxi-589.

Pathologie und Therapie der Herzneurosen und der functionellen Kreislaufstörungen. Von Dr. August Hoffmann, in Düsseldorf. Mit 19 Textabbildungen. Wiesbaden: J. F. Bergmann, 1901. Pp. ix-367.

Verhandlungen der siebzehnten Versammlung der Gesellschaft für Kinderheilkunde in der Abtheilung für Kinderheilkunde der 72 Versammlung der Gesellschaft deutscher Naturforscher und Aerzte in Aachen, 1900. Im Auftrage der Gesellschaft herausgegeben von geheime Sanitätsrath Dr. Emil Pfeiffer, pract. Aerzte in Wiesbaden. Mit einer Tafel. Wiesbaden: J. F. Bergmann, 1901. Pp. xiii-260.

Bericht über die acht und zwanzigste Versammlung der ophthalmologischen Gesellschaft. Heidelberg, 1900. Unter Mitwirkung von E. von Hippel und A. Wagenmann. Redigirt durch W. Hess und Th. Leber. Mit 17 Tafeln und 8 Abbildungen im Text. Wiesbaden: J. F. Bergmann, 1901. Pp. ix-242.

Das Asthma, sein Wesen und seine Behandlung, auf Grund zwei und zwanzig-jähriger Erfahrungen und Forschungen. Dargestellt von Dr. W. Brügelmann, Anstaltarzt in Südende bei Berlin. Wiesbaden: J. F. Bergmann, 1901. Pp. xvii-219.

Das Selbstbewusstsein; Empfindung und Gefühl. Von Theodor Lipps. Wiesbaden: J. F. Bergmann, 1901. Pp. 42.

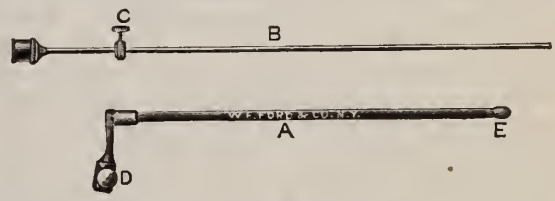
Functionelle Nierendiagnostik mit besonderer Berücksichtigung der Nierenchirurgie. Klinisch-experimentelle Untersuchungen von Dr. Leopold Casper, Privatdocent an der Universität, und Dr. Paul Friedrich Richter, Assistant der III. Med. Klinik, in Berlin. Mit 2 Holzschnitten. Berlin: Urban & Schwarzenberg, 1901. Pp. 155.

La peste d'Alexandrie en 1899 au point de vue clinique, épidémiologique, etc. Par le Dr. A. Valassopoulo, Médicin en chef de l'Hôpital grec d'Alexandrie. Avec figures et cartes dans le texte. Paris: A. Maloine, 1901. Pp. 3 to 164.

New Inventions.

DR. CORNING'S INSTRUMENT FOR SPINAL ANÆSTHESIA BY CATAPHORESIS.

The accompanying cut was accidentally omitted from Dr. J. Leonard Corning's article on Spinal Anæsthesia by Cataphoresis, published in our issue for May 4th.



A, the outer (insulated) tube; *B*, the inner tube; *C*, *D*, the binding-posts; *E*, the bulb of the outer tube.

Miscellany.

Some Medical Aspects of Napoleon's Campaign against Russia.—Some years ago Dr. Achilles Rose published in the *New Yorker medicinische Monatsschrift* a number of interesting extracts from a Latin dissertation by C. J. von Scherer, a surgeon attached to the corps of Würtembergians, and from a book by a German officer of the Westphalian corps. We now reproduce the substance of them in English.

In the beginning of May, 1812, Napoleon's army arrived at the frontier of Poland, whence it proceeded by forced and most tiresome marches to the river Niemen, which forms the boundary between Lithuania and Poland, arriving at its borders in the middle of June. An immense body of soldiers met near the city of Kowno, crossed the Niemen on pontoons, and formed under the eyes of the emperor in endless battle line, on the other side of the river. The forced march continued day and night over the sandy soil of Poland. The tropical heat during the day and the low temperature at night, the frequent rain storms from the north, the camping on bare and often wet ground, the ever-increasing want of pure water and fresh provisions, the immense masses of dust which, like a cloud, hung over the marching columns —all these together had sapped the strength of the soldiers even in the beginning of the campaign. Many were taken sick before they ever reached the Niemen. The march through Lithuania was hastened as much as the march through Poland; provisions became scarcer all the time; meat from cattle that had suffered from starvation and exhaustion was for a long time the soldiers' only food. The great heat and the inhalation of sand and dust dried the tissues of the body, and the thirsty soldiers longed in vain for a drink of water. Often there was no other opportunity to quench the thirst than in the swamps. The officers were powerless to prevent the soldiers from kneeling down at the stagnant pools and drinking the foul water without stint. Thus the army,

tired to the utmost from over-exertion and deprivation and disposed to sickness, entered the land of the enemy. The forced marches were continued during the heat of the day through sand and dust until stormy weather set in with rain, followed by cold winds. With the appearance of bad weather a general diarrhœa, which had already been observed at the time of crossing the Niemen, showed itself with greater severity. Men were attacked so rapidly that in the midst of the march they had to leave the ranks. The route the army had taken from camp to camp was marked by offensive evacuations. The number of the sick became so great that they could not all be attended to, and medical treatment became illusory when the supply of medicaments was exhausted. Many were left behind and a large number died on the way. On post-mortem examination, nothing noteworthy was found in the intestinal tract.

The greater part of the army fought in vain, however courageously, against the extending evil. Soon the strongest constitutions succumbed. Naturally enough, there was wanting everything of which the sick were in need—vegetables, farinaceous food, and medicaments—and consequently there was no barrier against the spread of the disease, while at the same time the deprivations and hardships which had caused it continued and reached their climax. Of a morning there were often as many as thirty of the small Würtembergian corps who had died during the night, not only such as had come to the camp sick, but also many who the previous evening had been counted among the healthy. Many who apparently were strong were taken with sudden nervous exhaustion and were as if paralyzed, unable to stir. Then came vertigo, insatiable thirst, and pain over the eyes. They died suddenly without fever. They had a slow pulse, without any abdominal pain, and often died in a moment with perfect consciousness. The post-mortem examination of those who had died from dysentery revealed inflammation of the stomach and the larger intestine, especially the rectum. The intima of the stomach, of the duodenum, and sometimes of the whole intestinal tract was completely relaxed and atrophied. In some cases there were found small ulcers in the stomach, with dentated margins, especially in the fundus, and there were like ulcers in the rectum. In other cases there were found quite large ulcers extending from the stomach into the small intestine. They were from the size of a lentil to the diameter of half an inch, and occupied the different membranes; in extreme cases the muscularis and the mucosa, but only rarely the servosa. In many instances there were gangrenous patches. The gastric juice had a sour odor; the lower part of the liver was bluish and hardened, containing a bluish liquid; the gall-bladder was generally empty or contained only very little bile; the mesenteric glands were mostly inflamed, sometimes purulent.

During the advanced stage of the disease the patients suffered from gastralgia, were very hungry, longed for vegetable diet, but had no fever. Some would march, equipped with knapsack and arms, apparently in good spirits, but suddenly would succumb and die. Others, especially those of a strong constitution, would become melancholic and commit suicide. Immoderate use of liquor proved very disastrous.

On the way from the Niemen to the Düna three thousand sick men had to be left in the hospitals of Malaty, Wilna, Disna, Strizzowan, and Witepsk.

The number of deaths increased from day to day. In the hospital of Strizzowan, in which von Scherer served six weeks, there were 902 patients. Of these, 310 died during the first three weeks; during the following three weeks, when better nursing and better means of treatment were obtainable, the number of deaths was only thirty-six.

The arrangements, which were made in haste during the march and called hospitals, had either no supply of drugs or only a very limited quantity. All that could be found in the shape of medicinal herbs in the fields or in the woods was made use of. Thus, they used, for instance, in the hospital of Witepsk, huckleberries and tormentilla root. When von Scherer organized a hospital in the castle of Strizzowan, he brought a large number of patients into a barn and two stables, and being without the necessary refreshments and drugs for them, he proceeded, not without difficulty and danger, to obtain some from the vicinity. During the first three weeks he gave partly as nourishment, partly as a medicament, the following plants which grow there, and sometimes with really good effect: Cochlearia armoracea, acorus calamus, allium sativum, rhaphanus sativus, menyanthes trifoliata, and salvia officinalis.

During the following three weeks he received several thousand florins from General Count von Scheeler, with instructions to apply the sum toward ameliorating the condition of his patients. He procured eatables and drugs from great distances, namely, from the Polish cities, Mohilew, Minsk, and Wilna. Enabled now to give his patients proper diet and medicines, he had excellent results. Some of the convalescents had relapsed on the slightest provocation, such as the eating of potatoes, which grew abundantly in the vicinity of the hospital. They were eaten surreptitiously, often in large quantities, by some of the convalescents. Many who were on the way to recovery died in consequence of their imprudence; others suffered for a long time great weakness of the intestine.

Marvellous was the effect of mental emotions on the disease. Great fright or great joy caused a sudden cessation of dysentery. Surgeon-General von Kohlreuter during and after the battle of Smolensk, witnessed the great influence of mental emotion on diseases of the body. Of 4,000 Würtembergians who took part in that battle there were few who were quite free from dysentery. Tired and depressed, the army dragged along; but as soon as the soldiers heard the cannon at a distance, telling them the battle was beginning, they emerged at once from their lethargy; the expression of their faces, which had been one of sadness, changed to one of joy and hilarity. Joyful and with great bravery they went into action; the hope of relief from the depressing state of war revived body and mind.

During the four days that the battle lasted and for some days afterward dysentery disappeared as if banished by magic power. When the battle was over, and the deprivation was the same as before, the disease returned as severe as before—nay, even worse, and the soldiers fell into complete lethargy. Many convalescent improved but slowly from great emaciation. Most noticeable was a kind of despondency or, rather, mental indolence which persisted in the patients; even in officers whom von Scherer had known as energetic and cheerful men a certain moroseness and a remarkable indolence were observed.

In the battle of Borodino, the soldiers fought like maniacs, with a wild joy devoid of all human feeling. They attacked the enemy where they were the most numerous. In charging a battery they all sought to

first, exposing themselves to the fire of innumerable cannon; over heaps of corpses they stormed the batteries of the enemy. This was not the work of health and strength, not the work of calm bravery, but the act of extreme despair. About a thousand Würtembergians were wounded, and many had to undergo surgical operations. It is noteworthy that in those of enfeebled and in reduced general condition capital operations were unusually successful and more were saved than is usual under apparently more favorable circumstances.

After the battle the army marched to Moscow and remained there until October 19th. The condition of the men was not materially improved. They had arrived starving, without the necessaries of life, and the burning of the city deprived them of suitable winter quarters, of which they were in sore need. Although eatables saved from the fire were distributed among the soldiers, so that they had during the weeks they remained tea, coffee, meat, and bread in sufficient quantity and of good quality, dysentery continued and assumed in the majority of patients a typhoid character. Besides, real "typhus"* had now made its appearance in the army. Icterus, associated with gastralgia and feverish pulse, were among the first symptoms. The fever spread rapidly and added to the misery of the army. The large number of sick gathered in miserable places, the odor of the innumerable cadavers lying in the streets of Moscow, the fatigue and deprivation of the men—all this had prepared for the development of the disease.

After the retreat from Moscow had been decided upon, all the sick that could be transported were sent ahead on wagons under a strong guard. They were sent on the nearest road to Borodino, while the army took the road to Kaluga. Several thousand fever patients were left in Morkan. With few exceptions, according to later information, they all perished. Of those who, although attacked by the disease, had still strength enough to be transported on the wagons, quite a number recovered on the way, to become, later on, victims of the cold.

The army left Moscow after the middle of October. The weather was clear and the nights were cold. The road chosen was the one to Kaluga, and the march was a forced one. Near Maloijoroslawez a desperate engagement took place, in which the French cavalry sustained severe losses. The discipline which thus far had kept the army together was shaken, and irregularities of all descriptions began to take place. Officers and men alike, seeing the general helplessness, looked with despair into the future. Surrounded on all sides by the enemy, who pressed them severely, the men were forced to remain on the high road. Whoever absented himself from the road exposed himself to the alternative of being killed or taken prisoner. On the endless tract of devastated land, from Moscow to Wilna, one did not see a native for days or even one head of cattle. Cities and villages had been laid in ashes; every day the misery and distress increased. The provisions which the men had taken with them from Moscow were lost, together with the wagons, on the flight after the engagement of Moloijoroslawez, before the army had reached Borodino. The rations which the soldiers carried with them were eaten in the first few days, and after that there was complete want of food. The horses, which could not be fed, fell in great numbers on the road. From the last days of October until mid-December, when the army arrived at Wilna, horseflesh was the only food of the greater portion of the soldiers. Many did not get even this and died from starvation before the great cold set in. The meat, however, which the survivors ate came from the starved and worn-out horses which had been unable to proceed further, or from such as had been lying dead on the road for a long time. With great voracity the soldiers threw themselves on the dead animals and fought with inhuman frenzy, disregarding all differences of rank and all military discipline, officers and men alike striving to secure some portion of the carcass, the heart, liver, and brain being the most preferred parts. The weaker had to be contented with any part. Many devoured the meat raw, while others placed it on bayonets and roasted it by a fire, eating it with the greatest relish, without any addition of condiments.

This was the sad condition when the great cold set in and brought the misery to its climax. During the last days of October, when the army hardly had reached Borodino, cold north winds came. On October 26th there was the first snowfall, and the snow made the way difficult to the utmost degree for the enfeebled army. The cold increased now from day to day, and it was already terrible for many to pass the night in the open air. Most of those who were unable to protect themselves by the warmth of a fire or by warm clothing had their limbs frozen. During the first days of November the thermometer had fallen to 5° F. Among the deleterious effects of the cold, mental derangements were noticed about this time. The first effect of the cold on the brain, which manifested itself even in the strong and healthy men, was loss of memory. At the very beginning von Scherer noticed many who could not name the best known and most familiar things, who even could not name the articles of food they were longing for most eagerly, or called them by a wrong name. Many forgot their own names and did not recognize their nearest friends and comrades. Others appeared altogether weak-minded, the facial expression being that of perfect dulness. Those who escaped the ill effects of the cold because of their strong constitution of body and mind were pained and horrified, in addition to their own misfortunes, to see the mental faculties of excellent men, otherwise full of will power, sometimes slowly, sometimes rapidly diminish and gradually degenerate into real lunacy, once in a while to brighten up for a moment only to sink down again.

The great cold enfeebled at first the brain of those whose health had been suffering before, especially of those who had suffered much from dysentery. Soon, however, with daily increasing cold, the influence of the low temperature made itself felt by every one. In consequence of the effect of the cold, the deeper-seated vessels of the brain and lungs were gorged, and the right heart was enlarged. In one case the autopsy revealed rupture of the blood-vessels of the brain; in most instances more or less serum was found in the sinuses. The corpses were white as snow, while the central organs in every autopsy were found full of blood. In the beginning, while the cold was still tolerable, the concentration of the liquids from the surface of the body into the central organs caused only slight changes in the functions of these organs, such, for instance, as difficult breathing, mental weakness, sometimes in greater, sometimes in less degree, numbness, indifference to external matters; in short, all that was called at that time the "Russian dunce," or "Russian dolt." The actions of these men gave evidence of complete paranoia and the highest degree of indifference. This condition may be compared to that of senility, when body and mind have been reduced again to the state of childhood. The bodies

*It is probable von Scherer means what we call typhoid fever.

of those who had suffered most from cold were as much wrinkled and parched as those of very old people. Men, before full of vigor in body and mind, hardened in the field, were tottering along, bent over a stick, lamenting and wailing like children. On the way they would beg for a piece of bread, and, if they received something to eat, real childish joy overcame them, bringing not infrequently tears to their eyes.

The features of these unfortunates were, according to the amount of suffering they had undergone, deadly pale and strangely changed. Youths looked like men eighty years of age, and their appearance was like that of cretins. The lips were bluish, the eyes dull without brilliancy and constantly in tears; the veins were small, hardly visible; the extremities were cold, the pulse could not be felt either at the wrist or at the temples; an almost invincible inclination to sleep prevailed. Often there happened, in the moment of sinking to the ground, paralysis of the lower extremities; shortly after this a few drops of blood from the nose indicated approaching death.

All bonds of brotherly love were undone; extinct was all human feeling. Upon anyone who sank down exhausted on the road the nearest comrades, the dearest relatives would throw themselves, to take possession of his garments, etc., leaving him naked on the snow, exposed to sure death. All that lived in the men was the instinct of self-preservation.

During the second half of November, still more during the first days of December and especially on the 8th, 9th, and 10th, when the army arrived at Wilna, the cold had reached the highest degree. During the night from the 9th to the 10th the thermometer was 40° F. below zero. The cold air caused severe pain in the eyes, similar to that brought on by heavy pressure. The eyes, which had been weakened already by the continued sight of snow, suffered thus very much. Many were blinded to such a degree that they could not see one step forward, could recognize nothing, and had to feel the way by means of a stick. Numberless men fell on the road and stiffened at once. During this period von Scherer observed that when those fell on the hard, frozen, ice-covered ground who had been suffering already considerably from cold, they died soon, in consequence, probably, of concussion of the spinal cord brought on by the fall, for suddenly general paralysis of the lower extremities, of the bladder, and of the sphincter ani occurred; urine and fæces were involuntarily voided. Many, without falling, without suffering such a concussion, died from progressive paralysis which proceeded from the lower extremities. In others complete hemiplegia ensued, while the mental faculties remained intact up to the last moment.

Regimental Surgeon von Keller communicated the following case to von Scherer: "It was near Wilna, during the first days of December, in one of the coldest nights, when we were lying around a fire in the road, together with a number of German officers, when a military servant approached us, asking permission to bring his master, an officer of the guard, to our fire. We consented with great pleasure, and two men of the guard brought a tall and strong man of about thirty years of age and placed him between themselves on the ground. When the French officer learned that a surgeon was present, he narrated that something very strange had happened to him. Notwithstanding the great misery, he had been until now cheerful and well, but half an hour ago his feet had become rigid, he had been unable to walk farther, and now he had no longer any sensation from the toes up to the thighs. I examined the case carefully. The feet were perfectly stiff, white as marble, and ice-cold. The officer was well dressed and, although in a most precarious condition, more cheerful than my comrades and myself. Soon he had a great desire to urinate, but was unable to do so. With great relish he ate a large piece of horseflesh which had been roasted, but complained soon of illness, and his hitherto cheerful disposition changed into greatest depression of mind. The urine was retained for several hours, which caused him great pain, but during the latter part of the night he passed involuntarily fæces and a large quantity of urine. He slept a great deal, and his breathing was until then free, but when morning dawned he went into a comatose state, and with daybreak, before we left our camp fire, the strong man who eight or ten hours before had been in good health, had died."

Interstitial Keratitis in the Offspring of Syphilitics.—Dr. Peter A. Callan (*American Gynæcological and Obstetrical Journal,* February) concludes that the offspring of syphilitics show the evidences of the inherited taint in only a slight percentage of the cases; that is, if we except those children that die under five years of age. Only a slight percentage of such children develop interstitial keratitis. When the disease attacks one eye, all our treatment appears to be powerless to prevent its development in the other eye. We may possibly delay, but we cannot prevent, the outbreak of interstitial keratitis in certain cases.

A Wandering Letter from the United States to the Late Ernest Hart.—The following from the *West London Medical Journal* for April may possibly reach the eye of the sender of the letter, and is therefore republished:

"A curious letter was delivered the other day at the hospital. It bore the United States postmark, and was addressed to 'Dr. Ernest Hart, at one time ophthalmic surgeon to the West London Hospital.' I have no means of judging of the measure of the sender's expectations as to the proper delivery of the letter, but to save further speculation it may be pointed out that Mr. Hart ceased his connection with the hospital more than thirty years ago, and that he has been dead more than three years. If the sender of the letter should ever happen to see this paragraph, it may interest him to know that I forwarded his communication to Mr. Hart's widow. That ends my knowledge of the matter, because I have not had a reply."

The Legal Complications of Ovarian Grafting.—The *American Gynæcological and Obstetrical Journal* for April, commenting editorially on a paper on Ovarian Grafting in the *Medical Record* for January 19th, by Dr. Robert T. Morris, says:

"Should some of these experiments result in pregnancy we should fancy certain not uninteresting medico-legal questions might arise, but we suppose this is one of the objections that Dr. Morris classifies as 'fanciful'; and when at last a real baby is produced from such a dual league it will be time enough to decide whether the infant belongs to the woman whose tissues, though cast upon a foreign shore, really sent it forth or to the woman whose uterus took the wanderer in and harbored it for nine weary months; and whether the second woman would be justified in a suit to recover rental: or, failing in that, in evicting the tenant before the lease should have expired."

Original Communications.

THE PATHOLOGY AND BACTERIOLOGY OF URETERO-INTESTINAL ANASTOMOSIS.

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(Concluded from page 761.)

Ureteral implantation into the rectum was done on 120 dogs (Martin, 76; Peterson, 44), of which number 101 died during the first forty-eight hours after the operation, of peritonitis, due to leakage of urine into

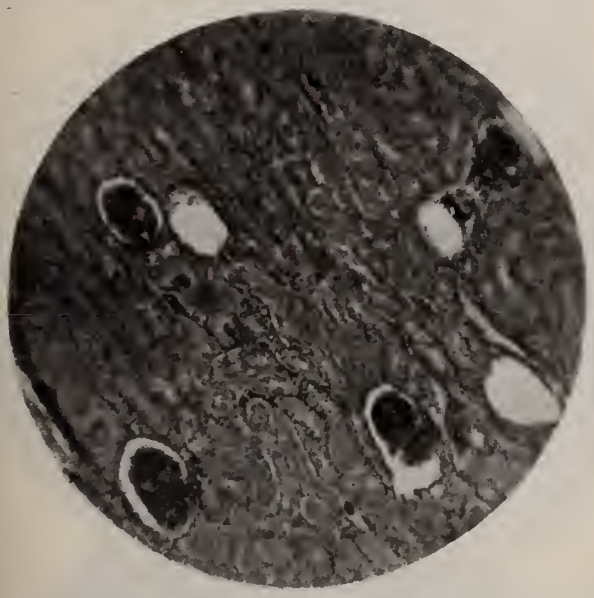

FIG. 9.—Implantation of both ureters into the rectum. The dog died, sixty days after the operation, of pyelonephritis of one kidney. Cloudy swelling and necrosis of the epithelium of the convoluted tubules.

the peritoneal cavity, or of general sepsis. I found colon bacilli in the kidney cortex of two dogs (iv P. and 1072 P.), which died within two days after the operation, and in such enormous numbers that the convoluted tubules were packed with them.

Sections showed severe hyperæmia, marked leucocytic infiltration, and some parenchymatous change. Cultures from the blood and various organs showed a rich growth of *Bacterium coli commune.* Mortality, 84 per cent.

Four dogs died between the second and tenth days (P. 805 and 940, P. ii and P. ix), of pyelonephritis and general sepsis.

Dog "A."—Implantation of the left ureter into the rectum. The dog lived eight days (xiii P.). Pyelitis and pyelonephritis of the side operated on. Fibrinous thrombi in both ventricles of the heart, extending into the pulmonary artery and aorta. Colon bacilli in both kidneys and in the blood.

Dog "B" lived nine days (ix P.). Pyelitis and pyelonephritis. Extensive medullary changes, necrotic black papillæ.

Histopathology: Many small cortical abscesses with colon bacilli. Necrotic papillæ and colon bacilli in the collecting tubules, surrounded by a necrotic area, much leucocytic infiltration, with many polymorphonuclear leucocytes and red blood corpuscles in the interstitial tissue.

Three died on the tenth day, of pyelonephritis and general septicæmia (5 and 6 M., iii P.). Pyelitis, pyelonephritis, fibrinous thrombi in the ventricles of the heart; septic spleen. Colon bacilli in the kidney cortex, blood, and spleen.

One died on the thirtieth day, of pyelitis, pyelonephritis (interstitial small-cell infiltration, dilated uriniferous tubules, capsules partly denuded of epithelium). Thrombosis of the portal vein. Colon bacilli in the kidney cortex and pelvis.

One died thirty-nine days after the operation (iv P., 1128), of pyelonephrosis and pyæmia. Endocarditis, septic spleen and liver.

Two dogs were killed forty days after the operation (P. i and ii, 1012 and 1032). One (P. i) had small granular atrophic kidneys with distinct evidence of former pyelonephritis. The colon bacilli had been destroyed with the tissue necrosis and cicatrization. The cultures showed no growth.

Histopathology: Proliferation of interstitial connective tissue, forming dense rays from papillæ to cor-

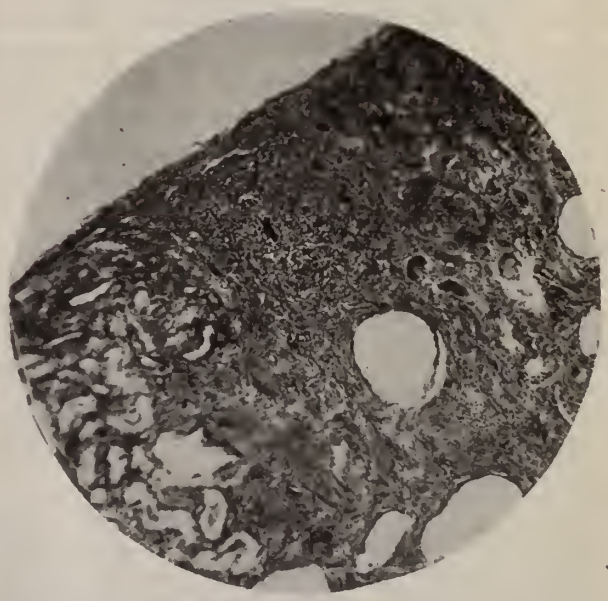

FIG. 10.—Implantation of both ureters into the rectum. The dog was killed ninety days after the operation. Atrophic granular kidney. Much interstitial hyperplasia with contraction and small-cell infiltration. Dilated, desquamated tubules and atrophic glomeruli, with thickened capsules.

tex, with retraction on the surface of the cortex. Many dilated desquamated tubules. Vessel walls thickened. Some cloudy swelling.

The other dog (P. ii) showed pyelitis and pyelonephritis, pyo-ureter, and fibrinous thrombi in both ven-

tricles, extending into the aorta and the pulmonary artery. Pyæmia. Cultures show rich growth of colon bacilli from both kidneys, the spleen, the liver, and the blood.

Histopathology: Pyelonephritis.

Macroscopical specimens "C" demonstrated:

One dog died sixty days after the operation (dog 5, P.), from pyelonephritis and pyæmia of one kidney and

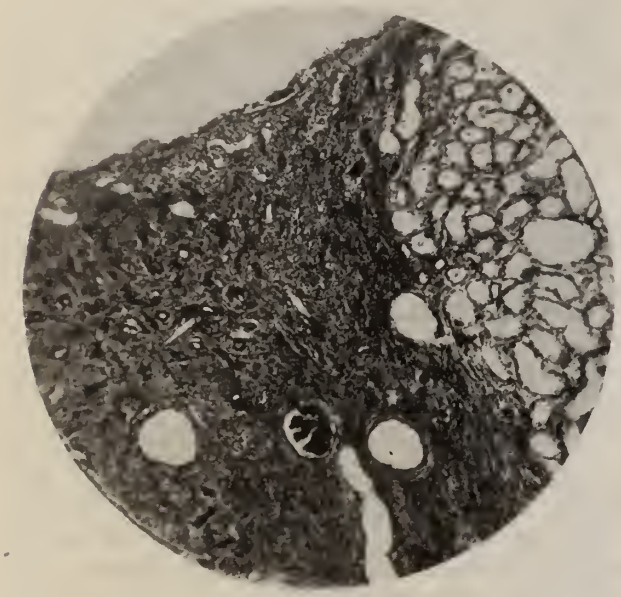

FIG. 11.—See Fig. 10.

parenchymatous nephritis of the other kidney. The right kidney was granular, with millet-seed cortical abscesses containing colon bacilli. Adherent capsule, old and recent pyelonephritis. The left kidney was enlarged and pale, and the capsule stripped off easily. No bacteria were found in smears or culture. Thrombosis of the portal vein, colon bacillus, and staphylococcus infection of the liver. Fibrinous thrombi in the right auricle and ventricle, with *Staphylococcus albus.* Purulent cystitis.

Histopathology: Right Kidney.—Pyelonephritis and granular atrophy. Hyperplastic interstitial connective tissue in the form of rays from papillæ to cortex, with cicatricial retraction of the surface of the cortex. Dilated tubules, with desquamated epithelium and granular detritus. Vessel walls thickened. Some cloudy swelling and necrosis.

Left Kidney.—Parenchymatous nephritis, cloudy swelling, fatty degeneration, and necrosis of epithelium of the convoluted tubules. Very little interstitial change.

Two dogs died eighty-four and eighty-seven days after the operation (dogs 3 and 8, P.). The first (eighty-four days) died of pyelonephrosis and pyæmia (mixed infection), pyelonephrosis, and pyo-ureter on the right side. *Bacillus coli communis* and *Staphylococcus albus.* Pyelonephritis of the left kidney. Fibrinous thrombi in the heart. Septic spleen and liver, with colon bacilli. Purulent cystitis with *Staphylococcus albus.*

The second dog (eighty-seven days) died of pyelonephritis and pyæmia (mixed infection). Slightly granular kidney, with adherent capsule and pyelonephritis. Pyo-ureter. Septic endocarditis with fibrinous thrombi. *Staphylococcus albus* and colon bacilli in the spleen, liver, and heart. Colon bacilli in the ureter and kidney.

One dog was killed ninety days after the operation (M., 4). Cultures taken from the live organs (chloroform narcosis).

Right Kidney.—Macroscopic specimen "D" demonstrated: Recent pyelonephritis, with colon bacilli. Non-adherent capsule. Millet-seed abscesses over the whole surface of the kidney, purulent rays from papillæ to cortex.

Left Kidney.—Old pyelonephritis, with granular atrophy of the middle of the convex border and adherent capsule. No bacteria.

Purulent cystitis with *Staphylococcus aureus* and colon bacilli, septic spleen and liver (*Staphylococcus aureus* and colon bacilli). Ureters comparatively healthy.

Histopathology: Atrophic granular kidney. Much interstitial hyperplasia with contraction and small-cell infiltration. Dilated, desquamated tubules and atrophic glomeruli with thickened capsules.

One dog died 127 days after the operation (M., 1), of pyelonephritis and pyæmia. Pyelonephritis and pyelitis of both kidneys, colon bacilli in both kidneys (uriniferous tubules) and ureters. Thrombosis of the por-

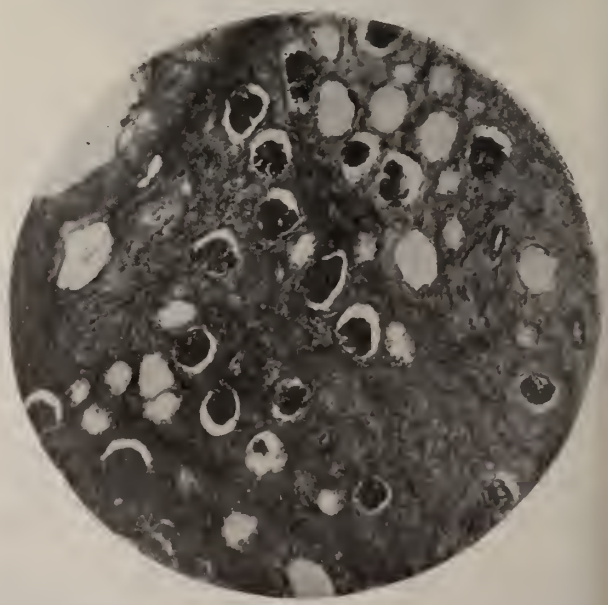

FIG. 12.—Ureteral implantation of both ureters into the rectum. The dog died three hundred days after the operation. Extensive induration and cicatrization. The newly formed and indurated fibrous tissue contains only a few atrophic glomeruli. Here and there small-cell infiltration is present in this scar tissue.

tal vein. Septic spleen. Cystitis. The bladder contained purulent fluid with colon bacilli and *Staphylococcus albus.* Fibrinous thrombi in the heart. Le

œdematous, with purulent exudate in the subcutaneous tissues and colon bacilli.

One dog was killed 210 days after the operation (M., 7). Macroscopic specimens "E" demonstrated: Old pyelonephritis with granular atrophy. Hydronephrosis of both kidneys and hydro-ureter. No growth of bacteria in cultures. Purulent cystitis with colon bacilli and *Staphylococcus albus.*

One dog died 300 days after the operation (3, M. 851) with small granular atrophic kidney, the result of old pyelonephritis. No bacteria found.

Histopathology: Extensive induration and cicatrization. The newly formed and indurated fibrous tissue only contained a few atrophic glomeruli; here and there small-cell infiltration was present in this scar tissue. Mortality, 96 per cent.

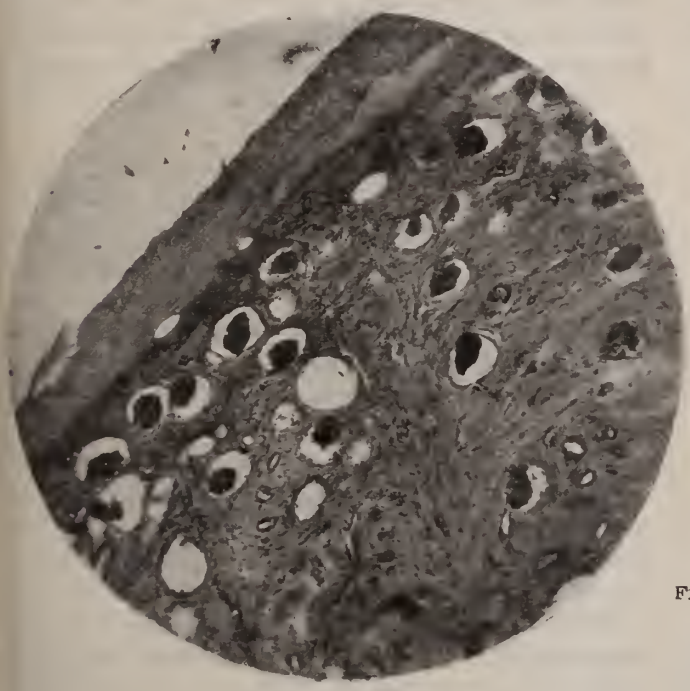

FIG. 13.—See Fig. 12.

One dog was killed 405 days after the operation (P., 10). Macroscopic specimens "F" demonstrated: This dog had perfectly recovered from the operation and was, to all appearances, in the very best of health when we killed him. Cultures and smears from all the organs showed no bacteria present. Both kidneys had opaque adherent capsules, with deeply branching cicatricial retractions of the surface, having macroscopically the appearance of arteriosclerotic contracted kidneys. Both ureters were dilated. Sections of the kidneys showed distinct evidence of an old pyelonephritis. Radiating, yellow, ray-like lines from papillæ to cortex surface.

Histopathology: The elevated portions of the cortex consisted of fairly normal parenchyma. Some cloudy swelling was present. The retracted areas consisted of newly formed cicatrized connective tissue with atrophic glomeruli, dilated capsules, and leucocytic infiltration of newly formed connective tissue. The many small cortical abscesses of pyelonephritis seen in other cases had resulted here in infarct-like retractions by scar tissue.

IMPLANTATION OF THE TRIGONUM INTO THE RECTUM.—Peterson operated on twenty-one dogs, of which number, sixteen died during the first few days (76 per cent.), of peritonitis and general sepsis. He thinks that twelve deaths were clearly due to faulty technique.

One dog died eight days after the operation, from pyelonephritis and pyæmia. The left half of the trigonum with denuded mucosa, the right half with mucosa intact, were implanted into the rectum. Pyelitis and pyelonephritis of the left kidney. Hyperæmic right kidney, otherwise normal. Fibrinous thrombi in the heart. Abdominal wound sloughing, and pelvic abscess. Colon bacilli in both kidneys, the spleen, and the heart.

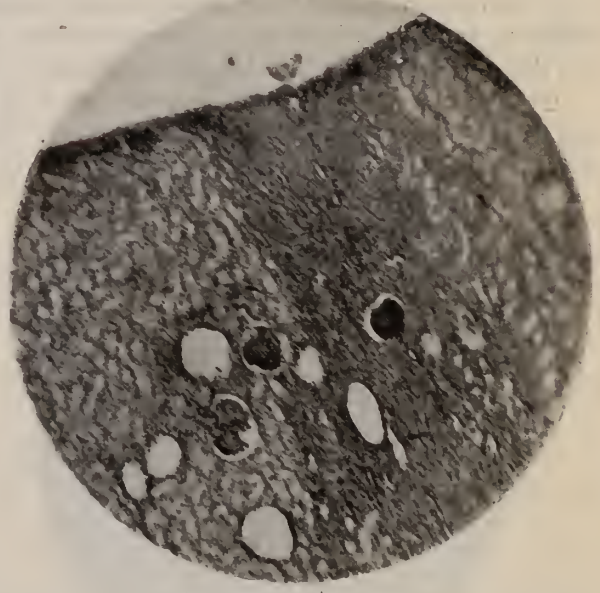

FIG. 14.—Implantation of both ureters into the rectum. Dog killed four hundred and five days after the operation. The elevated portions of the cortex consist of fairly normal parenchyma. Some cloudy swelling is present. The retracted areas consist of newly formed cicatrized connective tissue, with atrophic glomeruli, dilated capsules and leucocytic infiltration of newly formed connective tissue.

One dog was killed thirteen days after the operation. Macroscopic specimen "G" demonstrated: The dog was much emaciated and dying from pyelonephritis. The right ureter was implanted into rectum by the former method. The left ureter with the trigonum was implanted into the rectum. The results are highly interesting. The right kidney showed a well-marked pyelonephritis with pyelitis, necrotic papillæ, and opaque capsule. The cortex was covered with yellow, purulent, millet-seed abscesses, surrounded by hyperæmic zones. Yellow and red flame-like rays from papillæ to cortex. Colon bacilli in smears and cultures. Left kidney, normal. No bacteria.

Histopathology: Fully developed pyelonephritis of the right kidney. Many small abscesses in the cortex. The leucocytic infiltration was so extensive that very little of the kidney structure could be seen. Hæmor-

rhagic extravasation and polymorphonuclear leucocytes in the lumen of the tubules and in the interstitial tissue. Colon bacilli in the collecting tubules. Necrotic papillæ.

Left Kidney.—Hyperæmie, with some cloudy swelling of the lining epithelium of the convoluted tubules. No bacteria.

One dog was so sick on the forty-fourth day that we killed him. Macroscopic specimen "H" demonstrated: Pyelonephritis and pyæmia. The trigonum with both ureters was implanted into the rectum. Too much ureteral mucosa was removed, implanting flaps transversely across the bowel. Both kidneys showed advanced pyelitis and pyelonephritis and adherent capsules. Pyoureter of the right side. Colon bacilli in both kidneys. Fibrinous thrombi in both ventricles and auricles. Result the same as in uretero-intestinal anastomosis.

One dog was killed on the fifty-ninth day after the operation. Macroscopic specimen demonstrated: Trigonum implanted into the rectum. Ureters slightly di-

FIG. 15.—Pyelonephritis thirteen days after implantation of the ureters into the rectum. Many small abscesses in the cortex; the leucocytic infiltration is so extensive that very little of the kidney structure can be seen. Hæmorrhagic extravasation and polymorphonuclear leucocytes in the lumen of tubules and interstitial tissues. Colon bacilli in the collecting tubules. Necrotic papillæ.

lated. No pyelonephritis. Capsule stripped off easily. Smears and cultures negative.

Histopathology: Parenchymatous nephritis.

One dog was killed sixty-five days after the operation. Macroscopic specimen "K" demonstrated: The left ureter with half of the trigonum implanted into the rectum. This dog was in perfect health, apparently, when killed. Very small, atrophic left kidney. Capsule adherent and surface slightly nodular. Left ureter much dilated and non-patent. No bacteria in smears and cultures. Compensatory hypertrophy of the right kidney. Purulent cystitis.

ANIMAL EXPERIMENTS WITH BACILLUS COLI COMMUNIS.—It has been shown by the preceding reports that an ascending infection by the *Bacillus coli communis* takes place in every case of uretero-intestinal anastomosis, which led me to undertake some experiments with a view to producing an artificial immunity against infection by these organisms. The animals experimented upon were white rats and guinea-pigs.

Virulence of Bacteria.—The virulence of the colon bacillus varies much, according to the different sources from which it is obtained. But even from the same source we cultivated bacteria which were identical in morphological and cultural characteristics, and yet varied greatly in their virulence.

The name of this bacillus stands for a whole group of bacteria. In order to determine the virulence and lethal dose of *Bacillus coli communis* to be used for immunization, I employed pure cultures obtained from two sources, of which I shall only give the most characteristic. In all cases, twenty-four-hour bouillon cultures were used (second generation), which were inoculated from discrete colonies on agar plates (first generation).

A, 1.—Second generation, from a case of colitis membranacea of Dr. Emil Ries.

(*a*) *Guinea-pigs.*—Intraperitoneal injection of 2 cubic centimetres killed a guinea-pig of 500 grammes in eighteen hours. Smallest lethal dose, 0.2 cubic centimetre. At the autopsy a hæmorrhagic exudate was found in the peritoneal cavity, with colon bacilli and great distention of the large intestine. Colon bacilli in the heart-blood, the spleen, and the liver.

(*b*) *White Rats.*—Intraperitoneal injection of 2 cubic centimetres killed a white rat of 180 grammes in from twelve to eighteen hours. Autopsy: Great distention of the colon. Hæmorrhagic exudate into the peritoneal cavity. Colon bacilli in the exudate, the heart-blood, the spleen, and the liver. Smallest lethal dose, 0.4 cubic centimetre.

A, 2.—Second generation, from a case of colitis membranacea of Dr. Emil Ries. Intraperitoneal injection of 2 cubic centimetres. Guinea-pig weighing 380 grammes:

		Degrees.		*Grammes.*
2d day:	Temperature,	101.;	weight,	370
3d "	"	101.6;	"	320
4th "	"	102.;	"	310
5th "	"	102.;	"	285
6th "	"	101.4;	"	295
7th "	"	101.;	"	315
8th "	"	101.;	"	333
12th "	"	100.2;	"	360

B, 1.—Second generation, from the rectum of a healthy guinea-pig of 370 grammes. The same guinea-pig, inoculated with 2 cubic centimetres, showed loss of weight and lowered temperature for several days, but recovered completely within ten days, at which time its weight was the same as before inoculation.

B, 2.—Second generation, from the rectum of a healthy guinea-pig. One cubic centimetre killed a guinea-pig of 350 grammes in from twelve to eighteen hours.

It is evident from this that, of the four cultures used, only two (A, 1 and B, 2) were virulent, although no cultural or morphological difference could be made out between virulent and non-virulent cultures.

Immunity.—Löffler and Abel (46) have already shown that the poisonous principle of the colon bacillus is in the bacterial bodies and cannot be separated, so we used for our experiments:

1. Living cultures of virulent colon bacilli, one tenth of lethal dose, by subcutaneous injection.

2. Cultures killed by heat.

A white rat of 177 grammes was injected subcutaneously with 0.04 cubic centimetre of living culture A, 1.

		Degrees.		*Grammes.*
1st day:	Temperature,	101.;	weight,	170
2d "	"	101.;	"	160
3d "	"	101.;	"	155
4th "	"	100.;	"	160
5th "	"	99.;	"	161
6th "	"	99.;	"	171
8th "	"	99.;	"	172
10th "	"	99.;	"	180

On the twelfth day another subcutaneous injection of 0.08 cubic centimetre was made, without fever reaction or loss of weight.

On the 14th day, 0.1
On the 19th day, 0.2
On the 24th day, 0.4 (Lethal dose.)
On the 30th day, 1.0

A large necrotic area with hard, swollen base and circumference had formed on the abdomen where the injections had been made. This animal now received an intraperitoneal injection of 1 cubic centimetre of this virulent culture—that is, more than double the lethal dose—but without effect. A serum test showed marked and immediate clumping of bacilli in a dilution of one drop of blood with fifty drops of bouillon culture.

When we tried the same reaction with other colon cultures, it proved negative. The animal then received an intraperitoneal injection of 2 cubic centimetres of the virulent bouillon culture B, 2, and died the same night. The autopsy showed hæmorrhagic exudate with colon bacilli in the peritoneal cavity and in the heart-blood and the spleen. It appears from this that the animal was immune only to *Bacterium coli,* A, 1.

The same experiment was done on several guinea-pigs with practically the same results. We now used dead cultures (killed by heat) of the same *Bacterium coli,* A, 1, in a third generation for immunization of another guinea-pig, and found again a positive serum reaction after we bled the animal to death to obtain the serum. This serum clumped only the same colon bacilli which were used to produce the immunity.

The experiments are not concluded, and will be the subject of a future paper; but it would seem from the results obtained so far that artificial immunity to the group of bacilli constituting the so-called colon group, to prevent ascending infection in cases of ureteral implantation into the rectum, is impossible, although it is the only hope of making such an operation feasible.

Implantation of the trigonum into the rectum (Maydl's operation) cannot be done in cases of malignant disease of the bladder. The same may be said of vesicorectal anastomosis (Frank).

These operations are very efficient in the prevention of early ascending infection, but, of course, out of the question where the trigonum is diseased and the bladder must be removed.

Renal infection does not take place until very late, when the normal ureteral vesical orifices become deficient and an ascending infection or pyelonephritis may follow

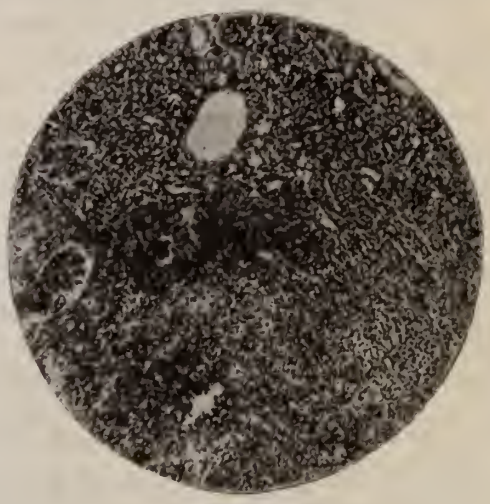

FIG. 16.—See Fig. 15.

in the same manner in which it occurs in an old purulent cystitis. For a time the normal vesical orifices resist the entrance of bacteria, until a purulent cystitis encroaches also upon the region of these valve-like structures, and then pyelonephritis results. Artificial immunity would seem here, also, the only resource.

CONCLUSIONS.

1. Ureteral implantation into the rectum is always followed by ascending infection. The resulting pyelonephritis is caused by the *Bacillus coli communis.*

2. The primary mortality is very large, 84 per cent., no matter which operation is done.

3. Of 120 dogs operated upon, 90 per cent. died of peritonitis due to leakage of urine or general sepsis and pyelonephritis during the first ten days.

4. Dogs living a longer time died of pyelonephritis, pyelonephrosis, and pyæmia.

5. Dogs which had fully recovered from the operation and the resulting pyelonephritis, and were, to all appearances, in perfect health and vigor again, *all* had granular contracted kidneys, due to induration and cicatrization of diseased areas. The rectum acts as a fair substitute for the bladder in such cases.

6. Dogs which had fully recovered after unilateral implantation were living by the other kidney. The kidney of the side operated on was atrophic and granular, the result of an early pyelonephritis. The functionally active kidney was of two to eight times the size of the atrophic one.

7. A review of the literature on uretero-intestinal anastomosis in man shows that no better results can be expected in man than in animal experiments.

8. The ureters are frequently dilated, but show very little or no disease, no matter how extensive a pyelitis or pyelonephritis is present.

9. The bladder is always infected by way of the urethra, whether it is emptied at the time of operation or not. A purulent cystitis was found in every case, caused by *Staphylococcus albus* and *Bacillus coli communis.*

10. Artificial immunity to infection by the so-called colon group of bacteria is the only hope of making uretero-intestinal anastomosis a feasible operation.

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AIR, A FACTOR IN DIGESTION.

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As students of anatomy and physiology, we have been taught that the organs of digestion start at the mouth and end at the ileocæcal valve; that the functional possibilities are completed at this point, and the resulting product is ready for absorption and assimilation. This, I take it, is complete so far as it goes; but if put to the test, it is only a part of a truth—that completed digestion implies a further catalytic change which is furnished in the lungs.

In this presentment I do not purpose entering the domain of the experimental physiologist, but will simply follow the trend of established anatomical and physiological fact. It is not necessary to follow the food elements through mastication and through the results of the action of the varied ferments from the mouth to and through the small intestines, for these changes are accepted; neither is it necessary to follow the water and the salines in their ready absorption into the venous circulation; but it is necessary to follow the resulting absorption of the food elements from the intestines. Here we find two factors at work—the venous and the lacteal

systems. It is immaterial which has the greater prominence, so far as our proposition is concerned, because this introduces the point at issue—viz., if the digestive processes are completed at the ileocæcal valve, why the anatomical arrangements for a further physiological act?

It is a recognized fact that the lacteal system collects the results of digestion and empties them into the receptaculum chyli. At this point is added to it the result of the lymphatic absorption—a venous auxiliary in the collection of the lymph or used-up material from the body. The conjoined fluid is carried by the thoracic duct to the left subclavian vein, with a usual conduit to the right subclavian vein. At these points the elements of the food are added to the venous blood returned from the upper part of the body, after the elements of nutrition have been abstracted. Surely no one can conceive of a completed process by the commingling of a fluid practically void of the life elements with a fluid bearing the elements of life minus one factor—oxygen. The pulmonic circulation, which has to do with the return, or venous, circulation, plus the food elements of digestion, to this point, empties the combined fluid into the right auricle; from this it passes into the right ventricle, and from this through the pulmonary arteries to the lungs. Here, the last, and possibly the most potent, part of digestion takes place, the elimination of carbonic acid, etc., and the oxygenation of the venous blood, plus the new products from the food. After the oxygenation—a unique process—the completed, reanimated, fully digested product is sent to the left auricle through the pulmonary veins, bearing all the elements of nutrition and in a condition for assimilation. It then passes into the left ventricle and is sent from thence on its errand to foster the life and growth of all parts of the body through the systemic circulation.

The anatomy and physiology of the circulation of the blood in the heart demonstrate the necessity of this last act in digestion. The blood to foster the growth and maintenance of this organ is furnished by the systemic circulation through the coronary arteries. After it has abstracted the elements for its growth and sustenance the veins collect the residue and return it to the right auricle, whence it issues again to commingle with the venous blood and the food products furnished by the pulmonic circulation.

It follows as a rational sequence that the last act in digestion is accomplished in the pulmonic circulation in the lungs, and that oxygen is the necessary chemical element: that oxygenation is a part of the digestive process because, from the time food has entered the mouth, the circuit has not been changed, barring the absorption of water and the salines, until the systemic circulation has become a factor: that the pulmonic circulation affords the first time at which oxygen is added to the sum of the elements; that all oxygen furnished to the system prior to this is abstracted from, not added to, the sum of the elements after ingestion: that there is a lung digestion as surely as a stomachic or intestinal, and that its place and importance will appear clear on analysis.

This statement abridges the function of the systemic circulation and increases the function of the pulmonic circulation. The one ceases at the arterial capillaries, the other begins at the venous capillaries. The veins and lymphatics are carriers of dead blood and lymph, deoxygenated blood and lymph, or at least blood and lymph deprived of life-begetting elements plus the food elements gathered up by the lacteals and veins, and this product must be oxygenated before it can impart its vital elements to the body.

THE PROPER ADMINISTRATION OF THE SCHOTT EXERCISES.

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Since the appearance of my article on the Schott treatment of chronic heart disease in the *New York Medical Journal,* about a year ago, I have received numerous requests to further elucidate the manner in which the exercises should be given. But realizing that it is well-nigh impossible to acquire the art of administering the exercises from a mere perusal of written directions, and knowing, as I do, the harmful effects that can result from an improper use of the remedy, I have refrained from any endeavor to teach through the medium of the press and have confined my labors of tuition to those who have come to me for personal instruction.

Of late, however, I have run across several cases that have fared badly as a consequence of the improper administration of the exercises. This I know because, after the operator was corrected and the exercises were given properly, the patient improved. In some of these cases the operator employed was not at all skilled, he being the valet or butler; in others, regular Swedish masseurs or masseuses were in attendance, but upon inquiry it was found that their knowledge of the Schott exercises had been gained from a perusal of some book or monograph on the subject, or perhaps at second hand through the instruction of the doctor who had himself gained his knowledge from the books or medical journals.

The chief and most frequent error I found to be too strong a resistance. The patients were, in part, responsible for this mistake. When a light resistance was given, they pooh-poohed it, thought it child's play, etc. Some people (and especially self-made men) want the fullest value for their money, and they think that twice as much resistance is going to do them twice as much good.

Another error was rapidity. The patient, as well as the operator, seemed to want to get it over as soon as possible. Frequently, there was no sitting-down rest between each movement. The operator wanted to get to

his other patients and the patient wanted to get to his business or his pleasure. Each was in a hurry.

In some cases I found the patient without a particle of enthusiasm, taking the exercises as he would a nasty dose of drugs. A frequent remark was "I don't question my doctor's judgment any more than my lawyer's, but I don't see what good these movements are going to do me."

Another somewhat frequent fault was "holding the breath" during a movement. Either the degree of resistance was so strong that it required great effort on the part of the patient to overcome it, and holding the breath was a natural consequence; or the patient simply forgot to breathe. The former was secondary to the fault of over-resistance. The latter was due to a habit of mind concentration, and should have been combated by eternal vigilance on the part of the operator.

I have therefore come to the conclusion that it would do no harm, and indeed might prevent harm, if some directions were given and the danger signals pointed out.

When an operator comes to me to be taught, I first instruct him how to count the pulse. In every case he should count the pulse and note it before, during, and after the *séance*. The pulse is the best indication of the good or bad effect of the exercises. When the effect is good, the pulse will go down, or, at least, not go up (except in bradycardia); and if the pulse goes up, there is a fault somewhere which must be corrected.

There are two ways to count a pulse: Counting the rhythm and counting the beat. In a markedly intermittent pulse, if the beat alone is counted a very erroneous

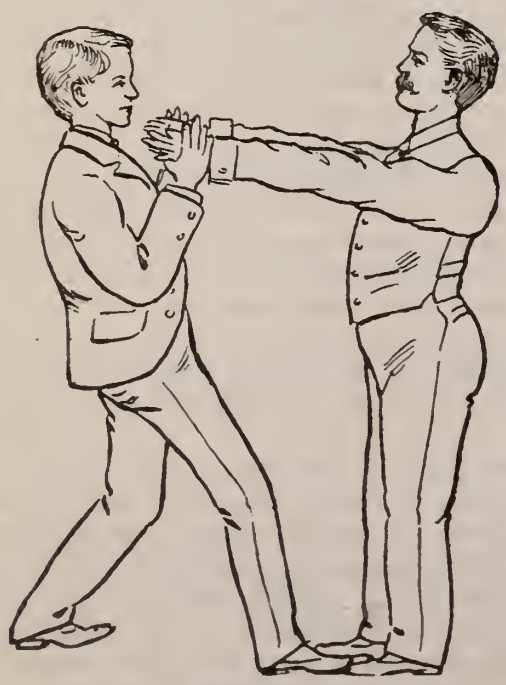

FIG. 1.—Beginning the first movement.

impression of the pulse rate may be obtained. There may be only fifty beats to the minute and yet the heart's action may be very rapid indeed. The way to count the rhythm is to count right along, following the rate of the beat, and filling in the interval with imaginary beats. Thus, a heart having actual beats numbering sixty may

FIG. 2.—Second half of first movement.

have a rhythm of ninety. This is important because the exercises will bring the rate down from ninety and up from sixty.

I next explain to the operator the object of the movements. In the words of Schott, "Movements without design weaken the heart; movements with design strengthen the heart." The primary object of the exercises is, *not* to develop the muscles, but (*a*) to relieve the overburdened heart by (1) drawing the blood away from it into the extremities and muscular structures; (2) accelerating the circulation (contraction of the muscles upon the blood-vessels); and (3) soothing the nervous mechanism of the heart by acting upon the motor nerves through the slow movements of the muscles; and (*b*) to strengthen the heart muscle.

I then rehearse the *rules:*

1. Each movement is to be performed slowly and evenly, without jerking or trembling.

2. Each movement is to be followed by an interval of rest (sitting).

3. Arm movements should alternate with leg or body movements.

4. No part of the body is to be held so as to compress the blood-vessels or interfere with the breathing.

5. The patient should be instructed to breathe naturally and regularly.

6. The patient should be watched closely for (*a*)

irregular breathing, (*b*) straining, (*c*) trembling, (*d*) flushing or pallor of face and lips, (*e*) dilatation of nostrils, (*f*) yawning, and (*g*) drawing down of the corners of the mouth.

Fig. 3.—Second movement.

If any of these signs are exhibited, something is at fault—usually too much resistance or too rapid execution.

The *movements* are as follows:

No. 1.—Both arms are moved simultaneously from the extended horizontal position in front to the extended horizontal position at the sides and returned to the first position. The operator's four fingers compose the resisting surface during the first half, and the thumbs during the second. One foot should be extended close to the patient to maintain the balance.

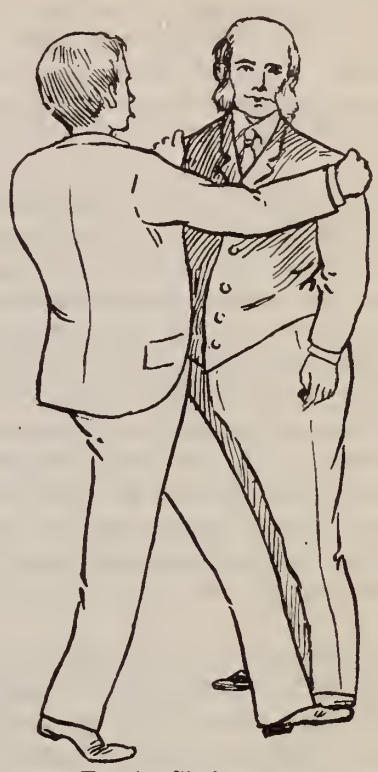

Fig. 4.—Sixth movement.

No. 2.—The patient rests one hand on the back of a chair and raises the inside knee as high as he can and returns to first position. The operator disposes himself on the right knee, places his right hand on the arch of the foot for the first half, and under the instep for the second.

No. 3.—The patient raises the arms from the hang-

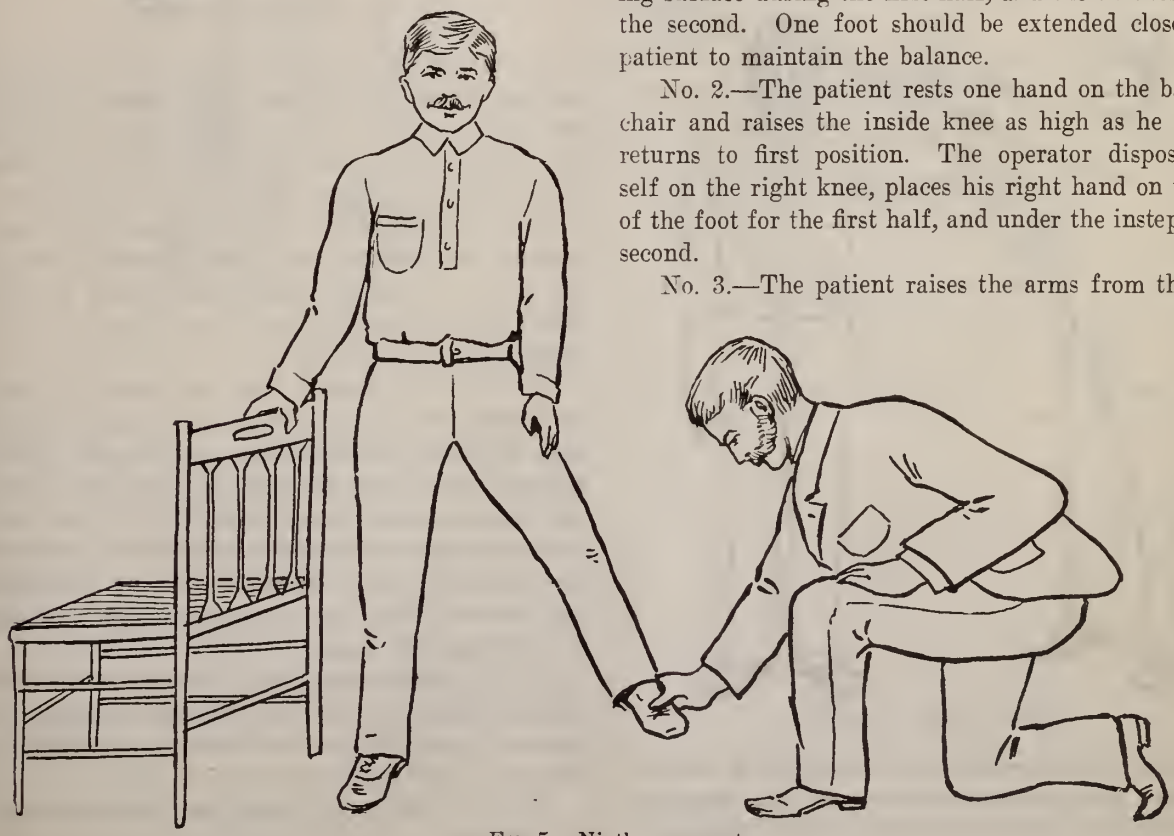

Fig. 5.—Ninth movement.

ing position to the side-horizontal position and return. The operator's four fingers resist the downward as well as the upward movement.

No. 4.—The patient rests a hand on the back of a chair and raises first one foot, then the other behind him, flexing the knee. The operator resists with the fork of his thumb and finger behind the heel for the upward, and with the fingers in front of the ankle for the downward, movement.

No. 5.—The patient's arms are raised from the hanging position to the front-horizontal position and return. The operator resists with the fork of his hand at first, but as the arms rise he twists his hands so that the fingers are resisting at the finish. In the return movement the operator's fingers are curved under the patient's wrists.

No. 6.—The patient twists the upper portion of his body first to one side, then to the other side, and return. The feet are kept still and the hands hang at the sides. The operator's left hand resists the right shoulder, and the right hand is placed behind the left shoulder over the scapula—that is, when the patient twists to the left; the hands are changed when the twist to the right is begun.

No. 7.—Resting one hand on the back of a chair, the patient raises one foot in front of him, returns it, and does the same with the other. The operator resists with the fork of his thumb and finger in front of the ankle, and then with his four fingers behind the ankle.

No. 8.—The patient flexes the forearm on the arm in the hanging position and return. The operator places one hand on the patient's shoulder and resists with the

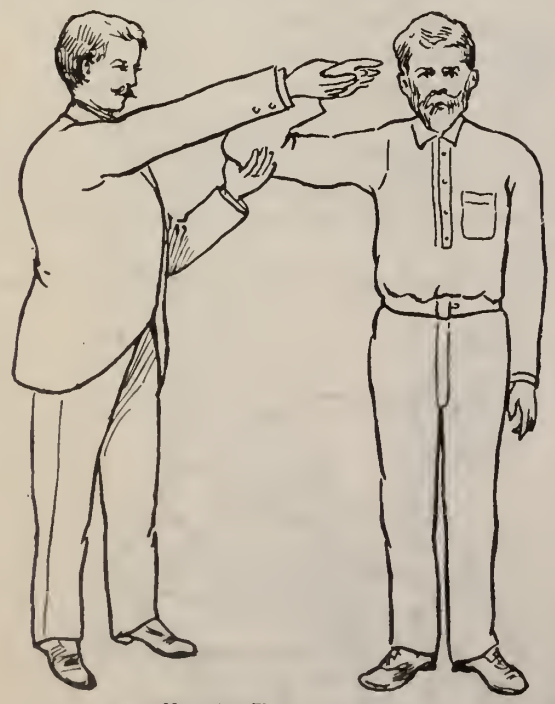

FIG. 6.—Tenth movement.

other hand over the wrist. The hand should not rest heavily on the shoulder, however, and the resistance should be kept up until the fingers touch the shoulder.

No. 9.—The patient rests one hand on the back of a chair and raises one leg sideways as far as he can. The operator squats or kneels, and resists with the fork of his right hand, the resistance diminishing as the leg rises.

FIG. 7.—Twelfth movement.

No. 10.—With the patient's arm extended in the side-horizontal position, he flexes the forearm on the arm, one arm at a time. The operator places his left hand under the patient's elbow and resists with the four fingers of the right hand curled around the patient's wrist.

No. 11.—The patient sits in a chair without arms and separates the knees as far as possible without displacing the feet. The operator squats before him and resists with his four fingers outside of the knees, and, on the return, inside of the knees.

No. 12.—The patient starts one arm at a time forward from the hanging position, then upward, then backward, then downward, making a complete circle in the air with his hand. This is called the windmill movement. One of the operator's hands is laid lightly upon the patient's shoulder and resistance is made with the four fingers of the other until the arm reaches the overhead vertical position, when the hands must be quickly changed for the downward sweep.

No. 13.—The patient sits on the edge of a chair and raises one foot at a time until the leg is straight. Resistance is made with the fork of the hand in front of the ankle and with the fingers behind the ankle.

No. 14.—The patient bends the body forward at the hips, the arms remaining hanging at the sides. The op-

erator stands at the patient's side, places his left hand in the small of the patient's back, his right hand in front of the left shoulder, and his own right shoulder in front of the patient's left shoulder. He resists with his body, bending his right knee as the patient bends his body. The upward movement is resisted by the operator's left hand placed between the shoulder blades, his right hand being placed over the pit of the stomach, as a sort of counterbalance.

These, then, are the principal exercises as they are given in Bad Nauheim by Professor Schott's masseurs. Of course, it is manifestly impossible to give any directions concerning the amount of resistance to be employed. Each case must have its own adaptation.

As to the contraindications, they are few. Advanced

Fig. 8.—Fourteenth movement.

atheroma, aneurysm, and acute inflammatory carditis comprise the list.

But in a great many cases the patient himself will decide that the exercises are not exactly suited to his case, and he will come to this conclusion for this reason: After a very short trial he will not see the miraculous improvement in his condition that he expected, and, as the treatment is rather expensive, he will go back to his drugs.

In closing, I might say that the use of mechanical appliances to take the place of the operator is not sanctioned by Professor Schott; in fact, he is opposed to them on the ground that they are not at all satisfactory and are in some cases harmful.

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THE USE OF THE SUPRARENAL CAPSULE IN DISEASES OF THE HEART.

(Second Paper, with a Report of Cases.)

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(Concluded from page 765.)

Case XXIX.—The patient, a girl, thirteen years old, had mitral regurgitation. The pulse was 104, slightly irregular, and of fair force. After the administration of the suprarenal capsule, the mitral murmur became softer, and decreased in volume. The pulse was 91 and regular.

Remarks.—The patient had chronic bronchitis, which was temporarily relieved.

Case XXX.—The patient, a woman, twenty-six years old, had mitral regurgitation; the heart's action was very irregular. The pulse was 86, very irregular, and weak; there were many beats dropped. After the administration of the suprarenal capsule, the heart's action became more regular. The pulse was 84, nearly regular, and strong; nearly all the intermittence had disappeared.

Remarks.—The tightness and sensation of a foreign body in the epigastrium were relieved.

Case XXXI.—The patient, a man, aged sixty-four years, had mitral regurgitation and aortic stenosis. The apex beat was at the sixth rib, three quarters of an inch to the left of the left nipple line. There was beginning cardiac dilatation. The pulse was 96, of fair force, and regular. After the administration of the suprarenal capsule, the mitral murmur became decreased in volume and intensity; at times it was almost inaudible. The aortic murmur became louder, plainer, and localized. The pulse was 84, increased in force, and regular.

Remarks.—The severe attacks of dizziness and staggering gait almost disappeared after one dose of the powder.

Case XXXII.—The patient, a young man, eighteen years of age, had slight mitral regurgitation; the heart's action was irregular. The pulse was 104, irregular and weak. After the administration of the suprarenal capsule, no marked effect was produced. The heart became only slightly more regular. The pulse was 104, more regular, and slightly increased in force.

Case XXXIII.—The patient, a man, aged fifty-four years, had myocarditis; there was slight aortic regurgitation and forcible heart-beating against the chest. The pulse was 73, and irregular in force and frequency; six beats were dropped every minute. After the administration of the suprarenal capsule, the forcible heart-beating disappeared. The pulse was 84, nearly regular, softer, and fuller. Two beats were dropped every minute.

Remarks.—The patient had an attack of rheumatism.

Case XXXIV.—The patient, a little boy, nine years old, had mitral and aortic stenosis and regurgitation. There was marked hypertrophy with beginning dilatation. The normal cardiac sounds were inaudible; a confusion of murmurs was heard; the apex beat was diffused. The heart's action was irregular. The pulse was 100, irregular in frequency and force, trembling, and weak. After the administration of the suprarenal capsule, the heart was contracted a quarter of an inch on each side; the heart's action became stronger and more regular. The apex beat became localized and was more easily located. All the murmurs became decreased in volume and intensity, and became localized and were much more

easily distinguished. The episternal pulsation became more pronounced, and the heart was powerfully stimulated. The pulse was 100, regular in frequency, quite full, and the force became markedly increased.

Remarks.—The patient was taking other treatment without any benefit. The headache and attacks of dizziness were relieved. The patient felt much better after the ingestion of the powder.

CASE XXXV.—The patient, a man, aged thirty-five years, had mitral regurgitation. There was marked hypertrophy with beginning dilatation. The pulse was 89, of fair force, irregular in frequency, and hard. Many beats were dropped. After the administration of the suprarenal capsule, the heart's action became much easier and more regular, and the apex beat was more easily located. The pulse was 86, of good force, more regular, soft, and full. The intermittence had disappeared.

Remarks.—The patient had phthisis pulmonalis in the third stage, laryngeal tuberculosis, and left sciatica.

CASE XXXVI.—The patient, a woman, fifty-nine years of age, had mitral regurgitation, and a dilated and weak-acting heart. The pulse was 92, irregular, weak, and thready, and almost imperceptible at the wrist. A few beats were dropped. After the administration of the suprarenal capsule, the heart was markedly stimulated, the mitral murmur had almost disappeared, and the action of the heart became regular. The pulse was 90, strong, full, soft, and regular, and all the intermittence disappeared.

Remarks.—The severe attacks of headache, dizziness, and fainting spells were relieved by the drug. No other medication was given.

CASE XXXVII.—The patient, a woman, aged thirty-nine years of age, had a loud, blowing, mitral regurgitant murmur. The pulse was 82, regular, full, and strong. After the administration of the drug the heart's action was slightly increased in force. The pulse was 82, fuller, and stronger.

CASE XXXVIII.—The patient, a man, aged thirty-eight years of age, had mitral regurgitation and cor bovis. The heart's action was very irregular and very weak; the mitral murmur was diffused and blurred; the apex beat was diffused. The pulse was 50, irregular, very weak, and nearly imperceptible at the wrist. After the administration of the suprarenal capsule, the heart's action became stronger, the apex beat became localized, and the mitral murmur became circumscribed. The pulse was 61, fairly strong, full, soft, regular, and easily perceptible at the wrist.

Remarks.—The patient had convulsions, due, in all probability, to an embolus from the heart. A marked effect of the drug was produced in this case.

CASE XXXIX.—The patient, a woman, aged sixty-four years, had mitral regurgitation. The pulse was 94, irregular, and weak. After the administration of the suprarenal capsule, the heart's action became stronger. The pulse was 86, regular, strong, and soft.

Remarks.—The patient had tuberculous cystitis with hæmaturia. The latter was completely controlled by the drug.

CASE XL.—The patient, a little girl, ten months old, had mitral regurgitation. The pulse was 123, irregular, and of fair force. After the administration of the suprarenal capsule, the heart's action became stronger and easier. The pulse was 106, regular, fuller, and increased in force.

Remarks.—The cyanosis of the face and neck, and the bronchitis, were relieved by the drug.

CASE XLI.—The patient, a man, twenty-nine years of age, had mitral regurgitation, and a weak and dilated heart. The normal heart sounds were muffled; the apex beats were very weak, and the impulse was diffused. The heart beats were 69, weak, and irregular; the radial pulse was imperceptible. After the administration of the suprarenal capsule, the heart became markedly stimulated, the normal heart sounds became more distinct, and the apex impulse became more perceptible and localized. The pulse was 73, regular, soft, and observed at the wrist.

Remarks.—The patient had phthisis pulmonalis, with attacks of dizziness, which latter were promptly relieved by the powder.

CASE XLII.—The patient, a man, forty-three years of age, had mitral regurgitation and aortic stenosis. The heart's action was weak, and the apex beat was diffused. The pulse was 102, very irregular, and weak. A few beats were dropped and many half-beats were observed. After the administration of the suprarenal capsule, the apex impulse became more easily located, the action of the heart became stronger, and the normal heart sounds became more distinct. The pulse was 89, fairly full, and nearly regular. Almost all the intermittence and the half-beats disappeared.

Remarks.—The patient had an attack of malaria and felt much relieved after the administration of the suprarenal powder.

CASE XLIII.—The patient, a woman, aged twenty-four years, had mitral regurgitation and aortic stenosis. The heart's action was very irregular, and there was heaving of the chest with each cardiac beat. The pulse was 76, very irregular, sometimes dichrotic, weak, thready, and trembling; it was almost imperceptible at the wrist. After the administration of the suprarenal capsule, the action of the heart was markedly stimulated. The pulse was 74, full, strong, more regular, and softer, and there was a fair pulse at the wrist.

Remarks.—The attacks of headache and dizziness disappeared after taking the drug.

CASE XLIV.—The patient, a man, aged twenty-nine years, had mitral regurgitation. The action of the heart was weak and irregular. The pulse was 120, irregular and weak. After the administration of the suprarenal capsule, the action of the heart became stronger. The pulse was 112, fuller, more regular, and stronger.

Remarks.—The patient had experienced the sensation of his heart beating forcibly against his chest for fifteen years, both day and night, which was very annoying. When a capsule of suprarenal extract was administered the sensation of the heart beating against the chest entirely disappeared within two minutes, and it remained absent for more than fifteen minutes, when the beating returned again, but very much diminished in force; "a light tapping," as the patient called it. This was the first time in fifteen years that the patient had been entirely relieved of this symptom. Twenty minutes later the patient felt much better and disposed to work, whereas, previous to the administration of the drug, he had felt indisposed to do anything.

CASE XLV.—The patient, a woman, forty-five years of age, had mitral and aortic regurgitation. The pulse was 104, irregular, and weak. After the administration of the suprarenal capsule, both murmurs were diminished in volume. The pulse was 88, strong, full, and regular.

Remarks.—The dizziness and general weakness disappeared after the administration of the drug.

CASE XLVI.—The patient, a woman, thirty-six years of age, had very loud aortic and mitral regurgitant mur-

murs; there was a hæmic murmur, and the heart's action was dilated and weak. The pulse was 100, irregular, weak, small, and sometimes dichrotic. Many beats were dropped and there were many half-beats. After the administration of the suprarenal capsule, the mitral murmur became almost inaudible; the aortic murmur became much lessened in volume, and the thrill at the apex entirely disappeared. The pulse was 78, nearly regular, and much stronger.

Remarks.—There was general anasarca. The urine diminished in amount and the dropsy increased steadily. Tapping was resorted to.

Case XLVII.—The patient, a woman, forty-two years of age, had mitral regurgitation with marked hypertrophy. The pulse was 106, regular, and of fair force. After the administration of the suprarenal capsule, the mitral murmur became clearer and more localized. The pulse was 106, regular, fuller, stronger, and softer.

Case XLVIII.—The patient, a man, aged sixty-eight years, had mitral regurgitation and a dilated heart. The heart beats were 61, very irregular, and weak; there was no radial pulse. Three or four beats were dropped. After the administration of the suprarenal capsule, the heart's action became stronger and more regular. The pulse was 69, easily felt, nearly regular, and of fair force. One or two beats were dropped every minute.

Remarks.—The patient was suffering from a malarial attack.

Case XLIX.—The patient, a woman, forty-two years of age, had mitral stenosis and regurgitation. There was hypertrophy with beginning dilatation. The pulse was 86, weak, but regular. After the administration of the suprarenal capsule, the stenotic murmur became more easily distinguished, and there was contraction of the heart muscle. The pulse was 84, full, strong, and regular.

Remarks.—The severe dyspnœa was relieved. Drowsiness was observed a minute after the administration of the drug.

Case L.—The patient, a man, thirty-five years of age, had mitral regurgitation and a dilated heart; the apex beat was diffused. The pulse was 66, irregular, weak, and trembling. After the administration of the suprarenal capsule, the heart's action became much stronger, and the apex beat became localized. The pulse was 79, nearly regular, full, and strong.

Remarks.—The patient had been on a ten-days' debauch. Relief was afforded.

Case LI.—The patient, a woman, thirty-six years of age, had mitral regurgitation and hypertrophy of the heart; there was a diffused apex beat. The pulse was 69, weak, and irregular. After the administration of the suprarenal capsule, the murmur became slightly decreased in volume, and the apex beat became localized. The pulse was 76, strong, and regular.

Case LII.—The patient, a woman, twenty-eight years of age, had mitral regurgitation and aortic stenosis; the heart was dilated and there was a diffused apex beat. The pulse was 67, irregular, and weak. There were many half-beats. After the administration of the suprarenal capsule, the mitral murmur became decreased in volume, and the apex beat became more localized. The pulse was 77, regular, and strong. The half-beats disappeared.

Remarks.—The patient felt much better after the administration of the powder.

Case LIII.—The patient, a man, thirty-seven years of age, had mitral stenosis with hypertrophy; the apex beat was at the sixth rib in the nipple line. The pulse was 84, weak, but regular. After the administration of the suprarenal capsule, the thrill became less marked, and the apex impulse less pronounced. The pulse was 89, regular, fairly strong, full, and soft.

Remarks.—An attack of syncope was promptly relieved by the suprarenal extract.

Case LIV.—The patient, a woman, aged forty-six years, had mitral regurgitation and a dilated heart, with arteriosclerosis; the apex beat was diffused. The pulse was 99, very weak, irregular, trembling, and jerky. Many beats were dropped. After the administration of the suprarenal capsule the apex beat became localized, and the heart's action became stronger. The pulse was 87, nearly regular, fairly full, strong, soft, and steady. Almost all the intermittence disappeared.

Remarks.—The dizziness was much relieved.

Case LV.—The patient, a young man, twenty-one years old, had mitral regurgitation. There was a systolic thrill at the apex and diffuse pulsation over the præcordia. The apex beat was diffused. The pulse was 51, small, and irregular. After the administration of the suprarenal capsule, the thrill at the apex disappeared, and the apex impulse became localized. The pulse was 76, regular, full, and strong.

Remarks.—Other heart tonics had failed to benefit him for four years. Under the suprarenal treatment the patient can do light outdoor work, something that he has been unable to do for the past four years.

Case LVI.—The patient, a woman, thirty-eight years of age, had valvular cardiac disease, with beginning dilatation. Compensation had ceased. After the administration of the suprarenal capsule, the heart's action became stronger.

Remarks.—All the other heart remedies had failed to benefit her. Under the suprarenal treatment the patient was able to do light housework again.

Case LVII.—The patient, a woman, fifty-eight years of age, had mitral regurgitation, and the heart's action was very feeble. The pulse was 120, thready, soft, and intermitting every five seconds. After the administration of the suprarenal capsule, the pulse was 120, and the volume and force were markedly increased, and intermitted only six times to the minute.

Remarks.—There were general venous stasis and anasarca. The respiration seemed to be performed with more ease, and better, after the suprarenal powder was administered.

Case LVIII.—The patient, a woman, had mitral insufficiency. The pulse was 78 and somewhat irregular. After the administration of the suprarenal capsule, the heart was stimulated, and the pulse became stronger and regular.

Remarks.—The suprarenal powder acted well when all other treatment was discontinued.

Case LIX.—The patient, a woman, had mitral insufficiency. The pulse was 84 and very irregular. After the administration of the suprarenal capsule, the pulse became stronger and more regular.

Remarks.—The patient did not feel any benefit from the suprarenal treatment.

Case LX.—The patient, a little boy, five years old, had mitral regurgitation; the action of the heart was very irregular. The pulse was 132, irregular, trembling, weak, and intermittent. After the administration of the suprarenal capsule, the pulse was 101, nearly regular, and stronger.

Remarks.—The patient had rheumatism. He felt much better after taking the suprarenal powder.

CASE LXI.—The patient, a man, had mitral regurgitation, with acute and excessive dilatation of the heart. The pulse was very irregular in its frequency. After the administration of the suprarenal capsule, marked improvement in the action of the heart and of the pulse resulted.

Remarks.—When the suprarenal powder was added to the treatment marked improvement took place.

CASE LXII.—The patient, a woman, twenty-four years old, had mitral regurgitation and a dilated heart. The pulse was 96, irregular, and of fair force. After the administration of the suprarenal capsule, the mitral murmur entirely disappeared, and the heart's action became nearly regular. The pulse was 100, nearly regular, and increased in force.

Remarks.—The patient was nervous and in the fourth month of pregnancy.

CASE LXIII.—The patient, a woman, fifty-nine years of age, had mitral and aortic regurgitation; the heart's action was very irregular. The pulse was 86, irregular, intermittent, small, and weak. After the administration of the suprarenal capsule, the diastole of the heart seemed to be prolonged; the normal heart sound became louder, plainer, and more easily distinguished. The mitral murmur became much diminished in volume, the aortic murmur also became diminished in volume and more localized. The pulse was 92, nearly regular, and stronger.

Remarks.—The severe attack of bronchitis and the headaches were relieved by the powder.

CASE LXIV.—The patient, a young man, nineteen years old, had a shrill, mitral regurgitant murmur, and the heart's action was irregular. The pulse was 106, jerky, small, and irregular. A few beats were dropped. After the administration of the suprarenal capsule, the mitral murmur became less shrill and more localized, and the heart's action became stronger. The pulse was 99, nearly regular, and fairly full. One or two beats were dropped every minute.

Remarks.—The patient was suffering from malaria.

CASE LXV.—The patient, a woman, twenty-two years old, had mitral stenosis, endocarditis, and hypertrophy of the right ventricle. The pulse was 96, irregular, very weak, and thready. After the administration of the suprarenal capsule, the pulse was 79, regular, full, strong, and soft.

Remarks.—No benefit had been obtained from other treatment. When the suprarenal powder was administered improvement resulted.

CASE LXVI.—The patient, a young man, twenty-one years old, had mitral stenosis and enlargement of the right ventricle. There was a displaced apex beat and a diffused impulse along the right border of the sternum, and epigastric pulsation. The pulse was 41, and almost imperceptible at the wrist. After the administration of the suprarenal capsule, the pulse was 72, stronger, fuller, and more regular.

Remarks.—Marked improvement resulted under the suprarenal treatment. The patient had been confined to his bed, but in five days he was able to walk a mile without fatigue.

CASE LXVII.—The patient, a woman, thirty years old, had mitral regurgitation and dilatation of both ventricles. The heart beats were 55, very irregular, and weak. The pulse at times was imperceptible, dichrotic, and very weak. After the administration of the suprarenal capsule, the pulse was 73, nearly regular, full, and strong.

Remarks.—The patient had had other heart remedies for over a year without benefit. She was cyanotic and moribund, but under the suprarenal treatment she recovered and the cyanosis disappeared.

CASE LXVIII.—The patient, a little boy, seven years old, had mitral stenosis. The pulse was 95, irregular, and very weak. After the administration of the suprarenal capsule, the pulse was 71, regular, fairly full, and strong.

Remarks.—The child had scarlatina and cardiac dropsy. He recovered under the suprarenal treatment. No other treatment was employed.

CASE LXIX.—The patient, a little girl, five years old, had mitral stenosis, with hypertrophy of the right ventricle. The pulse was 116, irregular, and weak. After the administration of the suprarenal capsule, the pulse was 93, regular, full, and strong.

Remarks.—The patient had pertussis, which was benefited by the suprarenal treatment.

CASE LXX.—The patient, a woman, twenty-one years old, had mitral regurgitation. The pulse was 123, very irregular, weak, and fluttering, and almost imperceptible at the wrist. After the administration of the suprarenal capsule, the heart became quite markedly stimulated. The pulse was 91, regular, full, and strong.

Remarks.—The attacks of syncope were prevented, and rapid improvement in the general health resulted under the suprarenal treatment.

CASE LXXI.—The patient, a woman, thirty-six years old, had aortic regurgitation and a Flint murmur. The pulse was 78, irregular in force, but regular in frequency. After the administration of the suprarenal capsule, the pulse was 76, regular in frequency, and more regular and increased in force.

CASE LXXII.—The patient, a woman, fifty-five years of age, had aortic and mitral regurgitation. The pulse was 133, and irregular in force and frequency. Four beats were dropped every minute. After the administration of the suprarenal capsule, the pulse was 126 and increased in force. One beat dropped every minute.

CASE LXXIII.—The patient, a man, thirty-eight years of age, had mitral regurgitation. The pulse was 90, and irregular in frequency and in force. After the administration of the suprarenal capsule, the pulse was 102, increased in force, and regular in frequency.

Remarks.—The patient had phthisis and rheumatism.

CASE LXXIV.—The patient, a woman, fifty-one years of age, had mitral regurgitation. The pulse was 96, regular in frequency, and of fair force. After the administration of the suprarenal capsule, the pulse was 84, increased in force, fuller, and regular.

CASE LXXV.—The patient, a woman, forty-three years of age, had a loud, blowing, mitral regurgitant murmur. Compensation was good. The pulse was 93 regular, and soft. After the administration of the suprarenal capsule, the mitral murmur became slightly lessened in intensity. The pulse was 79, stronger, and regular.

Remarks.—The acute attack of bronchitis was controlled by the suprarenal powder.

CASE LXXVI.—The patient, a young man, twenty-one years old, had mitral regurgitation. The pulse was 84, fairly strong, and slightly irregular in force and frequency. After the administration of the suprarenal capsule, the pulse was 84, nearly regular, and increased in force.

CASE LXXVII.—The patient, a man, had a double aortic lesion and mitral regurgitation. The pulse was 78, regular in frequency, and irregular in force. After

the administration of the suprarenal capsule, the pulse was 78, regular in frequency, and regular and increased in force.

Case LXXVIII.—The patient, a young man, nineteen years old, had a systolic murmur. The pulse was 96, weak, irregular in force, and regular in frequency. After the administration of the suprarenal capsule, the pulse was 90, regular in frequency, and regular and increased in force.

Case LXXIX.—The patient, a man, thirty-six years of age, had mitral regurgitation. The pulse was 84, very irregular, and weak. After the administration of the suprarenal capsule, the pulse was 78, stronger, and more regular.

Case LXXX.—The patient, a little boy, eleven years old, had mitral regurgitation and aortic stenosis. The pulse was 102, regular, but weak. After the administration of the suprarenal capsule, the pulse was 96, regular, stronger, and fairly full.

Case LXXXI.—The patient, a man, thirty-eight years of age, had lesions of all the heart valves, with general arteriosclerosis. The pulse was 90, of high tension, and irregular in force and in frequency. After the administration of the suprarenal capsule, the pulse was from 72 to 80, softer, and more regular.

Remarks.—The patient had been on exhibition in New York and in other cities before classes of students in general medicine. His heart and circulatory phenomena were very interesting.

Case LXXXII.—The patient, a woman, fifty-one years of age, had mitral and aortic stenosis, with beginning predominant dilatation. There was a diffused apex beat. The pulse was 100, very weak, and very irregular. After the administration of the suprarenal capsule, both murmurs became softer and decreased in volume, and the heart was stimulated. The pulse was 81, regular, quite full, and strong.

Remarks.—Much improvement was experienced by the patient after the ingestion of the powder.

Cases of Organic Heart Disease in which the Suprarenal Capsule had no Apparent Effect.—Eighteen in Number.

Case I.—The patient, a woman, twenty-seven years old, had aortic stenosis. Compensation was good. The pulse was 98, regular, and fairly strong.

Case II.—The patient, a woman, forty-nine years of age, had slight mitral regurgitation. The pulse was 69, strong and regular.

Case III.—The patient, a man, thirty-four years of age, had slight aortic regurgitation. The pulse was 74, regular, full, and strong.

Case IV.—The patient, a man, forty-two years of age, had slight mitral regurgitation. The pulse was 77, slightly irregular, and strong.

Case V.—The patient, a man, sixty-eight years of age, had mitral regurgitation, with marked hypertrophy. The pulse was 86, full, regular, and strong.

Case VI.—The patient, a woman, forty years of age, had mitral stenosis. The pulse was 79, slightly irregular, full, and strong.

Case VII.—The patient, a man, thirty-nine years of age, had aortic regurgitation. The pulse was 69, regular, and strong.

Case VIII.—The patient, a man, twenty-nine years old, had mitral and aortic regurgitation, with predominant hypertrophy. The pulse was 73, full, regular, and strong.

Case IX.—The patient, a young girl, sixteen years old, had mitral stenosis. The pulse was 87, slightly irregular, but strong.

Case X.—The patient, a woman, forty-nine years of age, had mitral regurgitation, with predominant hypertrophy. The pulse was 91, regular, and strong.

Case XI.—The patient, a man, thirty-eight years of age (Case LXXIII), had mitral regurgitation. The pulse was 82, regular, and strong.

Case XII.—The patient, a woman, twenty-one years old (Case LXX), had mitral regurgitation. The pulse was 79, regular, and fairly strong.

Remarks.—When the pulse was full and strong no effect was observed, but when the pulse was irregular and weak the suprarenal capsule produced an effect.

Case XIII.—The patient, a woman, fifty-one years of age (Case LXXIV), had mitral regurgitation. The pulse was 86, regular, and strong.

Case XIV.—The patient, a woman, aged forty-two years, had slight mitral regurgitation. Compensation was good. The pulse was 87, slightly irregular, strong, and full.

Case XV.—The patient had a mitral regurgitant murmur. The pulse was 80 and regular. The blood-pressure was 120. Measured by the tonometer.

Case XVI.—The patient had an aortic regurgitant murmur. The pulse was 82 and regular. The blood-pressure was 118. Measured by the tonometer.

Case XVII.—The patient had mitral regurgitation and aortic stenosis, and a presystolic murmur which disappeared when the patient was quiet and rested. The pulse was 80 and regular. The blood-pressure was 118. Measured by the tonometer.

Case XVIII.—The patient, a young boy, sixteen years old, had mitral regurgitation, with slight hypertrophy. The pulse was 77, regular, full, strong, and soft.

Remarks.—The acute bronchitis was relieved by the suprarenal powder.

Conclusions.—After the administration of the suprarenal powder, the following was observed:

1. A weak and irregular-acting heart became stronger and more regular.
2. A dilated heart was contracted.
3. A diffused apex beat became localized.
4. A diffused, loud, and rough mitral regurgitant murmur became localized, smoother, and lessened in intensity, while in some cases the murmur disappeared.
5. A murmur which, owing to the extreme weakness of the heart, could scarcely be heard, became more distinct, thus aiding in the diagnosis.
6. The normal cardiac sounds, when indistinct, became clearer and more easily distinguished.
7. In some cases a rapid pulse became less rapid; in other cases a slow pulse became faster.
8. Patients who were very weak, with organic heart disease, were improved.
9. No effect was observed in organic heart disease when the pulse was strong and regular.

218 East Forty-Sixth Street.

J. Pierpont Morgan's Gift to a French Hospital.—J. Pierpont Morgan has given 50,000 francs to the hospital at Aix-les-Bains, and the municipality has marked its appreciation of the gift by presenting to him a bouquet.

RELATIONS OF VASCULAR DISEASE TO HEART DISEASE.

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As the heart seems to be constructed with its cavities and valves fitted to act more than any other bodily organ on mechanical principles, like a simple pump in fact, it is natural to invoke mechanical principles to account for its disorders. Thus, when in the walls of the vessels through which it has to drive the blood, alterations occur which seriously diminish the calibre and elasticity of those tubes, it is readily inferred that the increased work thus entailed on the heart must in time afford us both the cause and the explanation of the consecutive heart lesions. But anatomical investigation and clinical experience abundantly demonstrate that the connection between vascular disease and heart disease is by no means so direct and simple that mechanical explanations will suffice to make everything plain. Thus, Mott reports that in the necropsies of 113 males and 81 females, or 194 in all, who had been inmates of the Claybury Insane Asylum, in each of whom extensive atheroma of the aorta and its branches was found, only 4 showed marked hypertrophy of the heart. On the other hand, at the Charing Cross Hospital, London, fully 24 per cent. of males and 7 per cent. of females with atheromatous arteries showed severe heart lesions. The difference between these two classes lay in the fact that the asylum patients usually had been long confined to the asylum where they were either in bed or led physically inactive lives, while the hospital patients were directly admitted from hard-working people, like porters and dockyard laborers. Again, as an example of the effects of bodily inactivity, the most extreme alterations in arteries are met with in senile degenerations, where every main artery of the body may be found stiff and extensively calcareous, and yet, in more than half, the heart will be found small.

We have to go much further to establish the connection which undoubtedly exists between vascular and heart disease, and in so doing we traverse one of the widest and most important fields of general pathology, which brings us directly to the subject itself of the nature and import of sclerotic changes in tissues.

Sclerosis in general is a substitution of the least living and most mechanical tissue of the body, the connective tissue, for some higher tissue which it replaces when that dies. In the blood-vessels, in both arteries and veins, we find it in more or less diffused patches, embedded in the intima just within the endothelial layer, and at first sight it looks like the result of some localized inflammatory process. But this is a mistake. At no time, in the great majority of cases, do the affected areas show infiltration with inflammatory products, so that it is erroneous to speak of an atheromatous artery as becoming so by endarteritis. There is no resemblance between the initial changes in the intima of the arteries in this case and the changes in the lining of the heart in endocarditis. What happens first in the artery is a degeneration and death of the muscular and elastic fibres of the middle coat, which, if not provided against in some way, would be followed by aneurysm or rupture from intravascular pressure wherever such degeneration occurred. To prevent this, the subendothelial connective tissue corpuscles actively proliferate and fill up the space left by the removal of the elements of the muscular coat, just as a plumber stops a leak in a pipe with solder. Even when this new product assumes a nodular form and may impart a beaded feel to the affected artery, Thoma, to whose researches we owe the most thorough investigation of this subject, has shown that it does not project into the lumen of the vessel, but projects the other way so as to fill up the space left by the absorption of the degenerated débris in the middle coat. Subsequent contraction of the sclerotic tissue may greatly change the calibre of the vessel, but primarily the process is a conservative one, and does not itself constitute the disease scarcely more than the scars left by small-pox are parts of that disease. In other words, the true disease here is that process of degeneration and decay in the higher order of cells that form the middle coat of the vessel.

What is it, therefore, which first kills the cells of the middle coat and leads to compensatory sclerosis? Evidently quite a number of devitalizing agencies, some immediate and some remote in their modes of operation. One of the most immediate of these can be nothing else than the damaging effect of continuous intravascular strain. The distribution of atheroma shows this pretty conclusively. In the aorta it develops at the root, where the initial stress is the severest; then along the concave, rather than the convex, contour of the arch; then at bifurcations and in distributions where the impact of the blood current is strongest, until, where the sclerosis occurs very widely diffused, we find the arteries of the lower limbs the most frequently involved, the anterior tibial being the artery most often affected in the body. The frequency, therefore, with which the coronaries are affected is plainly due to their situation where they are subjected to the highest arterial pressure. The most decisive illustration, however, is found in the case of the pulmonary artery, which almost invariably shows no trace of atheroma, however extensively the aorta and its branches are affected. In cases of prolonged mitral stenosis, however, all this is changed, and the pulmonary artery may be found atheromatous throughout owing to the stress falling on it from this valvular defect. Likewise in veins, the branches of the portal vein may be found both sclerotic and calcareous in long-standing cases of portal obstruction.

But where are we to find the original seat of the obstruction to the current which causes this strain?

Neither in the aorta nor in any of its branches, for Thoma has shown by examination of sections that the lumen of these vessels is as wide as ever. As late results of the atheromatous change, the originally tough deposits may caseate and ulcerate, or calcareous matter may accumulate in them till the inner surface of the vessel becomes rough or the seat of thrombi; but such changes do not constitute essential grades of the process. The development of atheroma in the pulmonary artery in mitral stenosis, just cited, as well as in the portal system in cirrhosis of the liver, shows that the primary seat of the obstruction is beyond the vessels and in the area of the capillaries. This is further demonstrated by the fact that the most widely diffused and most serious sclerotic changes are to be found in the arterioles, just those vessels which have relatively the largest supply of the actively living muscular tissue whose one function is to produce movement. To find them most affected has but one meaning, and that is, that they have had the most work to do in the struggle against an obstruction beyond them.

It cannot be too clearly recognized that the arteries are but conduits to the capillary area. That no appreciable processes take place in them, but that it is in the capillary area that everything goes on. It is there that all the nutritive and all the chemical changes take place which make up the processes of life. According as the interchange is natural between the extracapillary and intracapillary fluids will the physical conditions of the coming current of blood in the arteries be normal. But let chemical or vital changes occur in the capillary area that interfere with the normal interchange through the walls of the capillaries, and the arterial flow must be correspondingly affected. A simple illustration of the chemical side of this subject is afforded in chlorosis, where diminished affinity between blood and tissues due to deficiency of the oxygen carrier, hæmoglobin, leads both to œdema at the periphery and to dilatation of the heart at the centre of the circulation. Hence, we come to the conclusion that, so far as the factor of intravascular strain is concerned in producing vascular disease, the original cause is to be located in unfavorable conditions within that area of the circulation which ministers directly to nutrition. The arteries become very palpable to touch because overfull with blood from obstruction further on, and the pulse rises in tension. Hypertrophy of the muscular coat of the arterioles follows, on account of increased work; but hypertrophy in a muscle is always at the expense of its reserve stock of vitality. All hypertrophied muscles degenerate sooner than normal muscles, and arterioles illustrate this law very fully.

We are thus brought to the remote, or ultimate, causes of this leading form of vascular disease, and they may be conveniently summed up under the term of *tissue poisons*. We will refer to the commonest of them in their order, as lead, gout, alcohol, intestinal ptomaines, kidney disease, and syphilis. Lead is a specific muscular poison, but so far as it causes disease of the blood-vessels it seems to do so by inducing in some unknown way a general gouty condition. The arteries feel full, the pulse is incompressible, gouty arthritis follows, and tophi are often present in the ear cartilages. Ordinary gout, on the other hand, is one of the commonest causes of arterial atheroma and degeneration. That it is not uric acid alone which causes gout is shown by the clinical facts of the systemic associations of uric-acid gravel. Children may suffer from uric-acid calculi severely, and likewise many adults who yet never have gouty toes or gouty bronchitis or any of the other familiar troubles of the gouty state, nor, we may add, diseased blood vessels. Out of the great array of theories or facts bearing upon the ætiology of gout, the geographical distribution of the disease is the most significant, for it is endemic wherever fermented, in distinction from spirituous, liquors are used, while it is scarcely known where no liquors are taken. Thus, on the same island, England is the land of strong beer and of much gout; Scotland is the land of much whiskey, but not of gout. When a Scotchman is gouty he is taking something else besides his whiskey. So in America, in my young days, gout used to be an aristocratic disease because limited to those who took European wines. Everybody else took whiskey and only had gout if he took too much cider. At present gout has become wholly vulgarized among us by the imported German custom of lager-beer drinking. I once lived in a Mohammedan country where they use no liquors at all, and no one there knows what gout is. When, therefore, we find disease of the blood-vessels so commonly present in old beer drinkers, we can safely infer that a specific derangement of digestion furnishes the tissue poison, for a beverage is as much diet as solid food is, and this inference lends color to other inferences about the alimentary origin, so to speak, of much vascular and heart disease, as well as affords indications for therapeutics.

Alcohol causes tissue degeneration irrespective of gout. In lager beer which can produce gout the alcohol may be only from four to six per cent.; in whiskey it is from fifty-five to sixty per cent. With spirits, therefore, a man may readily soak his tissues with an agent which chemically alters the properties of living cells and particularly delays normal metabolism. Such treatment simply ages prematurely the nervous, muscular, and secretory cells, with accompanying signs of impeded circulation and weakened function everywhere, and it is in the atheromatous blood-vessels that this acquired senile decay most clearly expresses itself.

Many writers speak of sclerosis as the final stage of life which all must reach if they do not die sooner, and as people start with a varying stock of vitality according to what they inherit, so the arteries of many at fifty are as old as others at eighty. We do undoubtedly find hard and tortuous vessels in people in middle life with a family record of apoplexy, who have not been drinkers or

even had gout or kidney disease, but, as I have maintained in a published paper on The Prophylaxis of Hemiplegia, a careful inquiry into the condition of their portal circulation often discloses a chronic intestinal mal-digestion, which very probably induces a self-intoxication as injurious to the blood-vessels as that caused by any other toxic agency.

The toxæmia produced by kidney disease may harden the arteries of a youth. It is the toxæmia, also, to which the heart is the most sensitive. But, both in their physiology and in their pathology, the kidneys are the most paradoxical organs in the body. According to J. Rose Bradford, if two thirds of the substance of both kidneys is excised, the remaining third will excrete more urea and much more urine than will normal kidneys. Thoma's experiment that seventeen litres of normal saline fluid had to be injected before the limbs became œdematous if the vessels were healthy, while only four litres sufficed to cause œdema if the vessels were sclerotic, might be thought to aid in the explanation of Bright's disease dropsy; but granular kidney is the worst form of all to show both blood-vessel and heart disease, and yet complete absence of dropsy is its characteristic. Moreover, both renal and vascular sclerosis are so general in this condition that it is often difficult to say which has preceded the other. There are a great many points in chronic diseases of the kidney which need further investigation. I am engaged at present in observing the changes in the specific gravity of the urine in old-standing cases of renal damage, by records taken at 6 A. M., 12 M., 6 P. M., and 10 P. M. Three such patients have been confined to bed, attended by trained nurses, and kept rigidly on the same diet and regimen for from four to twelve weeks. The extraordinary fluctuations, therefore, cannot be ascribed to changes, either in diet, from nervous complications, or from any other but intrinsic causes. One example, to which the other two patients' records also conform, is:

6 A. M., sp. gr.	1028
12 M.	1003
6 P. M.	1008
10 P. M.	1010

But there never is any periodicity in these fluctuations, for sometimes the specific gravity at 6 A. M. is the lowest, and that at noon the highest, or the 6 P. M. and 10 P. M. are, respectively, the lowest or the highest in the twenty-four hours. Meantime the specific gravity of the collected urine for the twenty-four hours is always low, from 1010 to 1012, and the percentage of urea for the twenty-four hours ranges from 8 to 13 grammes when it ought to range from 18 to 20 grammes. But the perplexing anomaly in two of the cases, especially the first, is that the proportion of the other solids is increased, amounting in the first case on the day noted to 340 grains above normal, while the urea was barely half the normal output. These singular fluctuations would seem to indicate very irregular vasomotor perturbations in the splanchnic area, and such vasomotor storms, so to speak, may account for a number of nervous derangements characteristic of renal inadequacy of both functional and organic origin. In passing, I may say that if any of these specimens of temporary high specific gravity were submitted for examination to one who did not know the history of the patient, he would say that the patient had perfectly healthy kidneys, with normal color, no albumin or casts, and plenty of solids. Irregular strain of vasomotor origin in the great distribution of the splanchnic vessels may tax the heart quite independently of the general high tension throughout the systemic arteries, and may help to account for the marked tendency of Bright's disease, in most of its forms, to cause cardiac complications. Otherwise, we might say that the stimulation of the vasomotor supply of the arterioles throughout the body by such toxic ingredients of the blood as before mentioned, is a conservative influence analogous in its uses to the compensatory hypertrophy of the heart. It is always, however, an important element in prognosis to determine whether the incompressible artery is only overfull from hindered outflow or is permanently altered by thickening of its coats. This is done by laying three fingers on the vessel, obliterating the current by pressure with the first finger and then feeling the distal portion with the other two fingers. If it is simply overfull the vessel beyond the pressure collapses, while if it is permanently changed in texture it can still be felt as a rigid tube.

Our chemistry is not yet able to tell us why poisons which come through the blood are always selective in their action. Thus, why, in the case of so tangible a poison as the metal lead, it attacks extensors rather than flexors, we do not know. No poison, however, is more selective than that of syphilis when it causes vascular disease. Its particular preference is for the arteries at the base of the brain, in the carotids, and at the Sylvian fissure, while the vessels of the hemisphere escape. But what especially concerns us now is, that another favorite seat is the aorta and the coronary arteries, though it may occur elsewhere in the body as well. Owing to its localized distribution an examination of the radials or of other accessible arteries may not give us a hint, as in other forms of vascular disease, of the seriousness of the vascular lesions, and, moreover, the nature of the process itself in the coats of the vessels is quite different from those processes which we have been considering. It is essentially a true arteritis, beginning with grayish-white deposits of a stiff cartilaginous consistence, narrowing the lumen and sometimes obliterating the vessel, and turning it into a hard cord. Its tendency is to pass on to fibrosis without undergoing either cascation or calcification, and, except in the aorta, not showing the characters of ordinary atheroma. It may progress through all three coats and set up a periarteritis as well, while, owing to its frequently attacking the vasa vasorum of the large

arteries, it produces localized necrosis before there is time for connective tissue repair, and thus leads to aneurysm on the supervention of any sudden strain. Aneurysm of the aorta, therefore, is oftener due to syphilis than to any one other cause. Syphilitic disease of the coronary arteries leads to fatty degeneration of the heart by blocking its nutritive blood, with clinical characteristics which we will soon note. It is an error to suppose that syphilitic arteritis is a late tertiary development of the disease, for it frequently occurs before the expiration of the first year after infection, though, as a rule, it develops earlier in the arteries of the brain than in the aorta.

We are now prepared to note how the coexistence of vascular disease may alter the conditions of the problems of heart disease, whether in a pathological, a clinical, or a therapeutical sense. Too often we find an embarrassed heart in a patient after middle life prescribed for with virtually the same remedies that are given to a young patient whose whole vascular system is yet intact, but whose heart has been disabled locally in its valves or its appendages by a carditis of a toxic origin as from acute rheumatism. For, while it is true that primary disorders of the heart affect the circulation in most patients after forty, we often find the converse equally true—that primary disorders of the circulation affect the heart, and that physical examination of the arteries may afford as important indications of the nature of cardiac disease as physical examination of the heart itself; and the same may be said of signs observable in the venous, lymphatic, and capillary systems. The circulation, in fact, is more extensive still in its course, for the rapid effects of a hypodermic injection show that the interstitial fluid outside the capillaries moves at a scarcely less rapid pace than the intravascular current, and many cases of labored heart's action, leading in time to serious organic changes in the heart, doubtless arise first in a disordered state of the interchange between the intracapillary and the extracapillary fluids. Recognizing, therefore, that in such cases the heart should be regarded as only a part of the apparatus of the circulation, and, as such, as simply taking its share in a general disease, we have with each patient to go all over him, not only as he is, but as he has been in his inheritance and in his modes of life.

Thus, one of the first questions to be considered is to what extent the nutrition of the walls of the heart itself is impaired by disease of its coronary arteries. This is notably the case when we have reason to suspect the effect of syphilis. One patient, for example, who gives no sign of valvular defect, yet shows a tendency to frequent sighing; his pulse has but little tension, but, instead, is rather slow and intermittent, especially upon exertion, and his heart impulse is feeble. In another case, we are called to see a comparatively young subject on account of alarming symptoms of heart failure, which suddenly set in after a muscular effort, especially after lifting. There is good reason for fear, in the case of such a patient, that these symptoms may be due to the giving way of a localized degeneration caused primarily by the blocking of a coronary branch, and that death may suddenly end all. Here, the severity of the signs of failure in cardiac function compared with the absence of marked signs of organic change in either the heart or the system at large, should lead us to push "specific treatment" actively, enjoining as well the total avoidance of muscular strain.

On the other hand, there is a different class in whom there is no reason to suspect syphilis, and who do show evidences of more or less vascular disease. They give, however, more signs of intrinsic weakness of the heart than of anything else. The pulse is not sustained in any quality; the face, after either exertion or emotion, shows changes of color generally to yellowish paleness, and the patients cannot finish a long sentence without an extra inspiration or two. The heart impulse is very feeble, and there may, or may not, be physical signs of valvular defect or of cardiac dilatation. Mural weakness is to be inferred as the chief danger of the patient, and that, again, is most likely due to coronary disease. It is noteworthy, however, what a great improvement, at least for a time, may occur in such patients by treatment. About eighteen months ago a well-known Western capitalist came to me with a serious train of these cardiac symptoms, which, though he had no valvular lesion, had induced several alarming attacks of pulmonary engorgement. He faithfully followed my directions for six months, and not only was he able to engage again in business, but he went safely through an accident in which he broke three ribs. Last spring, however, he took a trip to Europe, and, contrary to my advice, went to Nauheim. I warned him, and the physician who was to accompany him, that the Nauheim treatment was not adapted to his case. That physician has published a paper on the outcome of his patron's experience there, in which he says: "The usual number of baths (at Nauheim) is from twenty to twenty-four, ranging over a period of from four to six weeks. However, Professor Schott kept Mr. —— in Nauheim from May to August 13th, during which time about sixty baths were administered. It is but feeble language to say that (after this) my resources were taxed to the utmost, and the marvel is that Mr. —— ever reached America alive."

We may add that in all cases where, along with a weak or imperceptible apex beat, the pulse and complexion show signs of fatty degeneration in the ventricles, digitalis works badly, and so do some other remedial measures which may be of great service in the next class of cardiac disorders supervening on vascular disease. The symptoms at the heart itself will usually suffice to show the difference, especially when taken in connection with the ætiology of the trouble. Thus, in gouty patients, and in many cases of chronic alcoholism, the large fat hand with distended veins on its back, the swollen visage, and the œdematous ankles, go along with many other confirmatory signs of great embarrassment in every

tissue circulation. Meantime, the heart is found laboring powerfully with a widespread and heaving impulse, having grown large and strong in its efforts to cope with the peripheral obstruction. Later, the same patient is found waterlogged in his extremities and filling up in his serous cavities. The heart no longer strikes the chest wall forcibly, but with the short diffused slap of dilatation. It is doubtful if at any time, or at least in the beginning, the nutrition of the heart muscle in such cases was much impaired by coronary disease. The indications, therefore, are to relieve the tense arteries and the loaded veins by a prompt bleeding, followed by a calomel purge and digitalis, and, finally, by the true and permanent remedies which we will mention. It is in such cases that a judicious employment of stimulant baths may, after a while, do good. But what we would emphasize is, that these cases of cardiac disorder are really extrinsic to the heart itself in their origin, and that our chief aim should be to deal, as best we may, with those extrinsic causes and conditions.

For a long time albuminuria was used as a term equivalent to Bright's disease, but it is altogether too narrow a designation of kidney disease, especially of those forms of renal change which are most associated with vascular disease, for not only is the albuminuria in cases of granular kidney generally slight or even absent, but I also feel assured that albumin may not be found for years in many instances in which the kidneys have been steadily declining in their duty of eliminating urea, before the kidneys themselves become "granular." In those forms of Bright's disease characterized by dropsy and abundant albumin the blood-vessels and the heart in time become affected in proportion, not to the albuminuria, but to the failure of proper excretory function.

The pathology of granular kidney is extremely obscure, for in typical cases it comes the nearest of anything toward suggesting a sort of general spontaneous sclerosis all round, illustrated by wrinkled skin, emphysematous lungs, atrophied liver, and sclerosed nervous tracts, while the kidneys are neither more nor less wasted than the other viscera. The organ, however, which does not often waste, but rather hypertrophies, is the heart, as we might expect from the task it has to perform in driving the blood through so many well-nigh closed channels. The aorta suffers severely from the strain and the sclerosis at its root often involves the aortic valves with the production of corresponding auscultatory signs. Dr. Osler says that the combination of increased arterial tension, a palpable thickening of the arteries, hypertrophy of the left ventricle, and accentuation of the aortic second sound are signs pathognomonic of general arteriosclerosis. We may add that if, after a ringing metallic snap with the second sound, an aortic murmur begins to be heard, we cannot too soon warn our patient that an uphill bicycle ride may be the beginning of his end so far as danger from his heart is concerned, if he is not ended sooner by a cerebral hæmorrhage.

Therapeutically, our chief aims in cardiovascular disease should be prophylaxis, delay of a progressive process, and relief of symptoms. We can take comfort in the fact that the structure of the lungs, liver, and kidneys indicates that we start in life with about four times the stock of apparatus that we need to live with, and if our inventory of cells amounts, after middle life, to only half the original, we can get along, provided we do not trade as if we still had the whole. Notwithstanding sclerotic evidences of pretty general cellular death, we never can tell how much is yet left to go on with. Therefore, the first thing to do in cardiovascular disease is to take the chemistry of life in hand. Thus, we begin with diet, and study how we can thereby render the digestive processes easier, with consequent easier tissue metabolism, and, as a result, the least difficult products to excrete. The use of beer, alcohol, tobacco, strong meats, and such like articles, as well as too much of anything, are to be warned against, while a schedule, carefully studied for each patient's peculiarities, is enjoined, with explanations of the reasons.

There is one substance, however, which we may now call a food, whose importance as an agent to prevent muscular decay and degeneration is scarcely ever adequately appreciated, and that is oxygen. The more any animal breathes, the stronger its muscles, striped or unstriped. The muscular fibres of the heart and arteries of a sedentary indoor-living man or woman, cannot be as strong as the same fibres in an actively breathing man, any more than their arms and legs can. Muscular function, more than any other function in the body, is dependent upon the supply of oxygen which the muscles receive. The efficacy of the open-air treatment of tuberculosis is nothing compared with the efficacy of the open air for months together in such conditions of unstriped muscle weakness as obtain in chronic cystitis, chronic bronchitis, chronic gastro-intestinal atony, and, lastly, chronic cardiovascular disease. But in addition to the direct revivifying effect upon dying muscle, oxygen is our chief restorative for remedying the vitiated chemistry in the tissues which constitutes the "uric-acid diathesis" or causes the vital processes to be half smothered by alcohol or produces the dismal poisons of chronic dyspepsia.

It is high time that the profession should take up the open-air treatment for arteriocapillary fibrosis and prescribe such treatment for it in a very different fashion from the usual little-studied prescription that the sufferer should take a vacation. Long before this we ought to have appreciated better why it is that a dyspnœic man goes out for a short outing after trout and returns with his high-tension pulse soft, his wind restored, and his portal obstruction removed.

The other remedies, medicinal and otherwise, for symptoms or accompanying complications of cardiovascular disease, would take us too far afield for the limits of this article.

Therapeutical Notes.

The Treatment of Grippe.—M. H. Hervieux (*Union médicale du Canada,* April), in a general review of the subject, says G. Lyon believes strongly in quinine and antipyrine, while the author puts confidence in quinine and phenacetine.

For the *mild form* of the disease:

℞ Antipyrine. . . . . 12 grains;
Quinine hydrochloride or hydrobromide. . . . . 5 "
M.

For one wafer. Three or four daily for an adult.

Or:

℞ Phenacetine. . . . . 5 grains;
Quinine sulphate. . . . . .from 2 to 4 "
M.

For one wafer. One every four hours till the effect is attained.

It is well to follow the ingestion of either of these wafers with a small glass of light grog.

Where *nervous prostration* predominates, the following is recommended:

℞ Strychnine sulphate. . . . . $\frac{1}{6}$th of a grain;
Sodium benzoate. . . . . .75 grains;
Old brandy. . . . . 5 drachms;
Water. . . . . $3\frac{1}{3}$ ounces.
M.

To be taken in divided doses in the course of twenty-four hours.

When the nervous grippe has *cerebellar symptoms, e. g.,* dyspnœa without pulmonary cause, M. Huchard recommends the subcutaneous injection, three or four times daily, of a quarter of a Pravaz-syringeful of the following:

℞ Solution of trinitrin, 1 per cent. . .40 drops;
Distilled water. . . . . $2\frac{1}{2}$ drachms.
M.

Nerve tonics will be needed after this form of grippe, and, if there are symptoms of pseudomeningitis, hot baths and an ice bag to the head are called for.

Gastro-intestinal Grippe.—In this form there is a characteristic porcelain-like appearance of the tongue, or perhaps furring, bitterness in the mouth, absolute anorexia, sometimes vomiting and fœtid diarrhœa, with, occasionally, gingivostomatitis. A mouth-wash of borax or other antiseptic is needed, and the gums may be treated with the following application:

℞ Salol. . . . . $1\frac{1}{2}$ drachm;
Vaseline. . . . . $1\frac{1}{4}$ ounce.
M.

If there is much turgidity of the gums:

℞ Tincture of aconite, } equal parts.
Tincture of iodine, }
M. for local application.

Internally, antisepsis of the digestive tube must be maintained by benzonaphthol, salophene (ten grains three times daily), or salol (from five to ten grains three times daily). These drugs may be administered alone or with quinine, in wafers.

Intestinal lavage, morning and evening, is indicated. Enteroclysis with tepid baths is recommended in the pseudotyphoid form. Abundant drink is necessary.

Pulmonary and Cardiac Grippe.—Tracheobronchitis, with a fatiguing paroxysmal cough, is the most common form. Codeine, half a grain in wafers or tablets every two or four hours, is recommended. Or:

℞ Tincture of aconite. . . . . .100 drops;
Cherry-laurel water. . . . . $3\frac{1}{3}$ ounces;
Syrup of tolu. . . . . 10 "
M.

A dessertspoonful repeated several times in the twenty-four hours.

Or, again, the following prescription by Huchard:

℞ Quinine sulphate, } of each. . . . .30 grains;
Extract of cinchona, }
Extract of aconite root. . . . . 2 "
M.

For twenty pills. Three pills twice daily.

Inhalations of hot borated steam, with benzoin, mint, etc., are very useful. The atmosphere of the room may be charged with tar vapor.

In the *bronchitic form* with scanty difficult expectoration, ipecacuanha in nauseating doses or small doses of Dover's powder, squill, ammoniacals, etc., may be given. But where the expectoration is abundant and purulent, terpene in pills or wafers, from three to five grains, three or four times daily, or other balsamics or terebinthinates. Beechwood creosote is also useful.

For *pulmonary congestion,* Grassé recommends:

℞ Ipecacuanha. . . . . .30 grains;
Bitter-orange peel. . . . . .60 "
Boiling water. . . . . .$3\frac{1}{2}$ ounces.

Infuse and add

Syrup of senega or of orange flowers, 1 ounce.
M.

One soupspoonful every two hours. This mixture is contraindicated in profound adynamia.

Dover's powder and quinine fulfils the same end. Ergotin subcutaneously for hæmoptysis, stimulants, and cardiac tonics are of use in this form, especially injections of caffeine, sparteine, ether, strychnine or camphorated oil.

If there is acute asystolia with cardiac dilatation, $\frac{1}{120}$th of a grain of digitalin may be used, preceded at night by a slight bleeding. But the digitalin must not be repeated on the following day.

Journal des praticiens for April 27th credits the following prescription to Dr. Chevalet:

℞ Quinine valerianate, } of each. . . . .$3\frac{3}{4}$ grains;
Sodium benzoate, }
Phenacetine, }
Caffeine. . . . . .$\frac{3}{4}$ of a grain.
M.

For one wafer. One to be taken every four hours until the cessation of the headache, fever, and depression.

Yeast in the Secondary Infections of Tuberculosis.—Dr. Julius Ullman (*Journal of the American Medical Association,* May 4th) says that, having seen brewer's yeast used with great effect in a case of pyogenic affection of the tonsil, in doses of from two to four ounces every three or four hours, he has used the brewer's yeast to combat the secondary pyogenic symptoms of ulcerating tuberculosis in which there were chills, hectic flushes, morning decline, evening rise of temperature, etc. Since using it there have been no further chills, no hectic flushes, and no night sweats.

The remedy is easily obtained fresh from any brewery. It may be taken in a tumbler without the addition of other liquid, and the author's experience is that it is well borne. If the stomach cannot tolerate it, a rectal enema of double the quantity may be given.

It has been shown, says Dr. Ullman, by Vaughan and others that the nucleins of the body have much to do

with giving to an organism its immunity. The various organs generating nucleoalbumin and nucleinic acid give to the body a substance which is destructive to micro-organisms and their toxines. Brewer's yeast contains nucleinic acid and is, therefore, an excellent therapeutic measure, and one which the author has not seen recommended for pyogenic infection, whether pyæmia, septicopyæmia, or the secondary infections in tuberculosis, diabetes, typhoid, carcinoma, etc.

The Treatment of Leucorrhœa. — According to *Ἰατρική Πρόοδος* for March, Snegnirev recommends a vaginal injection of lactic acid, three per cent.

The same journal gives the following formula:

℞ Potassium chlorate, } of each..... 30 parts;
Tincture of opium, }
Tar water. . . . . .470 "

M.

From two to three soupspoonfuls in a quart of water as a vaginal injection night and morning.

The Treatment of Dental Neuralgia.—S. H. Creighton, D. D. S. (*Medical and Surgical Monitor,* April), says that the causes of dental neuralgia are almost exclusively local and may be classified into obvious causes and obscure causes.

A. Obvious causes are as follows: (1) Pulpitis, (2) putrescent teeth, (3) pyorrhœa, (4) recession of gums, (5) malposition of teeth, (6) substances under the gums.

B. Obscure causes are: (1) Dying of pulp, (2) pulpstones or nodules, (3) exostosis, (4) pericementitis, (5) necrosis, (6) periosteal thickening, (7) deposition of secondary dentine in pulp chamber, (8) unerupted or impacted teeth, (9) diseased antrum, (10) catarrhal conditions, (11) albuminuria, (12) anæmia.

Unquestionably the most confusing cases are those of reflex dental irritation, in which the real cause is not readily discernible, but far remote. By way of illustration, he says that Dr. Slater has recorded a case where the right arm was seriously affected; it became almost powerless, and was constantly in a state of aching pain. The patient could hardly grasp or hold anything in her right hand. Facial palsy occurred, with dimness of the right eye. A week later she had complete facial paralysis, deafness, and her right arm as before stated. The upper right wisdom tooth was removed. Before the patient left the house, the pain in the arm and the powerlessness had vanished. The patient was quite cured in a fortnight.

The treatment, of course, is first to remove the cause. Where relief does not follow thereon, the author gives the following: *Internally,* morphine; gelsemium; antipyrine; acetanilide, with codeine cautiously given as an auxiliary; cannabis indica; or, perhaps, the best of all, fluid extract of gelsemium and fluid extract of cannabis indica, five to ten drops, according to the age of the patient; given two hours apart. *Locally,* chloral-camphor; aconite; a combination of oleate of morphine, lanolin, and vaseline; menthol, thymol, and chloral, of each, eight parts; camphor water and alcohol, of each, ninety-six parts; dry heat. *Constitutional treatment* according to the patient's general constitution, habits, age, etc. If the attack is acute, the following will be found helpful: (*a*) Restriction of diet to vegetable only; (*b*) saline cathartics; (*c*) salicylates, iodides, with colchicum. *Chronic Disorders.*—Should there be a tendency to chronicity, build up with tonics of iron, arsenic, strychnine, cod-liver oil, and malt. Despite all efforts to discover a cause, there are many cases at present unexplainable. In such instances treat on general principles. Occasionally a case will refuse to yield to any of these measures. In such cases resort to surgical intervention.

The Alimentation of the Newly-born.—According to the *Lyon médical* of April 14th, M. Budin says that after birth the infant takes little milk; up to the tenth day the quantity augments, and then remains stationary for a while. He has found the following mathematical formula: The necessary quantity for twenty-four hours is arrived at by multiplying by two the figure of the child's weight and suppressing a 0. Thus: A child of 2,500 grammes will require $250 \times 2 = 500$ grammes; one of 3,700 grammes, $370 \times 2 = 740$ grammes, and so on.

An Ointment for Rheumatic Pains.—Maurange (*Gazette hebdomadaire de médecine et de chirurgie,* April 18th) is credited with the following formula:

℞ Methyl salicylate (oil of wintergreen) . 25 parts;
Guaiacol, } of each..... 5 "
Oil of turpentine, }
Lanolin. . . . . 15 "
Vaseline. . . . . 25 "

M.

Apply rapidly, and cover the affected joint with an impermeable tissue.

A Mixture for Tympanites in Infants.—The *Gazette hebdomadaire de médecine et de chirurgie* for April 18th credits the following formula to the *Journal de médecine de Bordeaux:*

℞ Sodium sulphocarbolate. . . . . .3 to 7½ grains;
Syrup of bitter-orange peel..... 75 "
Peppermint water. . . . . .375 "

M. S.

A coffeespoonful three times a day for two consecutive days.

A Liniment for the Pulmonary Manifestations of Influenza.—Bourget, of Lausanne (*Therapeutische Monatshefte,* 1901, No. 3; *Münchener medicinische Wochenschrift,* April 16th), recommends the following formula:

℞ Salicylic acid. . . . . 4 parts;
Methyl salicylate (oil of wintergreen). 10 "
Oil of eucalyptus..... 5 "
Oil of sage..... 3 "
Oil of nutmeg..... 5 "
Camphorated oil. . . . . 30 "
Spirit of juniper.....120 "

M.

The whole surface of the chest is to be rubbed with the liniment. [The spirit of juniper (*spiritus juniperi* [Ger. Ph., 2d ed.]) is made by macerating 5 parts of juniper berries in 15 parts each of alcohol and water and distilling off 20 parts.]

The Treatment of Ileus with Atropine.—Demme (*Münchener medicinische Wochenschrift,* 1900. No. 48; *Clinica moderna,* April 3d) has obtained a cure after other measures had failed in two cases of ileus, with stercoraceous vomiting, by a single injection of one thirteenth of a grain of atropine (gramme 0.005) [This dose seems very large and should be carefully watched in its effects, if used.]

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THE ST. PAUL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

BY the time this issue of the *Journal* reaches those of our readers who live in remote parts of the country, many of them will be making their final preparations for setting out to attend the annual meeting of the American Medical Association, to be held in St. Paul on the 4th, 5th, 6th, and 7th of June. If they have been prudent, they have already secured quarters, for there will undoubtedly be a large attendance. In addition to the usual preliminary affair of the meeting of the American Academy of Medicine, there is this year an important assembly of military surgeons to immediately precede the meeting of the national representative organization. To those who are to attend a meeting of the American Medical Association, and particularly to those who go as delegates, it is always advantageous to have some idea of the special features that are likely to mark the occasion.

In the *Journal* for April 20th, in an article entitled The Growth of the American Medical Association, we suggested in general terms certain lines along which, as it seemed to us, the association's work might be simplified and its present purposes more fully accomplished than is possible under its actual form of organization. We think we have since perceived indications that the matters we dealt with in that article are almost sure to come up for consideration. We hope—indeed, we expect—that they will be considered in the progressive spirit that animates the present chief officers of the association, persistence in the old ways, simply because they are old, being renounced in conformity to changed conditions. In short, we look for a reorganization of the association, or at least for action that will lead to such a result in the near future.

Another matter that, we think, might well engage the association's serious attention—and it is one that some of the prominent and deservedly influential members are already cherishing—is the question of giving the association's powerful aid to the Association of American Medical Colleges, perhaps (of course with the avoidance of an *ex-post-facto* rule) by its declining to receive as future delegates those whose qualifications for practice, aside from their having complied with State requirements, rest on a diploma from an American school which is not a member of the Association of American Medical Colleges, that is to say, a short-cut school. There are still too many of these stumbling-blocks. They should be rooted out, and the American Medical Association is quite capable of performing the task quickly and effectively.

Finally, there is the Pathological Exhibit, the fruit of the inspiration and enterprise of our brethren in Indiana. As we pointed out in the issue to which reference has already been made, that feature of the meeting, which was so appreciated at the Atlantic City meeting, is this year more snugly under the wing of the association. We regard it as highly important, however, that still greater prominence and support should be assured to it for all coming meetings of the association, and we hope that generous action to that end will be taken in St. Paul.

THE DEADLY INFLUENZA.

"WHAT'S in a name?" Generally nothing; sometimes everything. For many years preceding the present "influenza period" persons who felt the need of a high-sounding name for every ailment that attacked them applied the term influenza to coryza, sore throat, an ordinary catarrhal cough, or any other manifestation of what plainer people called a "cold." The Italian name had come down from the time of a former "influenza period." Whatever terrors it may have had for the laity in the early years of its use had vanished under the influence of its indiscriminate and senseless application to trivial affections. As for the French term *grippe,* early shortened by many into *grip,* it seems to have been in itself suggestive of triviality to most minds. And so the only two names under which the terrible disease in question is known to the world in general both conveyed a suggestion of the trifling if not of the amusing; as a consequence, the disease itself, though really one of the most destructive, came to be regarded as of little moment. The medical profession has not wholly escaped the notion of its insignificance, though every physician of any experience must now acknowledge to himself that influenza is

one of the leading destroyers of health and life. On this deliberate conviction he should act, freeing his mind utterly from his original conception of the disease, and cooperate with his local board of health in attempts to restrict its prevalence. Thus only can much be accomplished.

It is not that the direct, primary mortality of influenza is very great; perhaps we should be better off if it were, for we should at least be less given to the fatal error of underrating its gravity. But it leads to so many other serious conditions. Creeping along the Eustachian tube, it sets up purulent inflammation of the middle ear, and this extends often to the mastoid cells and in some instances to the brain. Descending upon the lungs, it sets up pneumonia, in itself a fearfully destructive disease, and paves the way for tuberculous infection. It is not, however, the mere crawling or burrowing of a local process that does all this mischief; influenza poisons the garrison before storming the citadel. Few other diseases so rapidly or invariably work that intense depression of the vital powers, that sapping of the natural resisting forces, so characteristic of influenza, and in the wake of none others follows such protracted exhaustion. Then, too, if Nature succeeds in forming any antitoxine, it is feeble and short-lived, for one attack leads to but brief immunity, if any at all, against others. Moreover, we as yet know of little in the way of treatment that is more than symptomatic, save that sore experience has taught some of us that the disease must be humored, so to speak, if we are to get the better of it—we must yield to the attack early, without a fight; take to bed at once, and keep it till the acute illness is entirely over.

It appears from the Chicago Health Department's *Bulletin* for March that, of late, pneumonia, often the result of influenza, has been the cause of more deaths in that city than were due to any other disease. We do not believe that Chicago is exceptional in that respect. We presume, however, that her vital statistics are kept with a degree of accuracy commensurate with the energetic way in which her sanitary officers deal with infectious disease. Let influenza, then, be generally recognized as a potent factor in the production of pneumonia and tuberculous pulmonary disease—in short, of a considerable percentage of the total mortality—during its periods of prevalence, which are now following alarmingly close upon each other; then possibly the ground will have been prepared for a virtual stamping out of the disease. We must commend the Chicago department's efforts in this direction most heartily.

"UREINE."

As a rule it is safe to take it for granted that an alleged discovery in medicine that is first heralded in the newspapers will turn out to be no discovery at all. Dr. William Ovid Moor's supposed discovery of a new and important constituent of the urine, which he called "ureine," seems to be no exception. Press dispatches last summer announced Dr. Moor's discovery as set forth before the Thirteenth International Medical Congress sitting in Paris. His paper, entitled The Discovery of "Ureine," the Principal Organic Constituent of Urine and the True Cause of Uræmia, was published in the *Medical Record* for September 1st. Though skeptical as to the genuineness of the alleged discovery, we allowed a very condensed abstract of the article to appear without comment in our issue for September 8th. We felt that the investigator had fallen into error, but we recognized that the error was not of a kind calculated to lead to calamity; it was to be corrected, though not hastily, for its full and convincing correction had to come from the chemists, and the medical profession could afford to wait for their verdict. It has come in the shape of an article entitled Is there Such a Constituent of the Urine as "Ureine"? by Dr. Walter S. Haines, professor of chemistry in Rush Medical College, Chicago, and Dr. Charles S. Woods, associate in chemistry in the same school, published in the April number of *Medicine*.

Dr. Moor described "ureine" as a viscid fluid, somewhat resembling glycerin, decomposing at a temperature of about 80° C. (176° F.), and almost equal in amount to all the other solid constituents of the urine put together. The Chicago chemists seem to have demonstrated the following facts: 1. The extreme improbability of a previously unknown proximate principle being shown at this late day to be present in large amount in normal urine. 2. The fallacy of the inference that some new constituent of the urine must be found to account for the blue coloration produced by the action of urine on potassium ferricyanide and ferric chloride; either uric acid or a urate will give rise to the color, as has long been laid down in various text-books of chemistry. 3. If the glycerin-like liquid termed "ureine" were really a proximate principle, it could not be evaporated to dryness, whereas the liquid obtained by Dr. Moor's process can be rendered absolutely dry by patient evaporation at a temperature of 65° C. (149° F.). 4. "Ureine" is simply a somewhat concentrated solution of certain solids (the normal solids of the urine plus some of the reagents employed) in water. 5. No substance of the specific gravity of 1.270 (assigned to "ureine" by Dr. Moor) could fail,

if added to the urinary constituents already known, to materially affect the specific gravity of normal urine as fully accounted for by those previously well-known constituents. 6. If "ureine," which is said to be decomposed at 80° C. (176° F.), were the toxic principle of urine, that excretion would be deprived of its poisonous quality if subjected to a temperature considerably below the boiling point, but boiled urine is well known to preserve its toxicity.

A physician, no matter what may be his attainments in medicine proper, may readily fall into error in regard to a matter of chemistry. Such an error is not at all to his discredit, and we do not doubt that in this instance Dr. Moor will share with the profession at large a sense of obligation to Dr. Haines and Dr. Woods for having been at the pains to clear up the question of "ureine" definitively.

A GOOD-NATURED SATIRE.

We have always been ready to applaud when a medical man has tried his hand in general literature, and we welcome Dr. John H. Girdner's recent satire on New Yorkers, in spite of its whimsical title.* Dr. Girdner is himself a typical New Yorker, though a Southerner by birth and rearing, so we Gothamites may readily preserve our equilibrium under his sometimes caustic sallies, which, by the way, seem to us to be quite as applicable to the people of almost any large town as to the inhabitants of New York. His personality is so genial that everybody who knows him will feel that, with all New York's faults, he loves her still, as we all do, and will even pardon him for defining a victim of "Newyorkitis" as a man who "has got his New York inflamed" and for injecting his political opinions into a homily upon subjects of no obvious political bearings. There is much that is wholesome and entertaining in the book, and doubtless it will meet with a wide circle of readers.

SALICYLIC ACID IN THE TREATMENT OF INFLUENZA.

Though its curative power must be of decidedly restricted range in influenza—practically limited, we should say, to that form of the disease in which catarrh of the air-passages is a prominent feature—an aseptic condition of the inspired air seems to be largely what Bourget (*Therapeutische Monatshefte,* 1901, No. 3; *Centralblatt für innere Medicin*) relies upon in the salicylic-acid treatment. He paints the entire thorax with an aromatic liniment of a volatile compound of salicylic acid, and the warmth of the body, the patient being in bed and well covered, soon volatilizes the salicylic compound, which at once pervades the inspired air.

**Newyorkitis.* By John H. Girdner, M. D., etc. New York: The Grafton Press.

THE NEW YORK STATE HOSPITAL FOR THE CARE OF CRIPPLED AND DEFORMED CHILDREN.

The opening of this new institution, which promises to be of much usefulness, took place in Tarrytown on Friday, May 17th. It was auspicious for the hospital that such eminent men as Bishop Potter, Dr. Robert F. Weir, Dr. A. Alexander Smith, and Dr. William M. Polk took part in the exercises, the medical men representing respectively Columbia University, the New York University, and Cornell University.

IN HONOR OF THE LADY DOCTOR.

The gallant Marcel Baudouin, in an article in the *Gazette médicale de Paris* for February 23d on The Women Physicians of Ancient Greece, justifies his practice of appending the name of their husbands to that of those women doctors who were married, unauthorized though it is from a classical point of view, on the ground that it is useful to facilitate further bibliographical research. He then adds: "Moreover, it is the only means of rescuing from oblivion the names of the husbands who have at least had the merit of making such glorious marriages." We congratulate our lady colleagues as well as M. Marcel Baudouin upon this graceful compliment. Like mercy, "it blesseth him that gives and her that takes."

SO-CALLED MASTITIS ADOLESCENTIUM.

That morbid condition of the breasts which sometimes, even in boys, occurs at the time of puberty or a little later is commonly called mastitis, but Richard Adler, of Prague (*Deutsche medicinische Wochenschrift,* 1901, No. 5; *Deutsche Medizinal-Zeitung,* March 14th), regards it as simply an expression of an unusually rapid or pronounced physiological development. Preferable to the ordinary treatment with tincture of iodine and mercurial ointment he finds the use of a celluloid shield for the breast, capacious enough to prevent all pressure on the nipple. It is held in place with sticking-plaster.

DIPHTHERIA AMONG CATS.

Chicago is reported to be having an epidemic of diphtheria among cats. The amount of infectious disease transmitted by domestic pets is probably far greater than people generally have any idea of, and cats are especially sources of danger, owing to their "freedom of the house," even including the sanctity of the bed chamber. The cat, moreover, is said to be very susceptible to diphtheria, and it devolves upon the members of the profession attending in cases of diphtheria to properly instruct those concerned to this effect.

News Items.

Society Meetings for the Coming Week:

MONDAY, *May 20th:* Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, *May 21st:* New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdenshurgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, *May 22d:* New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society.

THURSDAY, *May 23d:* New York Academy of Medicine (Section in Obstetrics and Gynæcology); New York Orthopædic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia.

FRIDAY, *May 24th:* New York Clinical Society; New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society.

SATURDAY, *May 25th:* New York Medical and Surgical Society (private).

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending May 11, 1901:

Small-pox—United States and Insular.

		Prevalent among	
Sitka, Alaska	Apr. 9	Indians.	
Los Angeles, California	Apr. 20-27	5 cases.	
Oakland, California	Apr. 6-27	2 cases.	
San Francisco, California	Apr. 20-27	2 cases.	
Jacksonville, Florida	Apr. 20-27	21 cases.	1 death.
Chicago, Illinois	Apr. 27-May 5	5 cases.	
Freeport, Illinois	Apr. 27-May 4	2 cases.	
Evansville, Indiana	Apr. 27-May 4	2 cases.	
Michigan City, Indiana	Apr. 22-May 6	5 cases.	
Clinton, Iowa	Apr. 27-May 4	1 case.	
Ottumwa, Iowa	Mar. 30-Apr. 27	5 cases.	
Wichita, Kansas	Apr. 20-May 4	71 cases.	
Bossier, Louisiana	Apr. 1-31	1 case.	
Caddo, Louisiana	Apr. 1-31	7 cases.	
New Orleans, Louisiana	Apr. 20-May 4	23 cases.	
Sabine, Louisiana	Apr. 1-31	1 case.	
Cambridge, Maryland	Apr. 1-30	5 cases.	
Fitchburg, Massachusetts	Apr. 20-27	2 cases.	
Holyoke, Massachusetts	Apr. 27-May 4	1 case.	
Bay City, Michigan	Apr. 20-27	7 cases.	
Detroit, Michigan	Apr. 27-May 4	1 case.	
Minneapolis, Minnesota	Apr. 20-May 5	44 cases.	
Winona, Minnesota	Apr. 20-27	3 cases.	
Omaha, Nebraska	Apr. 20-May 4	32 cases.	
Manchester, New Hampshire	Apr. 27-May 4	4 cases.	
Jersey City, New Jersey	Apr. 21-May 5	23 cases.	
Newark, New Jersey	Apr. 20-May 4	11 cases.	
New York, New York	Apr. 27-May 4	86 cases.	10 deaths.
Charlotte, North Carolina	Apr. 1-30	18 cases.	1 death.
Cincinnati, Ohio	Apr. 26-May 3	1 case.	
Cleveland, Ohio	Apr. 27-May 4	61 cases.	2 deaths.
Lehanon, Pennsylvania	Apr. 27-May 4	3 cases.	
McKeesport, Pennsylvania	Apr. 20-27	1 case.	
Philadelphia, Pennsylvania	Apr. 27-May 4	2 cases.	1 death.
Pittsburgh, Pennsylvania	Apr. 20-May 4	5 cases.	
Steelton, Pennsylvania	Apr. 27-May 4	1 case.	
Williamsport, Pennsylvania	Apr. 27-May 4	1 case.	
Memphis, Tennessee	Apr. 20-May 4	40 cases.	2 deaths.
Nashville, Tennessee	Apr. 27-May 4	6 cases.	
Salt Lake City, Utah	Apr. 20-27	18 cases.	
Roanoke, Virginia	Apr. 1-30	42 cases.	1 death.
Wheeling, West Virginia	Apr. 20-May 4	8 cases.	1 death.
Green Bay, Wisconsin	Apr. 28-May 5	1 case.	
Milwaukee, Wisconsin	Apr. 20-May 4	2 cases.	
Ponce, Porto Rico	Apr. 13-20	9 cases.	

Small-pox—Foreign.

Buenos Aires, Argentina	Feb. 1-28		32 deaths.
Prague, Austria	Apr. 6-20	11 cases.	
Antwerp, Belgium	Apr. 6-20	5 cases.	
Pernambuco, Brazil	Mar. 16-31		29 deaths.
Rio de Janeiro, Brazil	Mar. 16-31		9 deaths.
Colombo, Ceylon	Mar. 23-30	1 case.	1 death.
Hong Kong, China	Mar. 23-30	13 cases.	13 deaths.
Panama, Colombia	Apr. 22-29	5 cases.	3 deaths.
Cairo, Egypt	Apr. 8-15		1 death.
Marseilles, France	Mar. 1-31		3 deaths.
Paris, France	Apr. 13-20		11 deaths.
Leeds, England, Great Britain	Apr. 13-20	1 case.	
Liverpool, England, Great Britain	Apr. 13-20	2 cases.	
Dundee, Scotland, Great Britain	Apr. 13-27	4 cases.	
Glasgow, Scotland, Great Britain	Apr. 19-26		10 deaths.
Gibraltar	Apr. 7-21	2 cases.	
Bombay, India	Mar. 26-Apr. 9.		10 deaths.
Karachi, India	Mar. 1-Apr. 7	36 cases.	7 deaths.
Madras, India	Mar 16-29		21 deaths
Sicily, Italy	Apr. 6-13	Prevalent.	
Malta	Apr. 1-13	6 cases.	
Mexico, Mexico	Apr. 21-28		2 deaths.
Nuevo Laredo, Mexico	Apr. 13-20		1 death.
Merida, Yucatan	Three or four deaths daily.		
Rotterdam, Netherlands	Apr. 13-29	1 case.	
Moscow, Russia	Mar. 30-Apr. 13	15 cases.	4 deaths.
Odessa, Russia	Apr. 6-10	13 cases.	3 deaths.
St. Petersburg, Russia	Apr. 6-13	9 cases.	2 deaths.
Warsaw, Russia	Mar. 31-Apr. 13		14 deaths.
Singapore, Straits Settlements	Mar. 16-23		2 deaths.
Corunna, Spain	Apr. 20-27		1 death.
Malaga, Spain	Mar. 16-31		3 deaths.
Smyrna, Turkey	Mar. 17-Apr. 14		1 death.

Yellow Fever.

Rio de Janeiro, Brazil	Mar. 16-31		42 deaths.
Havana, Cuba	Apr. 20-27	1 case.	
Vera Cruz, Mexico	Apr. 20-27	(Resident for ten years.)	1 death.

Cholera.

Bombay, India	Mar. 26-Apr. 2.		10 deaths
Madras, India	Mar. 16-29		3 deaths.

Plague.

Cape Town, Africa	Apr. 6-13	43 cases.	22 deaths.
Hong Kong, China	Mar. 23-30	14 cases.	10 deaths.
Bombay, India	Mar. 26-Apr. 9.		1407 deaths.
Karachi, India	Mar. 24-Apr. 7.	429 cases.	358 deaths.
Wakayama Ken, Japan	Apr. 12	1 case.	1 death.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending May 11, 1901:

DISEASES.	Week end'g May 4		Week end'g May 11	
	Cases.	Deaths.	Cases.	Deaths
Typhoid Fever	22	11	29	10
Scarlet Fever	642	38	679	49
Cerebro-spinal meningitis	0	5	0	0
Measles	319	9	315	8
Diphtheria and croup	288	45	314	52
Small-pox	86	10	107	19
Tuberculosis	283	147	254	156

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from May 4 to May 11, 1901:

BLOCK, WILLIAM H., Captain and Assistant Surgeon, will proceed to San Francisco for transportion to Manila.

EBER, ALBERT H., Captain and Assistant Surgeon, United States Volunteers. The leave granted him is extended fourteen days.

GIRARD, JOSEPH B., Lieutenant-Colonel and Deputy Surgeon-General, is granted leave of absence for seven days.

JONES, PERCY L., Captain and Assistant Surgeon, will report at San Francisco for transportation to Manila.

PALMER, FREDERICK W., Captain and Assistant Surgeon, will proceed to San Francisco for transportation to Manila.

SWIFT, EUGENE L., Major and Surgeon, United States Volunteers, will proceed from San Francisco to Washington for instructions.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for Two Weeks ending May 11, 1901:

BENTON, F. L., Assistant Surgeon. Detached from the Naval Hospital, Yokohama, Japan, and ordered to duty on the Asiatic Station.

BOOERT, E. S., Passed Assistant Surgeon. Ordered to the *Lancaster.*

CURTIS, L. W., Surgeon. Detached from the *Vermont* and ordered home, and to be in readiness for sea duty.
DERR, E. Z., Medical Director. Detached from the Naval Academy, Annapolis, and ordered home to await orders.
LOWNDES, C. H. T., Surgeon. Detached from the *Lancaster* and ordered to the Naval Station, San Juan, Porto Rico.
PICKRELL, G., Surgeon. Ordered to the *Vermont*.
STOKES, C. F., Surgeon. Detached from the Asiatic Station and ordered home.
TAYLOR, J. S., Assistant Surgeon. Detached from the *Manila* and ordered to the Naval Hospital, Yokohama, Japan.
WIEBER, F. W. F., Surgeon. Detached from the Naval Station, San Juan, Porto Rico, and ordered to the Naval Academy, Annapolis.

A Monument to Pasteur is to be erected at Dôle, his native place. It will be inaugurated in 1902.

The Willard Parker and Reception Hospitals.—Dr. Louis Fischer has been appointed a visiting physician to the Willard Parker and Reception hospitals, of this city.

Willard State Hospital Funds Tied Up by Failure of a Banking House.—Fifteen thousand dollars of New York State funds is tied up in the failure of the banking house of Le Roy C. Partridge, of Ovid, Seneca county, which was the chief depository of the Willard State Hospital. The State is protected, however, by a bond of $25,000.

The Erie County Society for the Prevention of Tuberculosis, the second of its kind to be formed in the United States, has organized by the election of Dr. Benjamin G. Long, president; Dr. Henry R. Hopkins, vice-president; Dr. William G. Bissell, secretary, and Dr. Albert H. Briggs, treasurer. A board of fifteen directors has been chosen.

The Nathan Lewis Hatfield Prize for Original Research in Medicine, given by the College of Physicians of Philadelphia, has been awarded to Professor H. F. Harris, M. D., of Atlanta, Ga. The prize consists of the sum of $500 for an original research, conducted at the instance of the committee, entitled: A Study of the Alterations Produced in the Large Intestine of Dogs by the *Amœba coli,* by Heat, and by Various Chemical Substances, with Notes on the Anatomy and Histology of the Viscus.

The National Confederation of State Medical Examining and Licensing Boards will meet at St. Paul on June 3d, just prior to the meeting of the American Medical Association in that city. There will be a discussion of the question What should be the Legal Definition of the Practice of Medicine? following a paper on that subject by Dr. Henry Beates, Jr., of Philadelphia; also a discussion following the report of the Committee on Interstate Reciprocity and Uniform Medical Legislation. Further information concerning the meeting may be obtained by addressing the secretary, Dr. A. Walter Suiter, Herkimer, N. Y.

The New York Pathological Society's Protest in re the State Pathological Institute.—At the meeting of the New York Pathological Society at the Academy of Medicine, on May 8th, the president, Dr. Edward K. Dunham, in the chair, resolutions were adopted protesting against "the subversion of the scientific work of the Pathological Institute of the New York State Hospitals, in the face of appeals from many medical societies of this city and State, in utter disregard of the appeals of distinguished medical men and prominent scientific men both in this country and abroad for the continuance of the institute's work along its present lines of organization." The society also requested Governor Odell to intervene in behalf of this institute and to protect its work.

The New York University will Appeal in Medical School Property Case.—The decisions in the cases in which the New York University lost and the Medical College Laboratory and the Loomis Laboratory won, handed down by Justice Truax, in the Supreme Court, New York, will be appealed to the Appellate Division of the Supreme Court by the university. By the decisions the medical school property in East Twenty-sixth Street, including its contents, valued at $150,000, is to be transferred by the New York University to the Medical College Laboratory corporation, and it is held that the Loomis Laboratory, in East Twenty-sixth Street, now allied with Cornell University, is not held in trust for the New York University.

The University Loses Control of the Medical College Laboratory.—When the Bellevue and University schools were consolidated, the Medical College Laboratory of the City of New York transferred to the university its property, including the laboratory and school, in consideration of a promise that the medical committee of the university should always remain constituted of people who were acceptable and satisfactory to the governing faculty of the college; that vacancies occurring in this committee should be filled by the appointment of persons who were agreeable and acceptable to the college, and that that committee should have the entire management and control of the property. The Medical College Laboratory, finding that this agreement was not being adhered to by the university, brought suit to set aside the conveyance of the property. In opposing this motion, the university set forth that if the committee of the university had made any such promise it had acted without authority. A decision in favor of the Medical College Laboratory was handed down on May 7th in the Supreme Court by Justice Truax, in which the university was ordered to reconvey all the property to the Medical College Laboratory and to pay all the costs in the case, the justice holding that the agreement was an integral part of the transaction and was, in fact, the sole consideration given by the university; and that, if the committee had acted without its authority in making this agreement, the entire transaction was illegal and the university could not profit by it. On the same day the suit of the university against the Loomis Laboratory, based upon the contention that the laboratory was held in trust for the university, was decided adversely to the university, which is thereby denied control of the laboratory.

The Iowa State Medical Association held its semi-centennial meeting at Davenport, Iowa, on May 15th, 16th, and 17th.

The Medical Society of the State of North Carolina will hold its forty-eighth annual meeting at Durham on May 21st, 22d, and 23d. An attractive programme of papers has been prepared.

The Mexico and Audrain Medical Society, of Mexico, Mo., has selected delegates to the State Medical Association at Jefferson City, this month, and the American Medical Association at St. Paul in June. As delegates to the former Dr. J. Rule, Dr. Fritts, Dr. E. McD. Bridgford, and Dr. Eugene Hultz were selected, and Dr. Fritts and Dr. G. F. Toalson were named for the latter.

The American Congress of Tuberculosis and the Medico-Legal Society met in joint session at the Hotel Majestic, New York, on May 15th and 16th. There were delegates from many of the States and Territories and from Canada, Mexico, and Nicaragua. All of the South American States were asked to send delegates. Among the subjects discussed were preventive legislation, the treatment and cure of tuberculosis, and climatic conditions.

The St. Louis Medical Society, of Missouri, held a meeting in that city on May 4th, at which the following papers were presented: A New Technique for the Reduction of Hypertrophies of the Turbinal Bodies, by Dr. M. A. Goldstein; Report of a Case of Osteosarcoma of the Forearm (Rapid Development), with Presentation of Specimen; also a Case of Mucoid Colitis, by Dr. J. W. Smith.

At the meeting held on May 11th Dr. J. W. Smith presented a Report of a Case of Suppurative Pericarditis (Operation and Recovery); and Dr. C. A. Martin presented an Unusual Case of Epilepsy.

The Medical Society of the County of Westchester will hold its annual meeting on Tuesday, May 21, 1901, at Grace Parish House, White Plains. Programme: I. Regular order of business. II. Address by retiring president. III. Election of officers. IV. Paper on Some Phases of Medical Legislation, by Dr. M. J. Lewi, secretary to the New York State Board of Medical Examiners. The discussion will be led by Dr. F. Van Fleet (chairman of the Committee on Legislation, Medical Society of the State of New York), Dr. Robert T. Morris and Mr. C. S. Andrews (council of the New York County Medical Society). V. Paper on Cancer of the Uterus, by Dr. A. F. Currier.

The New York Academy of Medicine.—The Section on Ophthalmology will hold its stated meeting on Monday evening, May 20th, at 8.15 o'clock. The order of business is as follows: I. Presentation of new instruments, corneal microscope with oblique illumination, by Dr. C. Koller. II. Presentation of specimens and patients—(*a*) Specimen, tubercle of the iris, by Dr. A. N. Alling; (*b*) patient with cyst of the vitreous at the head of the optic nerve, by Dr. C. Koller; (*c*) transplantation of a large Wolff graft into the orbit, to permit the wearing of an artificial eye, with exhibition of three patients, by Dr. Charles H. May; (*d*) patient with permanent conjugate deviation, by Dr. E. L. Meierhof; (*e*) patient with unilateral nystagmus, by Dr. A. Schapringer; (*f*) Report of a Case of Xerosis Conjunctivæ Epithelialis, by Dr. J. E. Weeks; (*g*) Remarks on the Technique of Extracting Hypermature Cataract, with Demonstration of a Case, by Dr. H. Knapp. III. Paper, A New Operative Procedure for Treating Inflammation at the Posterior Part of the Eye, by Dr. S. B. Allen.

The American Pædiatric Society will hold its thirteenth annual meeting at Niagara Falls, N. Y., May 27th, 28th, and 29th. Following is the order of business: President's Address, by Dr. William D. Booker, Baltimore; The Visceral Lesion of the Erythema Group of Skin Diseases in Young Children; Congenital Absence of the Abdominal Muscles with Distended and Hypertrophied Urinary Bladder in a Child of Six Years, by Dr. William Osler, Baltimore; The Feeding of an Incubator Baby, by Dr. Charles W. Townsend, Boston; Glass Sun Rooms on City Roofs, or Winter Playhouses, by Dr. W. P. Northrup, New York; An Account of an Epidemic of Malaria in Children, by Dr. Rowland G. Freeman, New York; An Analysis of Thirty-two Cases of Congenital Heart Disease, by Dr. John Lovett Morse, Boston; A Study of 571 Cases of Summer Diarrhœa, by Dr. Charles Gilmore Kerley, New York; A Note on the Little Finger of the Mongolian Imbecile and of Normal Children, by Dr. J. Park West, Bellaire, Ohio; A Case of Pulmonary Gangrene in a Baby, by Dr. Walter Lester Carr, New York; Bulbar Symptoms in the Newly-born, by Dr. Irving M. Snow, Buffalo; A Case of Acute Hæmorrhagic Nephritis Complicating Influenza in a Thirteen-months-old Baby, by Dr. D. J. Milton Miller, Philadelphia; (*a*) Amaurotic Family Idiocy, (*b*) Monster, by Dr. A. C. Cotton, Chicago; Cyclical Albuminuria, with Report of a Case, by Dr. Frank Spooner Churchill, Chicago; (*a*) Heart Leap, (*b*) Maternal Impressions (report of case), by Dr. B. K. Rachford, Cincinnati; Measles Complicated by Appendicitis, by Dr. Harold Williams, Boston; The Treatment of Tuberculosis, by Dr. B. K. Rachford, Cincinnati. Papers are also promised by Dr. F. Huber, New York; Dr. A. Seibert, New York; Dr. Rotch, Dr. Acker, Dr. Adams, and others.

Manhattan State Hospital Training School for Nurses.—The fourth annual graduation exercises will be held at Ward's Island on Wednesday, May 22d, at 4.30 P. M. The steamers of the hospital service will cross to Ward's Island and return from the pier foot of East One Hundred and Sixteenth Street, every fifteen minutes after three o'clock P. M. The hospital will be open for inspection before the commencement of the graduation exercises, and guests who desire to visit the wards, etc., are requested to cross not later than four o'clock.

Mount Sinai Hospital.—It is announced that at the laying of the cornerstone of the new Mount Sinai Hospital, at Fifth Avenue and One Hundredth Street, on May 22d, the speakers will be Governor Odell, President Seth Low, Randolph Guggenheimer, Edward Lauterbach, and Dr. Abraham Jacobi. The stone will be laid by the president of the hospital, Isaac Wallach. Over eight thousand invitations have been issued.

Births, Marriages, and Deaths.

Married.

JERAULD—HUDDLESTON.—In Buffalo, on Tuesday, May 7th, Dr. Frederick Niles Coligny Jerauld, United States Army, and Miss May Ruth Huddleston.

KNOTT—BRAITHWAITE.—In Plainfield, N. J., on Saturday, May 4th, Dr. Middleton O'Malley Knott and Miss Hilda M. Braithwaite.

MALONE—PECK.—In Chicago, on Tuesday, April 30th, Dr. W. F. Malone, of Milwaukee, and Miss Adelaide Peck.

NICHOLS—GOODRICH.—In Yankton, South Dakota, on Saturday, April 27th, Dr. H. B. Nichols and Miss Edith R. Goodrich.

SHAMBAUGH—CAPPS.—In Jacksonville, Illinois, on Thursday, May 2d, Dr. George Shambaugh, of Chicago, and Miss Edith Capps.

SNITCHER—KAIPER.—In Denver, on Wednesday, May 1st Dr. H. C. Snitcher and Miss Ada B. Kaiper.

VOGT—ATKINSON.—In Brooklyn, on Tuesday, April 30th Dr. Francis C. Vogt and Miss Elizabeth A. Atkinson.

YOUNG—GREAMBA.—In Denver, on Tuesday, April 30th, Dr James M. Young, of Pueblo, Colorado, and Miss Nora Greamba

Died.

BOUSHEY.—In San Francisco, on Monday, April 29th, Dr Julius Boushey.

CASSIDY.—In Atchison, Kansas, on Wednesday, May 1st, Dr Joseph Cassidy.

DEYO.—In Gardiner, N. Y., on Saturday, May 4th, Dr. Abraham Deyo, in the seventy-first year of his age.

HUMPHREY.—In Akron, Ohio, on Saturday, May 4th, Dr. Elwyn Humphrey.

JARVIS.—In Hartford, Connecticut, on Tuesday, May 7th, Dr. George C. Jarvis, in the sixty-seventh year of his age.

LOWRY.—In Cincinnati, on Saturday, May 4th, Dr. Edward Noble Lowry, in the thirty-fourth year of his age.

MITCHELL.—In Marshall, Illinois, on Friday, May 3d, Dr. Orlando Mitchell.

PERKINS.—In Philadelphia, on Monday, May 6th, Dr. E. Stanley Perkins, in the fifty-sixth year of his age.

THURSTON.—In Louisville, Kentucky, on Thursday, May 2d, Dr. John M. Thurston, in the seventy-seventh year of his age.

TITUS.—In Great Falls, Montana, on Saturday, May 4th, Dr. W. H. Titus, of Dupuyer, Montana, in the thirty-fourth year of his age.

TULL.—In Chicago, on Monday, May 6th, Dr. Edward E. Tull, in the thirtieth year of his age.

Obituaries.

CHARLES RICE, PHARM. M., PH. D.

DR. CHARLES RICE, who died at his residence, in the grounds of Bellevue Hospital, New York, on Monday, May 13th, was born in Munich, Bavaria, in 1841. He received his education in public and private schools and in seminaries at Passau, Vienna, and Munich. Having at an early age special opportunities of acquiring a knowledge of various languages, one of his relations being an accomplished classical scholar and master of several Oriental languages, he felt drawn toward linguistic studies, receiving encouragement and special instruction from several prominent scholars, among them Dr. Gaugengigl, of Passau, and Professor Marcus J. Müller and Abbot Hanneberg, of Munich. He came to the United States in 1862 and entered the navy on board the sloop-of-war *Jamestown*. After three years of service as surgeon's steward, or apothecary, on this vessel in a cruise around the world he was honorably discharged. When he returned to New York he was so ill with malarial fever that he became a patient in Bellevue Hospital. It was not long before he became convalescent, and his well-known dislike of being idle led to his asking Mr. John Frey, then apothecary of the hospital and superintendent of the General Drug Department, for something to do while his strength was being recovered. Mr. Frey provided occupation for him and soon came to such an appreciation of Mr. Rice's ability and his desirability as an assistant that Mr. Rice was given a permanent appointment. Being appointed apothecary of the Bureau of Medical and Surgical Relief, when this was first organized, he was subsequently promoted to a similar position at Bellevue Hospital; and having meanwhile continued his chemical studies under competent instructors, he received the appointment of chemist at the General Drug Department, and, finally, chemist of the Department of Public Charities and Correction, which office he held up to the time of his death, in addition to that of superintendent of the General Drug Department. In 1872 he came very near losing his life. At the request of the late Professor McCreery he undertook the manufacture of a small amount of apomorphine, at that time something of a chemical novelty. The process involved the heating of the ingredients in a sealed glass tube immersed in a bath of boiling oil, and while he was watching the progress of the operation, the tube burst and the hot oil was driven to the low ceiling and fell as a shower upon Mr. Rice's head. It was this experience which led to his formulating an application for burns which has since been entitled "Rice's burn mixture" by others than himself, his title having been "glycerite of gelatin," or "glue-burn mixture." In 1877 he became chairman of the Pharmacopœia Committee of the American Pharmaceutical Association, which drafted the report adopted by the Convention for the Revision of the Pharmacopœia of 1880 as the basis for the sixth decennial revision. He was also elected a member of the Committee of Revision and Publication and became its chairman. He was also chosen chairman of the succeeding Pharmacopœial conventions of 1890 and 1900. In 1879 the University of the City of New York conferred upon him the honorary degree of doctor in philosophy, and in

CHARLES RICE, PHARM. M., PH. D.

1890 the New York Academy of Medicine elected him an honorary fellow. He was the associate editor of the *American Druggist* from 1876 to 1892.

A striking phase of Dr. Rice's personality was his phenomenal possession of intellectual ability in so many diverse directions. His eminence in the domain of pharmaceutical chemistry is well known; but there are but few who are aware of his accomplishments in other fields. He was remarkably proficient as a mathematician. As a philologist he was, of course, *au fait* in his native language, German, and was ultragrammatical and orthographical in English, while he read with ease in French, Italian, Spanish, Portuguese, Dutch, Latin, Greek, Hebrew, Arabic, Hindustanee, Sanscrit, Persian, and Pushto, and knew something of Russian, Chinese, and Japanese. According to the late Professor Whitney, of Yale University, Dr. Rice was one of the foremost Sanscrit scholars in this country. He was an active member of the German Oriental Society of Leipsic and Hallé and of the American Oriental Society, was a corresponding member of numerous scientific societies abroad, being connected in this way with the Société de pharmacie d'Anvers, the Colegio de Pharmaceuticos de Barcelona, the Sociedad de Historia Natural de Mexico, the Pharmaceutical Society of Athens (Greece), and the Société de pharmacie de Paris.

In Dr. Rice the city of New York has lost a faithful servant and the professions of medicine and pharmacy a most conscientious and honest exponent of all that was best calculated for their advancement.

Pith of Current Literature.

Medical News, May 11, 1901.

Practical Food Prescribing. By Dr. Floyd M. Crandall.—The author's suggestions are practical. He believes that all so-called infants' foods are deficient in one or all of the important elements, and directs attention once again to the importance of having good, clean cow's milk, when mother's milk for any reason is not available. He mentions the close relation that exists between the acidity in milk and the deleterious; and as milk with the least acid is, as a rule, freest from spore-bearing bacteria, he suggests that this fact be made use of in testing milk by means of alkaline tablets as counseled by Farrington. He objects to sterilization, but he advises Pasteurization when there is the least doubt as to the milk's cleanliness.

Studies in the Bacteriology of Typhoid Fever, with Special Reference to its Pathology, Diagnosis, and Hygiene. By Dr. Philip Hanson Hiss, Jr.—The author's hygienic conclusions are: The urine of typhoid-fever patients should always be disinfected. From a hygienic standpoint bacteriological examination of the urine of patients convalescing from typhoid fever is important and should never be omitted before patients are allowed to go at large, so that proper precautions may be taken to guard against dissemination of typhoid bacilli by the urine. This is, according to the author, an often neglected source of infection that should be seriously considered in the hygiene of typhoid fever. Fæces, of course, should be disinfected at all stages of the disease, but the organisms being present generally only from the beginning of the second week to the fall of the fever, and the patient during this period usually being confined to bed, the fæces are not such a source of infection at large as the urine. The bacilli may, on account of the lung and throat lesions, be present in the mouth of those suffering from typhoid fever, hence the expectoration should be disinfected, as well as all eating utensils, etc., used by the patients.

Restoration of Useful Vision in a Complicated Case of Acute Inflammatory Glaucoma of Ten Days' Duration, with Visual Acuity Reduced to the Perception of Light. By Dr. C. A. Veasey.

Rupture of the Right Kidney; Nephrectomy; Recovery. By Dr. G. R. Trowbridge.—In view of his experience in this case, the author concludes that, in cases of trauma of the kidney, it is best to do an exploratory operation, for by this means alone is it possible to learn the extent of the injury.

Medical Record, May 11, 1901.

The Toxic Origin of Neurasthenia and Melancholia. By Dr. M. Allen Starr.—The author refers particularly to a variety of neurasthenia that occurs either in poorly nourished women, or in men about the age of forty-five years, who have lived rather freely, have taken little care of their diet, have indulged in the use of alcohol and tobacco, and have neglected exercise. The chief characteristic of this type is the alternation of feelings and symptoms at different times of the day. The maximum of distress occurs after the sleep of night, and the author attributes the cause to a toxic agent that accumulates in the blood during the period of sleep, and is manufactured either in the intestines or in the stomach, inasmuch as activity in the digestive process appears to aid in the elimination of the poison. Indican or indoxyl is the one thing prominent in the urine, but of its ætiological significance nothing can be said. A true knowledge of the active agents concerned will be obtained only by very much more exhaustive studies in the chemistry of digestion. The diet in each case should be considered separately; no general rule applies to all cases. Meats, fish, rice, macaroni, and hominy are available; meat soups, potatoes, turnips, beets, and cheese are not. To counteract the toxic agent, a combination of five grains of sodium sulphocarbolate with one grain of potassium permanganate, put up in a shellac-coated capsule, is of use, given after each meal and on retiring. Capsules of salol (five grains) and castor oil (ten minims) are also of use. A hot bath on rising, followed by a brisk cool sponging, is of importance. Moderate exercise should be insisted upon, and an outdoor life, if possible, counseled.

Potain's Simple and Accurate Method of the Percussion of the Heart (with Post-mortem Verifications). By Dr. George M. Converse.—The key to the percussion of the heart rests in the recognition of the differences of pitch of the percussion note, and not in differences of intensity of the sound. The taking and preserving of tracings on a transparent paper is the simplest, quickest, and only accurate method of describing a heart for future reference.

The Treatment of Pneumonia, Including the Hypodermic Injection of Saline Solution. By Dr. F. Neuhoff.—As to the status of the saline-infusion treatment in acute croupous pneumonia, the author concludes that it is a useful adjunct to other treatment in selected cases. It acts as a powerful heart stimulant when other heart remedies can no longer sustain the flagging circulation. It increases the secretions, and moistens the tongue and throat as well as the skin. It lessens the delirium. Other observers have noticed that it also improves the respiration. It is contraindicated in pulmonary œdema. Some pneumonia patients apparently die of collateral pulmonary œdema not consequent on a failing heart. In these cases, saline infusions are not applicable. Other pneumonia patients apparently die from heart failure, or a pulmonary œdema caused by heart failure. In this latter class of patients the saline infusion averts the tendency to death by sustaining the heart when nothing else can, and thus it gives additional time for a favorable turn to occur in the disease.

Syphilis in the Well-to-do. By Dr. J. A. McDonald.—The author is convinced that syphilis among those favored by fortune is a totally different disease from syphilis in the poor. The statistics adduced support this opinion, and the author's explanation is, that the rich man gets his syphilis from a fashionable prostitute whose syphilis is well treated and not severe, and, moreover, once infected, the rich man avails himself from the start, of medical attention and constant care. The author insists that, in any case, the physician should make it perfectly plain to his patient that a failure to submit to a thorough course of treatment for the full period of two years will, in all probability, lead to disaster.

Subarachnoid Spinal Cocainization as a Means of Inducing Surgical Anæsthesia. By Dr. E. N. Liell.—The author believes that this method has passed the experimental stage, and entertains the hope that it will have its field of practical usefulness in the near future along with ether, chloroform, and nitrous oxide.

Keloid Formed upon a Vaccination Scar. By Dr. Frederic Griffith.

A Successful Pylorectomy on a Man in his Seventy-first Year. By Dr. Alfred King.

Postural Treatment in Threatened Miscarriage. By Dr. Alice M. Smith.

Boston Medical and Surgical Journal, May 9, 1901.

Some Reported Cases of Typhoid Fever Attributed to Contaminated Oysters, with Certain Facts Concerning this Means of Infection. By Dr. Charles Harrington.—After giving several interesting cases, the author refers to the investigations of Chantemesse, who secured specimens of oysters from several sources and made bacteriological examinations thereon. He found an abundance of bacteria and, in many instances, the *Bacillus coli communis.* He placed some of the oysters in water infected with typhoid stools and cultures, and, after twenty-four hours, removed them and kept them another like period before subjecting them to a bacteriological test. They yielded the typhoid organisms and *Bacillus coli communis* in great numbers. The author, in general, believes that the danger of infection arises wholly from the presence of sewage in the water where the oysters are planted or stored. The remedy lies, either in transferring the beds to cleaner situations, or storing the contaminated oysters in clean sea water until the bacteria have either perished or been washed away. As to the length of time sufficient to insure purification: Some believe that a week is enough; others, that sixteen days should be allowed. They should not be stored where sewage can reach them by currents along the shore, or where the prevailing winds can exert a harmful influence to the same end.

Experience with the Widal Reaction in Typhoid Fever. By Dr. Charles F. Withington.—The usual ninety-five per cent. of successful results indicates the value of the Widal reaction as a diagnostic sign. In the opinion of the author, however, the limitations of the test as to the time of its first appearance, which is rarely before the sixth day, and often not before the ninth or tenth, are such as to deprive it of the value which one would like to attach to it for early diagnosis. The author gives a typical instance of the tardiness of the Widal response in a case, where, after eight consecutive failures, it was positive for the first time on the twenty-ninth day.

The Widal Reaction in Typhoid Fever. By Dr. George B. Shattuck.

Means of Infection in Typhoid Fever. By Dr. E. N. Whittier.—The author's experience has made him very apprehensive regarding the course of typhoid occurring in families whose summers have been passed away from the city—rural and not urban in the source of the infection, imported and not native, "malarial and not straight." The typhoid of city origin may be atypical and puzzling; care and restrictions may be as prolonged, but it is without the terror, the destructiveness, the lethal drift, characteristic of country typhoids.

Early Diagnosis of Typhoid Fever by Isolation of Bacillus Typhosus from Stools; Conclusions of Dr. L. Reney, Based on the Use of his Aspargin-lactose-carbol Gelatin. By Dr. Calvin G. Page.—The author believes that there is good reason to hope that a method will be devised by which a report of examination of fæces can be made in less than three days.

The Fevers of the Philippines. A Preliminary Report on the Nature of the Fevers Prevalent in the Philippine Islands, Including Typhoid Fever, Malta Fever, the Malarial Fevers, and Undetermined Tropical Fevers. By Dr. Joseph J. Curry.

Philadelphia Medical Journal, May 11, 1901.

The Doctor's Fee—A Plea for Honorable Dealing. By Dr. John B. Roberts.—The author insists upon the point that the province of the doctor is to relieve the sick and suffering, and to subordinate to that first object of his calling the obtaining of a financial reward for his labor. Various forms of selfishness and cupidity are dealt with, and, with particular emphasis, the practice of dividing the fee is condemned, as is also the practice of accepting commissions. The author believes that the doctor should have an estimate of the value of his services, operative or otherwise, fixed in his mind. The amount should be based on his experience and skill, and it should not be so low as to coax away unjustly the patients of the younger and less experienced men in the profession. This fee should be lessened when the financial position of the patient would make its payment a serious burden. A well-to-do patient should pay the full fee, which should be generous in order to recompense the doctor for his expensive education and hazardous life. The fee should not be increased, however, unless an unusual time is given to the service, or additional responsibility placed upon the physician by reason of the man's position.

The Ætiology of Arrested Mental Development. By Dr. Pearce Bailey.—The author divides the factors that interfere with the development of the brain of the child into three classes: (1) Those acting before birth; (2) those acting during birth; and (3), those acting during infancy and childhood. He believes that the eradication of degeneracy has its brightest hope in increased education and better State care. Teach boys and girls physiology, and young men and women the pathology of generation. This, he believes, is a step not difficult to accomplish, and would provide a certain protection to the normal. For the abnormal and degenerate, sequestration is the only solution. For advanced cases, institutions are the legitimate homes. But for the borderland cases, the feeble-minded, the half-insane, the drunkards, the tuberculous, and the epileptic, colonization is the surest means of caring for the future.

Cataract Extraction. By Dr. Edward Jackson.—That ripening operations are better than waiting for spontaneous maturity of cataract in many cases, the author believes there can be no question. Now, however, that we have learned that immature cataracts can be extracted with safety, their field of usefulness has largely disappeared. Cataract extraction has been less affected by the evolution of antisepsis than any other important surgical operation. It is done with recourse to few of the more pretentious procedures by which asepsis is supposed to be secured in other capital operations, and yet few, if any, surgical operations show a better record as regards infection. According to the author, this fact demonstrates that the line is yet to be drawn between essentials and non-essentials in the technique of aseptic surgery.

Abscess of the Orbit from Disease of the Ethmoid; Curetting through the Orbit and Draining through the Nose. By Dr. George C. Harlan.

Purulent Chorioiditis, Following an Attack of Mumps; Diagnosis. Metastatic Chorioiditis, Revised by Study of the Enucleated Eyeball. By Dr. John T. Carpenter.

Spontaneous [?] Rupture of the Spleen—Laparotomy—Death—Report of Case. By Dr. D. C. Howard.

Ephemeral Insanity, with Report of Two Cases. By Dr. Charles J. Aldrich.—The author's cases are interesting examples of this form of insanity which Clouston has described as *"mania transitoria."* Most of these cases, according to Clouston, are epileptiform; a few cases are seen in young persons of unstable nervous and mental organization and usually of intense neurotic heredity. However, none of these causes or predispositions seems to explain the advent of insanity in the author's case. The occurrence of such insanity, which has a duration of a few hours or a few days in an otherwise apparently healthy and normal individual, possesses not only great medical interest, but involves questions of forensic medicine that are tremendous in significance and scope.

Journal of the American Medical Association, May 11, 1901.

The Diagnosis and Treatment of Injuries of the Head. By Dr. James H. Dunn.—The first duty in all head injuries is a careful and systematic examination, and, for this purpose, it is always desirable, and usually necessary, to shave the whole head. The natural depressions of the skull should be particularly considered, as such irregularities may be mistaken for depressed fractures, or asserted to have been such later on in damage cases. The embossments and tumefactions caused by extracranial effusions of blood may also lead to errors of diagnosis unless carefully studied. The discharges of blood and serum from the ear or nose, the behavior of ecchymoses of the mastoid region, of the conjunctivæ, of the pharynx, etc., and the disturbance of function of cranial nerves—all these are of great importance. The author gives an instance typical of the class of injuries to the head without important local signs or definite focal symptoms. He also considers those cases in which there are signs of fracture of the base, but no localized cerebral symptoms. He believes that the technique of intracranial surgery is still extremely defective in that, as yet, we have no easy, rapid, and safe method of opening the skull, nor are we yet able to prevent a welding of all the tissues, brain membranes, and scalp into one scar, which often proves a source of cortical irritation. He asserts that the insertion of foreign substances between the dura and the cortex is wholly objectionable, and that, far from preventing adhesions, it usually increases them by the irritation which it excites, even under the most favorable conditions.

The Relation and Position of Pelvic Organs; Examination of Patients. By Dr. Franklin H. Marten.—The author believes that the bladder and rectum, contrary to the opinion of many writers, perform their normal functions without interfering with the position of the uterus. The free upper wall of the bladder does not lie in contact with the anterior wall of the uterus, that space, when not occupied by the bladder, normally distended, being filled with light, constantly moving small intestines. These act as movable upholstery, surround the uterus on all sides, equalizing the abdominal pressure, and fill the necessary vacuum. In the general examination of a gynæcological patient, it is due to ourselves that we eliminate, or if it is impossible to eliminate, at least recognize, any serious organic difficulty other than gynæcological. The author outlines a systematic plan for the local examination. The systematic examination of the abdomen soon establishes a habit which will make an operator acute in detecting minor changes, and many things will be revealed which would never come out in a simple bimanual examination of the pelvis.

Four Cases of Calculi Impacted in the Ureter. Nephro-ureterectomy, Abdominal Uretero-lithotomy, Vaginal Uretero-lithotomy. By Dr. B. R. Schenck.

The Differential Diagnosis of Ectopic Pregnancy, with Especial Reference between it and that of Early Uterine Abortion. By Dr. Hiram N. Vineberg.—The points the author brings out are: 1. The frequency with which ectopic gestation is diagnosticated as early uterine abortion. 2. The advisability of looking with suspicion upon every case presenting apparently the symptoms of early uterine abortion, and, if the case is not running a simple and natural course, of fully anæsthetizing the patient for a rigid examination and for the proper performance of curetting in the event of uterine abortion being present. 3. If, after carrying out this plan, there is still some doubt, the advisability of making a posterior vaginal exploratory incision to determine the presence or absence of blood in the peritoneal cavity and of being prepared to open the abdomen if the condition found calls for it. 4. The unreliability of the so-called pathognomonic signs or symptoms of ectopic gestation.

I. Union Following Pathological Fracture of the Femur Due to Secondary Carcinoma. II. Spontaneous Disappearance of Carcinoma of the Lip. By Dr. Leonard Freeman.

The Rational Use and Limitations of Therapeutic Measures Intended to Promote Absorption of Exudates within the Eyeball. Medicinal Measures. By Dr. Randolph Brunson.—The limitation of therapeutic remedies used to promote the absorption of exudates is very circumscribed in a way, and, after all has been said, alteratives, mercury, and iodides, pilocarpine, sodium salicylate, and the hot baths constitute about the whole number of remedies on which we can place much reliance. Exudates of specific and uric-acid origin can without question be controlled, but in other cases we are frequently disappointed, do what we may.

Suppurating Mastoiditis, with the Report of Cases; Suppurating Otitis Media, both Ears; Suppurating Mastoiditis on the Right Side, Abscess Extending into the Deeper Tissues of the Neck, and Extradural Abscess. By Dr. J. H. Bryan.

Remarks on the After-effects of Operations for the Removal of Adenoid Tissues at the Vault of the Pharynx. By Dr. E. L. Shurly.

Medical Treatment of Actinomycosis. By Dr. J. L. Sawyers.—In this paper the author asserts that actinomycosis is not an uncommon disease, and that where uncomplicated, it is a non-suppurative, afebrile, comparatively painless, slowly progressing disease. The clinical signs and symptoms are often pathognomonic. The club-shaped bodies, single and in asters, are often absent, the threads more frequently present, and the coccus-like bodies most constantly present. Combined surgical measures and the administration of potassium iodide give the best results. Potassium iodide, administered internally, cures a large percentage of cases. The interstitial injection of potassium iodide into the infected tissues exerts a strikingly salutary influence over the disease.

Tropical Abscess of the Liver. By Dr. E. F. Robinson.

The Prevention of Insanity. By Dr. Daniel R. Brower.

When should we Operate in Appendicitis? By Dr. Douglas C. Moriarta.

Operating under X-rays. By Dr. J. F. Baldwin.

Lancet, May 4, 1901.

Eczema in Relation to Age. By M. Morris, F.R.C.S. —Eczema presents certain well-marked differences corresponding to different ages in life, and the author classifies the subject as follows:

Eczema in Infancy.—The disease usually begins as a patch of seborrhœa, around which a red areola appears. Everything tending to increase the local blood supply should be avoided, such as scrubbing the head with soap and water, keeping the head covered, etc. In the first stage, the disease is a purely local condition and calls for no constitutional treatment. Strong ointments and lotions should not be used; the applications should be of an antiseptic character, one of the best being an ointment of five grains of precipitated sulphur to an ounce of benzoinated lard. Improper food is not always the cause of the change of a dry scaly eczema to an acute condition; it may be due to vaccination, to intestinal worms, or other causes. In such acute cases the best drug to give internally is mercury in some form, such as calomel. To dry up the discharge in acute, weeping cases, the author recommends the use of a powder composed of equal parts of boric acid, starch, and oxide of zinc. Ichthyol is also of value in converting an acute into a subacute stage, very small quantities being used. This form of eczema, like all others, is cyclical in its nature.

Eczema in Childhood.—In children eczema is also generally of the seborrhœic type, and begins as rough and scaly patches upon the cheeks and forehead. The early recognition and treatment of these patches is of the greatest importance. A relapse is much less likely if the original scaly condition is treated at the beginning. Such children should not go away to school; they are far better treated at home. The author doubts very much whether any relation exists between eczema and teething.

Eczema at Puberty.—There are two chief forms of eczema beginning at puberty. One is the seborrhœic form, and the other is the form which is associated with dry skin—xeroderma. In the latter form it is essential that the dry condition of the skin should be treated by mollient baths, and the free application of a twenty-per-cent. solution of glycerin in water. Xeroderma usually attacks the flexor surfaces—the bends of the elbows and knees. That form of eczema which alternates with nerve attacks (asthma, rheumatoid arthritis), very often appears at puberty for the first time, and requires special internal treatment in the form of nerve tonics, etc.

Eczema in the Adult.—An otherwise perfectly healthy person may suddenly become subject to a severe general attack of eczema, following exposure to cold. In such cases nothing is better than small doses of tartrated antimony, repeated in an hour or two; one thirty-second of a grain is usually sufficient. The irritation of the skin left behind after the subsidence of such an acute attack is often most intense, though there may be nothing to be seen. In some cases nothing but a change of climate will prove of service. It is in this form of eczema that mineral-water treatment is most efficacious. The use of alcohol seems often to have a definite relationship to such general attacks of eczema. The disease often takes the form of intertrigo in adults, being localized around the scrotum and the inner side of the thigh. Exercise should be curtailed, and the parts bathed with an antiseptic lotion, dried, and a weak sulphur ointment applied accurately all over. Varicose eczema is also exceedingly common in adults; the treatment is rest in bed, with elevation of the leg, and the application of Unna's zinc glycerin jelly. Chronic eczema of the leg, in the form of small, circular, chronic patches, is often seen. A serious effort should be made to get rid of these patches, as the condition may become acute and extend all over the leg. Ointments of salicylic acid and resorcin, and of pyrogallic acid are recommended.

Eczema at the Menopause.—Two forms occur at the change of life: Acute eczema of the head and face, and the very acute eczema of the vulva and anus.

Eczema in Old Age.—The constant irritation and itching so common in the eczemas of old age, often leads to very serious results. There is loss of sleep, imperfect nutrition, etc., thus forming a vicious circle. It is not uncommon for old people to commit suicide on account of their eczema. In such cases there is only one drug of any service, and that is opium; it should be given freely.

The Action of Arsenic as Observed during the Recent Epidemic of Arsenic Poisoning. By Sir Thomas Lauder Brunton.—In this article the author gives a short account of the general action of arsenic upon the body, classifying the symptoms observed in the late epidemic of arsenical poisoning, rendering it easier both to remember them and to understand the varieties which have been described. In both the Manchester and Hyères epidemics there can be little doubt the symptoms were chiefly, if not entirely, due to arsenical poisoning. The discovery of selenium in beer imports a new factor into the question, but it is not yet settled whether this substance may be partly to blame for producing neuritis. The author is very doubtful as to the production of peripheral neuritis by alcohol, and suggests that alcoholic neuritis, so-called, may in reality be due to arsenical poisoning.

Some Further Investigations upon Rheumatic Fever. By Dr. F. J. Poynton and Dr. A. Paine.—In a preceding contribution the authors described a diplococcus, which they were able to isolate from the tissues in rheumatic fever, and which they thought to be a cause of rheumatic fever. They have continued their investigations and have now isolated the diplococcus from sixteen cases of rheumatic fever. They have succeeded in demonstrating the organisms in rheumatic nodules in two cases, and have in addition grown them in the nodular tissue outside of the body in pure culture. Intravenous inoculation of this culture has produced valvular inflammation, pericarditis, and polyarthritis in a rabbit, and the diplococcus isolated from its joint exudate.

The authors hold that the commencement of rheumatic chorea is associated with the presence of the diplococci in the brain, and perhaps the pia mater, as well as with the presence of toxines produced by these organisms. They have observed distinct choreic movements in a rabbit inoculated with the diplococcus, and have isolated the organism from the blood and from the cerebrospinal fluid. They review the pathological and bacteriological literature of chorea, the reported facts agreeing well with their hypothesis. That only certain cases should develop chorea is remarkable and cannot yet be explained, but it is only a further evidence of the remarkably specific action of the more complex poisons. The causal relation of fright to chorea is also a great difficulty. Rheumatism produces a cerebral state analogous to that produced by fright: what that condition is

we do not know. The diplococci have been demonstrated in the multiforminuclear leucocytes, so that the moderate leucocytosis which occurs in rheumatic fever may be looked upon as protective in nature. It does not seem probable that rheumatic fever has a definite incubation period. The authors' observations tend to show that the fever of rheumatism is a primary phenomenon, and not secondary to the local lesions only. The causes of the occurrence of ante-mortem thrombosis in the heart in rheumatic fever are probably various: mechanical difficulties, weakness of the heart wall, and the increased tendency of the blood to clot.

A Case of Perforating Gastric Ulcer with Rigors. Operation for Suture Followed Three Weeks Later by Volvulus and Acute Intestinal Obstruction Requiring a Second Laparotomy. By A. A. Bowlby, F. R. C. S., and J. F. Steedman, F. R. C. S.—The case here reported is interesting on account of the extraordinary vitality of the patient, who survived two days of peritonitis following perforation and the necessary operation for suture, as well as the strangulation of an immense quantity of small intestine and a very serious operation for its relief within three weeks of the first abdominal section.

On Serous Vaccinia in Connection with Cretinism and Rickets. By Dr. R. Kirk.—The author reports several cases of serous vaccinia, all of the patients showing subsequently signs of myxœdema or rickets. In serous vaccinia, instead of normal viscid lymph being produced at the point of inoculation, a vesicle forms which, when broken, discharges thin, watery serum. It would appear that we should recognize the existence of a serous as well as a hæmorrhagic diathesis; the two are closely related, and both are associated with great vulnerability of tissue by various morbific agents. The author raises the question whether a healthy thyreoid gland is necessary to produce the viscid lymph of normal vaccinia, and suggests that vaccination be performed on calves whose thyreoids have been extirpated and the results noted. The viscidity of the lymph perhaps acts as a defence against micro-organismal invasion. In one family of rickety children, serous vaccinia occurred in six out of seven children.

Three Cases of Sarcoma of the Uterus. By Dr. E. O. Croft.—While sarcoma of the uterus is an uncommon disease, yet its rarity has been overestimated. The author reports three cases seen by him. In two of the cases the disease had progressed so far as to be unsuited to operation; in the third, the uterus was removed and the patient made a good recovery.

A Case of Recovery after Operation for Diffuse Peritonitis from Perforation of the Appendix. By Dr. R. Coombe.

On the Uses of Diphtheria Antitoxine. By T. B. Broadway, M. B.—The author wishes to impress on all that the serum treatment of diphtheria has placed the prognosis of this disease in a more favorable light, and, if used early, practically saves life; it preserves the patient from the serious sequelæ which often follow recovery from it; if proper antiseptic precautions are taken no abscesses form at the seat of injection; and the almost instantaneous relief it gives to distressing symptoms would alone justify its use. It should be used early, freely, and in all doubtful cases of sore throat. Of twenty-four cases treated with antitoxine, one died of cardiac failure; of six cases treated without antitoxine, two died.

The Respiratory Movements of the Præcordial Area in Health and Disease. By Dr. J. Aikman.—The author has found that in cases of pericarditis complicating rheumatism, a marked diminution of the respiratory movement in the third left intercostal space precedes the stethoscopic signs by a period varying from one to four days. This limitation of movement rapidly extends to the second and first intercostal spaces. In his experience this sign is invariably followed by the appearance of a pericardial friction and a dull percussion note. It disappears with recovery, and reappears before a relapse. The variations of chest movement which prognosticate and evidence endocarditis are less in degree, being least marked when the right side of the heart is involved.

British Medical Journal, May 4, 1901.

Functional Nerve Diseases. By Dr. G. E. Rennie.—By the expression "functional nerve diseases" the author means disturbances of function of the elements of the nervous system, whether in brain, cord, or peripheral nerves, which are not dependent on gross organic changes in those elements. Clinically, four types can be recognized: (1) Feigned disease; (2) hysteria in its various manifestations; (3) neurasthenia; (4) functional disease concomitant with and dependent upon organic disease. These various types are discussed in a very general way. Among the points brought out are the following: In feigned epilepsy, an important sign may be obtained from the examination of the urine, as in epileptics it is markedly hypotoxic as compared with normal urine. A study of the plantar reflex is important: in functional disease, as in health, the flexor response is the rule; in organic disease involving the pyramidal tract an extensor response is almost invariable. In certain cases neurasthenia approaches very closely to insanity; sexual neurasthenia is but a shade removed from sexual hypochondriasis.

On the Centralization of Medical Education by the University of London. By Dr. A. D. Waller.

Some Remarks on the Inheritance of Acquired Immunity. By G. Ogilvie, M. B.

Note on the Results Obtained by Antityphoid Inoculations in Egypt and Cyprus during the Year 1900. By Dr. A. E. Wright.—The author gives the following table, showing the incidence of typhoid fever and the mortality from the disease for the year 1900 in the inoculated and uninoculated among the British troops in Egypt and Cyprus:

	Average Annual Strength.	*Number of Cases of Typhoid.*	*Number of Deaths from Typhoid.*	*Percentage of Cases Calculated on Average Annual Strength.*	*Percentage of Deaths Calculated on Same Basis.*
Uninoculated....	2,669	68	10	2.50	0.40
Inoculated.....	720	1	1	0.14	0.14

The one case occurring among the inoculated was that of a patient admited to hospital on the thirty-third day after inoculation. It would seem that the disease was in this case contracted before anything in the nature of protection had been established by the inoculation.

Case of Secondary Anæmia becoming Pernicious. By Dr. W. Edgecombe.—The author reports the case of a woman, aged thirty-eight years, who had suffered for twelve years from a secondary anæmia following sma but continued hæmorrhages from the nose. At the tim

the first blood examination, in 1899, her symptoms ad become those of pernicious anæmia, the red corscles being below half a million to the cubic millietre, and the hæmoglobin index two and a half times e normal. She could not take arsenic, but improved pidly upon oxygen and an organic preparation of iron, d four months later examination showed her blood to almost normal. She then gradually failed and died out a year and a half later. A table of the results of e numerous blood examinations is given, and shows e following points of interest: (1) The hæmoglobin ll to eight per cent. just before death; (2) the high lor, or hæmoglobin index; (3) the preponderance of egaloblasts over normoblasts among the nucleated d cells; (4) the leucocytes were usually below the norl in number, the lymphocytes being relatively in exss.

The case clearly shows the possibility of chronic secdary anæmia passing into the pernicious form.

The Treatment of Two Cases of Nerve Leprosy in hich Recovery Took Place. By Dr. G. Thin.—The auor puts on record the outlines of two cases of nerve lepsy in which the credit of the cure must, apparently, be iefly attributed to the action of drugs. In the first se chaulmoogra oil was prescribed both internally (in venty-one-drop doses) and externally. In the second se pyrogallic-acid ointment was applied locally and urjun oil, in drachm doses, given internally. For a umber of years both patients have led active, useful ves, enjoying excellent health.

An Operation on the Subjects of Exophthalmic oître. By J. D. Harris, M. R. C. S.—The author rerts the case of a patient suffering from well-marked raves's disease, who was obliged to undergo amputation the breast for cystic degeneration. She failed steadily ter the operation, and died at the end of sixty-eight urs. The condition of the heart was from the first the eat difficulty; beating irregularly at great speed.

A Case of Descending Landry's Paralysis in a Child. L. A. Rowden, M. B.—In the case here reported the gnosis of Landry's paralysis of a descending form s made from (1) progressive, symmetrical, motor ralysis, affecting first the muscles of the neck—the iff-neck" complained of—then the arms, forearms, st, legs, etc.; (2) sensation did not seem at all disbed until a few hours before death, and even then y slightly; (3) absence of rigidity, twitching, pain spasm; (4) mental functions unimpaired; no loss of trol over the emunctories.

Two Cases of Severe Frontal Herpes. By C. Higs, F. R. C. S.

An Unusual Symptom in Secondary Syphilis. By A. S. Skirving, F. R. C. S.—The author has observed ral cases of secondary syphilis in which itchiness of fauces has been present. It is a definite itchiness, very way comparable to the ordinary feeling experied in the skin, and accompanied by a similar desire counterirritation by scratching. The occurrence of iness in syphilitic affections of the mucous membrane e more remarkable, since, with the exception of small ular syphilides, specific cutaneous eruptions seldom much, often indeed not at all.

Whooping-cough Cured by Irrigation of the Nares. E. M. Payne, M. B.—The author reports a case of pping-cough, occurring in a boy aged nine years, in h the nose was irrigated with a one to forty carbolic n three times a day. The cure was complete in t a week from the time treatment was begun.

Münchener medicinische Wochenschrift, April 16, 1901.

Meningitis Serosa Acuta. By Dr. J. Hegener.

Treatment of Intestinal Tuberculosis. By Dr. Edwin Klebs.—(*Continued article.*)

Fermentation Processes. By Dr. Carl Oppenheimer.

Treatment of Rhachitis with Adrenal Extract.—Dr. Max Hönigsberger found that rhachitic children placed under this treatment thrived very well. The general condition improved at once, or very soon, and while, in the majority of instances, the principal symptoms were favorably influenced, this result was not uniform. He concludes from his observations that suprarenal extract is not a specific in rhachitis.

Addison's Disease. By Dr. L. Huismans.

Gastric Lavage in Children.—Dr. Ignatz Steinhardt says that gastric lavage is easily practicable in children in private practice, even in nursing infants, and is rarely productive of harm. It is especially indicated in the acute digestive disturbances in little children when the usual remedies do not succeed in stopping the vomiting. It is almost universally followed by a rapid improvement.

Deutsche Medizinal-Zeitung, April 18, 1901.

Use of Röntgen Rays in Medicine.—Dr. Immelmann says that the conformation of the œsophagus can be determined by the Röntgen ray if the organ is filled with shot or a sound. It is not always possible to diagnosticate renal or vesical calculi, but this may be a development of the future. Arthritis deformans, gout, and rheumatism lend themselves well to detection by the x-rays. Therapeutically, especially in lupus, the rays have a distinct field of usefulness. The author mentions in detail the various injuries that may be detected by means of the Röntgen rays.

Prophylaxis of Gonorrhœa.—Dr. Ernst R. W. Frank describes a simple device of his own invention for the injection, after a suspicious intercourse, of a solution of twenty-per-cent. protargol in bichloride of mercury (1 to 2,000). He finds this an almost certain prophylactic against gonorrhœal infection.

Wiener klinische Wochenschrift, April 11, 1901.

Toxicity of Alcohol in Certain Nervous and Mental Diseases.—Professor Wagner von Jauregg draws attention to the curative influence of alcohol when it is given to patients suffering from alcoholic delirium. He accounts for this by assuming it to be an antidote for the toxines developed from the excessive use of alcohol, although the alcohol itself is not the direct toxic agent. In other nervous and mental affections it acts as a poison, possibly, the author thinks, from the fact that the liver, which is injured by alcoholic drinks, allows certain toxines to pass into the general circulation which evoke the symptoms of intoxication or poisoning.

Alcohol and Delirium. By Dr. Joseph A. Hirschl.—A statistical paper.

Local Use of Carbonic Acid in Menstrual Disorders.—Dr. Gustav Loimann recommends carbonic-acid baths and douches of the gas in dysmenorrhœa, amenorrhœa, oligomenorrhœa, chronic metritis, and cervical erosion. It must not be employed during pregnancy for fear of bringing on an abortion.

Centralblatt für Chirurgie, April 20, 1901.

Value of Aluminium Bronze Wire in Surgery.—Dr. Rudolf Pichler writes from Mikulicz's clinic that suture

material of aluminium bronze is easily sterilized, and that colonies of bacteria found in the neighborhood of these sutures are less virulent than those found about other suture materials. It is especially valuable in areas of the body which are not easily cleaned, such as the perinæum, the scrotum, the inguinal region, and the lips. It is especially useful, too, when the skin is tightly stretched and when the sutures must remain in place for weeks at a time.

April 27, 1901.

Atropine before Ether Anæsthesia.—Dr. Ludwig Braun takes issue with Dr. Reinhard and affirms that atropine is not necessary before the administration of ether to prevent accumulation of mucus in the respiratory tract. Pure ether and a good mask will accomplish the same purpose. Atropine is not always, he adds, a harmless drug.

Gazette hebdomadaire de médecine et de chirurgie, April 21 and 25, 1901.

Chorea Treated by Cacodylate of Sodium.—M. Lannois reports five cases of Sydenham's chorea treated by the subcutaneous injection of the cacodylate of sodium. He gives three tenths of a grain for a period of fifteen days, then omits the drug for three or four days, and repeats the dose for an equal length of time. A cure was effected in all the cases reported.

Emotional Icterus. By M. Debove.

Indépendance médicale, April 24, 1901.

Chlorosis. By M. Hayem.—A clinical lecture in which the diagnosis between chlorosis and tuberculosis is pointed out.

Presse médicale, April 13, 1901.

Pyonephrosis of Typhoid Origin. Dr. M. Garnier and Dr. Lardennois formulate the following conclusions from their investigations: Typhoid fever can give rise to renal suppurations affecting the form of pyonephroses open or concealed. The first signs often appear even in the course of the fever, but it is only after the establishment of convalescence that the diagnosis can be established. The diagnosis is to be founded on the existence of pains in the lumbar region, the establishment of tumefaction, more or less considerable, of the kidney, and, in certain cases, in intermittent pyuria. The treatment is, before all, surgical; intervention, as early as possible, by nephrotomy, may suffice, and may give with the least risk excellent results; but nephrectomy will often be secondarily indicated when the abscesses are numerous, badly drained, and if there is good ground for considering the other kidney intact.

April 17, 1901.

So-called Glandular Fever.—M. Marcel Labbé believes this peculiar condition to be due to bacillary invasion of a gland or glands. He thinks that the germs, according to the law worked out by him and Bezançon, wander from one gland to another, as a germ which has lived and thrived in one form of tissue has a tendency to localize anew in similar tissue. He thinks, therefore, that the title "glandular fever" should rather be replaced by the name "non-specific, acute infectious hypertrophic adenitis," as this corresponds to the clinical facts, to the particular condition of the glands as they are found in the disease, and to the special properties acquired by the causative germ. In the matter of prophylaxis, antisepsis of the nasal, buccal, and pharyngeal cavities is to be observed.

Technics of Shortening the Round Ligaments in the Inguinal Canal.—M. E. Juvara describes his method He first cuts down upon the inguinal canal, opens it seeks for and dissects out the round ligament. The ligament is drawn up and deep sutures of catgut are passed through it in the same manner as in the Bassini operation for hernia. Before the canal is closed, the round ligament is split into two portions, and these portions are made to traverse the superior and oblique muscles, the transversalis and the tendon of the superior oblique The ends are then tied together, and the entire wound is closed.

April 20, 1901.

Surgery of Deafness. By M. Georges Laurens.

Ureterovesical and Pyelovesical Reflexes.—M. Baz says that bimanual palpation of the kidneys does not always elicit, in suppurating pyelitis, a painful area. But when pressure is made upon the anterior abdominal wall a few inches from the median line, a painful radiation toward the bladder is elicited, which may be called a pyelocystic reflex. It is uncommon. The ureterocystic reflex is much more common and is more easily elicited in women than in men. On vaginal examination, the bladder being empty, palpation reveals a tender spot and causes a desire to urinate. This marks the junction of the ureter and the bladder. When but one kidney is affected, this painful area is felt on the affected side; it is present on both sides when both kidneys are involved When the bladder only is diseased, its neck is the only painful portion. He describes a test, which he calls Bouchard's sign, for distinguishing pus from the kidney and from the bladder. To the suspected urine, Fehling's solution is added drop by drop until the fluid becomes somewhat gelatinous. The tube is then violently shaken. If the pus comes from the bladder, nothing is noted; if it comes from the kidney, globules of gas can be seen imprisoned in the fluid, especially toward the bottom. Also, if the pus is of vesical origin, it will sink to the bottom of the container, while, if it is renal in its origin, it will rise to the surface and form a layer-like saliva.

Lyon médical, April 14 and 21, 1901.

Abnormal Forms of Pyloric Stenosis. By M. Boveret.

Formation and Evolution of Fat in the Normal and Pathological States. By M. E. Dufourt. (*Continued article.*)

Biochemical Rôle of the Prostate.—M. J. Eraud. an elaborate study of the functions of the prostate gland concludes that a modification of the prostatic fluid from alkaline to acid can contribute in a certain measure create sterility or to modify profoundly the vitality and structure of the spermatozooids which cannot live in an alkaline medium. Further, it possesses a certain biochemical action, which calls forth the secretion of a powerful special poison that acts particularly upon the sero portions of the body.

Riforma medica, March 22, 23, and 25, 1901.

A Case of Cardiac Suture. By Dr. Francesco Lataria.—Of twenty-three reported cases of wounds of the heart which had been treated by suture, eight recovered The author's patient was a lad, nineteen years old, who had received a penetrating wound about four centimeters in length in the fifth intercostal space at the parasternal

line. The author saw the patient half an hour after the injury had been inflicted. After disinfecting the wound, a horizontal incision curving slightly upward was made from the wound to the anterior axillary line. The third, fourth, fifth, and sixth ribs were severed by means of bone forceps, and a flap of ribs and intercostal tissue lined with pleura was reflected to the side. A wound in the pericardium was found and enlarged laterally, the finger introduced, the heart brought upward and forward, and the wound in the anterior wall of the right ventricle exposed and immediately compressed by the fingers of an assistant. The heart continued to beat during the entire operation. After the wound had been sutured the toilet of the pericardium and pleura was made, the pericardial wound sutured, except at one end where a gauze drain was inserted, the flap replaced and sutured into position, leaving space for the pericardial drain and for another drain from the pleura. At no time were there any signs of syncope, and the anæsthesia progressed well throughout. The entire operation lasted half an hour. The patient did well for a few hours after the operation, but then the circulation gave out in spite of stimulants, and he died on the following morning.

March 26 and 27, 1901.

On the Trypsin-forming Function of the Spleen. By Dr. T. Silvestri.—Experimental researches conducted by the author, with a view of determining the rôle of the spleen in the formation of trypsin, were the basis of the following conclusions: The existence of a secretion of the spleen which contains trypsin cannot be affirmed. The results of the author's researches indicate that the spleen exercises a mechanical function in digestion.

April 1, 1901.

On a Form of Chorea Complicating Erysipelas. By Dr. Luigi Fornaca.—Lumbar puncture has been performed for diagnostic purposes, in Bozzolo's clinic in Turin, since April, 1898. During the past year the author had occasion to perform lumbar puncture three times in cases of chorea. The first patient was a girl thirteen years of age, in whom the puncture was executed on the fifth day of the disease, which had developed acutely, without any fever. The second patient was a girl aged ten years, in whom the choreic phenomena appeared simultaneously with an acute otitis, followed by rupture of the membrane and a copious flow of pus. In this patient, a puncture was made on the first day after admission and again a few days later. The liquid obtained from the spinal canal of both these patients was clear, abundant, and sterile when grown on ordinary media. Inoculations into guinea pigs resulted negatively. In the third case the patient was a girl aged fourteen years, who was admitted to the clinic for erysipelas of the face, which disappeared under treatment in two weeks. Two months later she had another attack of facial erysipelas. On the third day after admission, choreiform movements were noticed, and three days later lumbar puncture was performed. The fluid was clear and cultures were prepared on various media. In the meanwhile, cultures were also prepared from the patient's blood and from her urine. The cultures of spinal fluid showed the presence of a streptococcus. Injections of the pure culture into the cranium of rabbits were followed by fever and paralysis of the limbs, which gradually disappeared. Subcutaneous injections in guinea pigs were negative. Streptococci have been found *post-mortem*, by Eberth and others, in chorea, but the special interest in the present account lies in the fact that this germ was for the first time demonstrated during life in cases of chorea. Lumbar puncture should be more extensively employed in diagnosis.

April 2, 1901.

The Bactericidal Action of Saturated Solutions of Sodium Chloride. By Dr. Francesco Testi.—The author's conclusions are as follows: Saturated salt solutions possess a certain degree of bactericidal power on various pathogenic germs. This action is increased greatly by an elevated temperature. In their order of resistance to salt solutions the following germs may be named: The cholera bacillus, the bacillus of Finkler, the bacilli of typhoid fever, diphtheria and glanders, and the *Staphylococcus pyogenes aureus.* These data refer to a temperature of 36° C.; at lower temperatures the resistance of these germs is much greater. The spores of the bacillus of anthrax lose their vitality in a day after exposure to salt solution at 36° C. On the other hand, the *Bacillus subtilis* resists this treatment. The anthrax bacillus is not affected by the solution in any way.

Klinitchesky Journal, January, 1901.

Catheter Fever. By Dr. C. Posner.—The author discusses the ætiology of catheter fever and emphasizes the fact that, in addition to infection with germs that penetrate into the mucous membrane of the urethra through lesions caused by the introduction of instruments, catheter fever may also be due to intoxication as the result of the absorption of toxines generated by germs in the urinary tract. The absorption of these toxines may take place without any lesion of the mucous membrane, as urethral fever has occurred without the introduction of instruments into the canal. The power of absorption is, however, fortunately quite limited. No absorption of any consequence takes place in the anterior urethra; the posterior portion of the canal can only absorb toxines through the medium of the prostate; the bladder cannot absorb toxines so long as its epithelium is whole. On the other hand, the pelvis of the kidney, and the kidney itself, are ready surfaces for absorption of bacterial poisons.

On the Action of Sodium Cinnamate in Tuberculosis. By Dr. A. P. Braunstein.—Experimental and clinical evidence collected by the author serves as a basis for the following conclusions: Sodium cinnamate has no influence whatever upon experimental general tuberculosis in guinea pigs. The drug has no effect upon local tuberculosis (ulcers). The virulence of tubercle bacilli found in the sputum of tuberculous patients remains unchanged under the influence of injections of sodium cinnamate subcutaneously. The drug diminishes the amount of sputum expectorated, and converts purulent sputum into mucous expectoration, but does not diminish the number of tubercle bacilli in the sputum.

A Case of Hepatic Neuralgia Simulating Cholelithiasis. By Dr. N. N. Michailoff.—Fuerbringer described, in 1891, under the designation of hepatic neuralgia a symptom-complex resembling biliary colic, but entirely independent of gall-stones. This syndrome occurs most frequently in neurotic women, especially during the menstrual periods or in the presence of scanty or disordered menstruation. The chief symptom is intense pain, leading sometimes to collapse. The diagnosis is the more difficult because jaundice may accompany this condition, probably as the result of spasmodic contraction of the biliary capillaries. The ætiology is obscure, and the

affection is for the present classed as a neurosis. The author reports a case of this syndrome. The patient was a girl, aged nineteen years, who presented a clear picture of gall-stones. An exploratory laparotomy was performed, but nothing abnormal was found. The gall-bladder was, however, sutured into the wound in order to open it if occasion should require later. The pains disappeared immediately and completely after the operation. The author does not attribute any real effect to the cystopexy.

Vratch, March 17 (March 29, New Style), 1901.

On the Physiological Action of the Alkaloid Johimbin and on its Significance in the Treatment of Impotence. By Dr. N. P. Kravkoff.—Johimbin is obtained from the bark of the Jambehu tree, *habitat,* the German African colonies, probably a member of the order *Rubiaceæ.* It was first obtained by Spiegel, and simultaneously by Thoms in 1899, and occurs in silky, crystalline needles, easily soluble in alcohol, ether, etc., but insoluble in water. Various salts of this alkaloid have been prepared, but the hydrochloride is used in preference to the others. The natives use an infusion of the bark as an aphrodisiac, and Oberwarth has shown that the alkaloid possesses aphrodisiac properties. Mendel and Lowy have tested the drug clinically and found it to be an efficient and harmless sexual stimulant. A gramme costs thirty-six marks ($9), and from five to ten drops of the one-per-cent. solution of the hydrochloride are given three times daily. Tablets containing five milligrammes each are also for sale in Germany. The author has conducted a series of experiments on animals with a view to determining the action of this alkaloid. (*To be continued.*)

On the Question of the Alkalinity of the Blood. By V. F. Orloffsky.—The author has found that Engel's alkalimeter gives figures indicating the percentage of alkalinity in the blood which exceed the actual amount by 106 milligrammes with litmus as indicator, and by 119 milligrammes with laemoid (a compound of resorcin and sodium nitrite) as indicator. The alkalinity of the blood in health is represented by from 240 to 267 milligrammes of NaOH to one hundred cubic centimetres of blood with litmus as indicator and from 269 to 299 milligrammes with laemoid. In some diseases the alkalinity of the blood is directly proportional to the number of red cells. The determination of the alkalinity of the blood alone in diseased conditions cannot give a correct conception of the causes of its deviation from the normal. The presence of a self-intoxication with acids can only be affirmed when the number of red cells is normal, while the alkalinity is greatly diminished, or when the diminution of alkalinity is much greater than the diminution in the number of red corpuscles. The latter conditions have thus far been observed by the author only in severe forms of saccharine diabetes and in cancerous cachexia. Small (259 cubic centimetres) warm alkaline enemas raise the alkalinity of the blood to a greater extent than the ingestion of alkalies in both health and disease, but this rise in alkalinity is in either case short-lived. The author announces the publication of further researches on the subject in the near future.

Some Difficulties in the Combat with Diphtheria. By Dr. G. N. Gabritchevsky.—The chief difficulty is the fact that diphtheria bacilli may persist in the throat and nose for weeks, or even months, after complete recovery, and may be present in persons who have never suffered from any symptoms of the disease. The author calls attention to the fact that in these chronic carriers of diphtheria there are usually some pathologic changes in the nasal or pharyngeal cavity, such as adenoids, hypertrophic tonsils, rhinitis, syphilitic lesions, etc. He has also found that diphtheria bacilli persist more tenaciously in anæmic and weakened children than in healthy ones. The conclusion is that patients should be kept under treatment until they are perfectly well after an attack of diphtheria.

The author also recommends what he calls *relative isolation* for chronic carriers of the infection; namely, that the patient be left to live with his family, but that all precautions against the spread of the contagion be rigidly observed. Thus the mouth and throat should be kept clean and disinfected; handkerchiefs should be sterilized after being used, and the expectoration should be collected in special vessels, etc. A special set of dishes should be used, and close contact with other persons, especially children, should be avoided.

On Postpartum Metrophlebitis. By Dr. B. A. Lieboff.

Proceedings of Societies.

KINGS COUNTY MEDICAL ASSOCIATION.

Meeting of December 11, 1900.

The President, Dr. H. ARROWSMITH, in the Chair.

The Specific Treatment of Acute Dysentery.—Dr. W. J. CRUIKSHANK presented a paper with this title (see page 403).

Dr. IRA VAN GIESON said that, though he was not familiar with the details of the clinical study of the disease, he might be permitted to say a few words about the relation of clinical study to other departments of medicine in general, because sometimes when we saw a department of science from a distance and were not wrapped up in its details we could appreciate its limitations better than if we were in the midst of its specific and detailed study.

There seemed to be a curious perversion of the understanding of the true science of medicine latterly in that, through the spread of laboratories, there had arisen a great competition in the study of bacteriology and pathological anatomy, as though they were to be regarded as the highest attainment in medical science, and the study of symptoms was of secondary importance. You notice this particularly among the undergraduates. When they wish to study the science of medicine, they desire to enter the laboratory, as though the study of clinical phenomena was not the highest study of medical science. The paper just presented was one of those rare and ideal presentations of medical science which were a triumph to the practitioner and proved what the speaker had just said. The living phenomena—the phenomena which the patient showed—contained the very heart of the problem. The really very great discoveries in medicine had been made by the practitioner, because he had been nearest the active phenomena. Those who worked in laboratories and studied dead tissues were, after all, working in a field that was of secondary value. It brought up the remark of Oliver Wendell Holmes, that the student of pathological anatomy was to be likened to the man who looked at what was left of the fireworks the day after the show. Pathology was a study of symptoms. The reflective clinician was the truly great scientist in medicine; his department really, it seemed to the

speaker, contained the opportunity for getting at the greatest truths in all the departments of medicine. Sometimes it actually seemed, from the growth and spread of laboratory literature, that this had been lost sight of, and that the true science of medicine consisted in looking at dead tissues and in the work of the test-tube or of culture media. The speaker did not wish to be understood as disparaging such work, or giving the impression that it was not desirable and, indeed, essential.

He had taken the liberty of making this introduction, because he wished to emphasize by it the character of the paper presented. This contribution brought out a great discovery, one made out by the study of living phenomena, the discovery of symptoms, the triumph of the practitioner. It was the same kind of work that Jenner had done, that Lord Lister had done, that Alonzo Clark had done in the treating of peritonitis. Of course, the laboratory work gave us a means of verifying certain theories and notions gained from clinical study. The treatment of hydrophobia and the treatment of diphtheria, it was true, had been evolved from the laboratory, and this had been essential because they had required extensive study in bacteriology and extensive animal experimentation. Nothing would be more fallacious than for us to overestimate the value of laboratory work in medical science. The paper of the evening was a striking demonstration of this.

The speaker had been struck by the scientific and logical character of the paper and by the method which had been used to get at the discovery and verify its truth. The author had brought his arguments forward in such a way as to convince us of the value of this great medical discovery, and give us all an opportunity to put it to practical use. Some men were speculative and could not apply their ideas in practical life; others took a forward position in practical affairs, but could not speculate or rise above the mere survey of facts. The paper under discussion seemed to him to be well balanced, for it gave us theory combined with practice. It was truly rare for us to hear papers which combined both theory and practice. The speaker did not hesitate to eulogize this paper, because it was a great achievement to place within human control a disease which made such ravages. In 1897 90,000 persons were afflicted with dysentery in Japan, and out of this number 22,000 died. It was surely a great achievement to place in our hands a therapeutic agent for such a disease, with an explanation of how it acted and why it should be efficacious.

A paper on rational therapeutics was a most difficult one to write. One working in a laboratory with a certain amount of diligence might prepare papers which were of interest because of their technical value or as a mere catalogue of facts, but they were found utterly useless to medical men in their practice. A paper on rational therapeutics implied great comprehensiveness and a knowledge of many departments of medicine; it required a knowledge of bacteriology and a knowledge of the disease process and of the succession of phenomena seen by the clinician. One might obtain eminence in any one of these departments, but to combine them all to practical advantage was truly an ideal effort. Such a paper, when written, was not one of transient interest. After the meeting of the Congress of American Physicians and Surgeons in Washington last spring, our great American Nestor in medicine had taken the floor and said: "Gentlemen, I have heard many brilliant papers on many departments in medicine; I have heard of many brilliant discoveries in pathological anatomy, yet I have heard not a single paper which has given us any help in the treatment of our patients." Had the paper presented this evening been read at that meeting Dr. S. Weir Mitchell would not have felt compelled to make this criticism.

The speaker thought it would be presumptuous on his part to go into the detailed consideration of the paper. The story of the ætiology in general terms was comparatively simple and straightforward. Some exciting agent entered the alimentary canal and lodged in one of the coats of the intestine, and the first natural defense exhibited by the body was to drench that agent by an outpouring of serum, a supersecretion of the tissues. This was full of significance. There was growing up a school of medicine which dealt largely with molecular motion in the tissues, but no amount of knowledge of the motion of molecules in the tissues would enable one to tell what was the purpose of life. The purpose and significance of that defense of the body against the exciting cause was to get rid of it and enable the body to survive the contest. That had been the pith of one portion of the evening's paper. The author had protested against treatment which was eminently contradictory to the natural defenses of the body, and, on the other hand, gave a drug which did that. Certainly this seemed to be rational therapeutics. That other people had used this did not in the least detract from the real value of the paper.

The speaker had had the privilege of knowing the evolution of the author's working out of this idea. Some eighteen months before, in a conversation with him, allusion had been made to the case which he had now said he had treated some years ago. When the natural defenses of the body were so plain, why should we do our best to defeat this effort by locking up the bowel with opium and covering over the surface of the bowel with bismuth? The discovery proclaimed in this paper had been made independently by careful and thoughtful clinical observation. Having done this, the author had looked around to learn what others had done in this direction. The value of a fact did not lie in the fact itself any more than the value of a dollar lay in the dollar itself. The value of a dollar, like the value of a fact, lay in its relations to other things, and to appreciate this value we must speculate. The paper had admirably combined both theory and fact.

Dr. Jacob Fuhs said that, after such interesting remarks as had been made by the previous speakers there was very little left for him to say. A paper which brought forth a rational method of treatment was certainly a valuable one. That the treatment was a rational one was shown, not only by the results attained, but by its applicability to other infectious diseases. We saw that Nature's method of treating the disease was eliminative. Even in typhoid fever the diarrhœa must be looked upon, not as an evidence of an additional disease process, but as evidence of the effort to relieve the intoxication. The diarrhœa had for this reason long been known as a toxic diarrhœa. We saw the same thing in other diseases—the so-called critical diarrhœas. The speaker thought, therefore, it was rational to treat an infectious disease, such as dysentery, by the method similar to that employed in other infectious diseases. Why we should have come to use the strange methods of treating dysentery which had been in vogue in the past was hard to understand. The diarrhœa of typhoid fever was rarely painful, and there was no need for narcotics, but in dysentery there was a strong temptation to treat the symptoms, pain and tenesmus. This probably explained why narcotics had been so generally administered. It had been customary in the past to counteract this bad

effect of narcotics by giving castor oil. The use of castor oil and opium combined had constituted the treatment in vogue in the early years of the speaker's practice. Sometimes this had been varied by using some astringent or by employing the sulphuric-acid treatment. He had found this latter treatment so useful that he had gradually reduced the morphine treatment to the minimum. Lately he had had an opportunity of testing the sulphate of magnesium treatment in a limited way, and so far as his experience went he could most heartily endorse it.

Letters to the Editor.

HÆMOSTATIC TAMPONS.

PASADENA, CAL., *April 27, 1901.*

To the Editor of the New York Medical Journal:

SIR: In your issue of April 20th Dr. P. M. Miller writes, on page 698, that he used *absorbent* cotton for a vaginal tampon in case of postpartum hæmorrhage. For the reason that a hæmorrhage passes freely through absorbent cotton I consider it unfit for this purpose, and I have seen serious results follow in one case where the surgeon assured the nurse that all was safe with the tampon in place. EDWIN R. CHADBOURNE, M. D.

Book Notices.

An Atlas of the Bacteria Pathogenic in Man, with Descriptions of their Morphology and Modes of Microscopic Examination. By SAMUEL G. SHATTOCK, F. R. C. S., Joint Lecturer on Pathology and Bacteriology, St. Thomas's Medical School, London, etc. With an Introductory Chapter on Bacteriology: Its Practical Value to the General Practitioner. By W. WAYNE BABCOCK, M. D., Pathologist to the Kensington Hospital for Women, etc. Sixteen Full-page Colored Plates. New York: E. B. Treat & Company, 1901. Pp. 7 to 82.

THIS is a reprint from the *International Medical Annual.* While the plates of the bacteria are beautifully executed and the limited text is above reproach, an atlas of this kind must necessarily be compared with the standard work, Fränkel's, and in this comparison it suffers severely. Some of the plates are more clearly elucidated than others. The work is attractive and ought to be of value to teaching students a discriminating knowledge of the various bacteria pathogenic to men.

The Essentials of Practical Bacteriology. An Elementary Laboratory Book for Students and Practitioners. By H. J. CURTIS, B. S. and M. D. Lond., F. R. C. S., Late Surgical Registrar, University College Hospital, etc. New York and Bombay: Longmans, Green & Company, 1900. Pp. xvi-291.

THE author of this excellent manual enters no speculative field of bacteriology, such as immunity and the production of toxines and alexines. He has confined his work exclusively to the laboratory side of the subject. He first gives directions for the preparation of culture media, then treats of methods of staining and cultivation, and considers next the examination of bacteria. In the succeeding division the non-pathogenic and the pathogenic bacteria, also the protozoa, are systematically considered. The author also describes Plimmer's cultivation of the protozoon of cancer and expresses the hope that some good may come of such researches. A chapter on the bacteriological examination of soil, water, air, and milk and one on testing disinfectants and antiseptics are added. An appendix on the fixing and staining of histological objects is also presented.

The illustrations are mainly new, although some are borrowed from other works on bacteriology, while some are in colors. As a teaching book for students, or as a work of reference for one who does occasional bacteriological work, the book is admirable. It is not a textbook, but it is an admirable laboratory guide.

Obstetric Clinic. By DENSLOW LEWIS, Ph. C., M. D., Professor of Gynæcology in the Chicago Policlinic, etc. A Series of Clinical Lectures on Practical Obstetrics delivered to Students and Practitioners in Cook County Hospital, Chicago, together with Remarks on Criminal Abortion, Infanticide, Illegitimacy, the Restriction of Venereal Diseases, the Regulation of Prostitution, and other Medicosociologic Subjects. Chicago: E. H. Colegrove, 1900. Pp. viii-652. [Price, $3.00.]

DR. LEWIS'S book is a collection of clinical lectures delivered at various times, and consequently the lectures bear little logical relation to each other. They are concise and cover almost the entire field of obstetrical physiology and pathology. The author branches off interestingly into the relations of syphilis and prostitution to the community. As to the latter, he takes the sane and modern Anglo-Saxon view that regulation of the social vice is impossible and impracticable, and he points out the feasible plan of teaching continence to man. He advocates, too, the isolation and care of women venereally infected, regarding the spread of gonorrhœa and syphilis as the worst features of prostitution.

In his views on obstetric subjects, Dr. Lewis does not depart from the accepted teachings. In a few details his therapeutic measures are different from those of others, but these are insignificant. The lectures form very interesting reading as a *résumé* of modern obstetric didactics. They are sound and convincing.

We trust that if another edition of the work should be printed, the author will see to it that a better quality of paper is employed.

Flesh Foods, with Methods for their Chemical, Microscopical, and Bacteriological Examination. A Practical Hand-book for Medical Men, Analysts, Inspectors, and others. By C. AINSWORTH MITCHELL, B. A. (Oxon.), F. I. C., F. C. S., Member of Council, Society of Public Analysts. With Illustrations and a Colored Plate. London: Charles Griffin & Company. Philadelphia: J. B. Lippincott Company, 1900. Pp. xv-336.

THIS work is one of more interest to the physiological chemist than to the practising physician. It deals with the methods of examination of the flesh of birds and domestic and wild quadrupeds, the means of preservation of flesh, the detection of adulterations, the poisons developed in meats, and methods of bacteriological examination. While the book is undoubtedly a thorough exposition of its subject, its theme does not warrant a more extended review in these columns.

The Medical News Pocket Formulary for 1901. By E. QUIN THORNTON, M. D., Demonstrator of Therapeutics, Pharmacy, and Materia Medica in the Jefferson Medical College, Philadelphia. Third Edition, Re-

vised and Enlarged. Philadelphia and New York: Lea Brothers & Co., 1901. [Price, $1.50.]

THIS edition has been brought fairly well up to date by the inclusion of many of the more recent additions to the materia medica. The prescriptions are arranged alphabetically under the headings of the various diseases, and among those given under hay fever we notice formulas for tablets and solutions of suprarenal extract. We assume that the usefulness of the salts of glycerophosphoric acid is not recognized by the author, since they receive no mention under any disease heading. The book is bound in leather and is of the convenient size and shape of a wallet for carrying in the pocket. Its usefulness would be increased, we think, by an index of the drugs named in the formulas. Greater uniformity in the names of drugs would also make for its improvement.

BOOKS, ETC., RECEIVED.

Principles of Surgery. By N. Senn, M. D., Ph. D., LL. D., Professor of Surgery in Rush Medical College, etc. Third Edition, thoroughly Revised. With 230 Wood Engravings, Half-tones, and Colored Illustrations. Philadelphia and Chicago: F. A. Davis Company, 1901. Pp. xiv-699. [Price, $4.50.]

Manual of Diseases of the Ear, including those of the Nose and Throat in Relation to the Ear. For the Use of Students and Practitioners of Medicine. By Thomas Barr, M. D., Lecturer on Diseases of the Ear, Glasgow University, etc. Third Edition, Revised and partially Rewritten. With 236 Illustrations. Glasgow: James Maclehose & Sons, 1901. Pp. xxiii-429. [Price, $4.]

Uterine Fibromyomata: Their Pathology, Diagnosis, and Treatment. By E. Stanmore Bishop, F. R. C. S. Eng., President of the Manchester Clinical Society, etc. With 49 Illustrations. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xii-13 to 323. [Price, $3.50.]

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, other than Drug-giving, Useful in the Treatment of the Sick. Edited by Solomon Solis-Cohen, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic, etc. Volume I. Electrotherapy. By George W. Jacoby, M. D., Consulting Neurologist to the German Hospital, New York, etc. In Two Books. Book I. Electrophysics—Apparatus required for the Therapeutic and Diagnostic Use of Electricity. With 163 Illustrations. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xxii-17 to 242.

Select Methods in Food Analysis. By Henry Leffmann, A. M., M. D., Professor of Chemistry and Toxicology in the Woman's Medical College of Pennsylvania, etc., and William Beam, A. M., M. D., formerly Chief Chemist for the Baltimore and Ohio Railroad. With 53 Illustrations in the Text, 4 Full-page Plates, and many Tables. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. viii-9 to 383. [Price, $2.50.]

Aphorisms, Definitions, Reflections, and Paradoxes, Medical, Surgical, and Dietetic. By A. Rabagliati, M. A., M. D., F. R. C. S. Ed., Consulting Surgeon, Bradford Children's Hospital, etc. New York: William Wood & Company, 1901. Pp. xiv-291.

Die periodischen Geistesstörungen. Eine klinische Studie. Von Dr. Alexander Pilcz, Assistant der k. k. I. psychiatrischen Universitätsklinik in Wien. Mit 57 Curven im Text. Jena: Gustav Fischer, 1901. Pp. vi-210.

Catalogue of the Library of the Pharmaceutical Society of Great Britain, in London. Eighth Edition. Compiled by John William Knapman, Librarian.

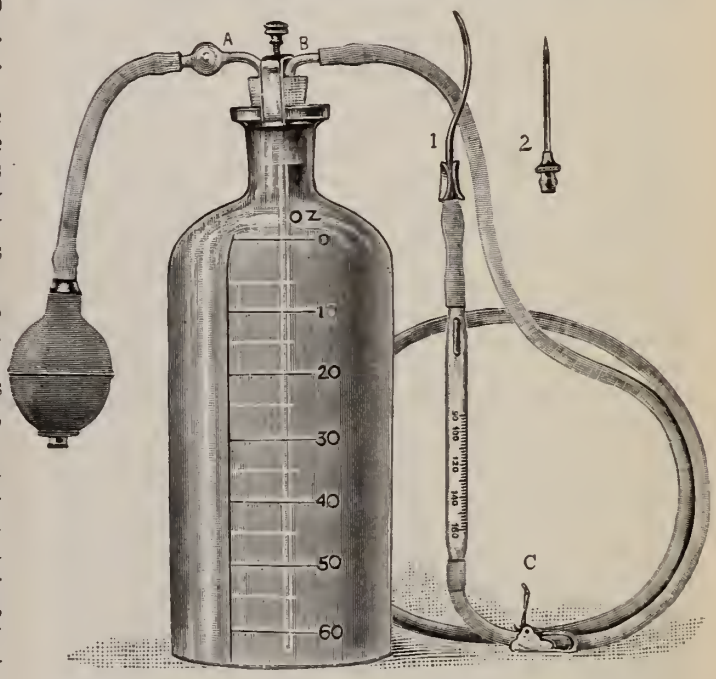
New Inventions, etc.

A NEW INFUSION APPARATUS.

By GEORGE RYERSON FOWLER, M. D.,
BROOKLYN, N. Y.

A GOOD infusion apparatus should possess the following qualities: It should be cleanly, convenient, easily kept in order, and capable of being immersed in warm water in order to maintain the temperature of the contained infusion fluid as equable as possible. The temperature of the infusion fluid as it reaches the cannula should be known. Finally, the apparatus should be adapted for use in intracellular infusion.

I have endeavored to meet these requirements in the apparatus herewith figured. The bottle is graduated in



ounces. Through the rubber cork, which is secured by a simple clamp and screw device, two lengths of glass tubing are placed (*A, B*), the one reaching to the bottom of the bottle, the other terminating just within the bottle; in the course of the latter a bulb is blown in which a mass of cotton or lamb's wool is placed as an air-filter. To the short glass tube a rubber bulb is attached. To the long tube a length of rubber tubing is connected, and to the further extremity is attached a piece of glass tubing in the interior of which a thermometer is placed. Finally, a conveniently curved metal cannula (*1*) is connected with the latter by a short piece of rubber tubing.

The manner of emptying the apparatus is as follows: The bottle is filled with decinormal saline solution of the proper temperature and placed in a basin of water of a slightly higher temperature. Hot water is added to that in the basin from time to time, as required to maintain the temperature within the bottle. The infusion fluid is forced from the bottle by slow and steady strokes of the bulb, air being driven above the surface of the water, passing through the filter on its way to the bottle. As

mucb or as little pressure as may be desired may be made in this way, this being graduated according to the rapidity or otherwise of the infusion as required.

Miscellany.

Electricity in the Treatment of Diseases of the Genito-urinary Tract. Dr. W. H. Walling (*International Medical Magazine,* February) discusses the use of electricity in sexual weakness and impotence, catarrh of Cowper's glands, spermatorrhœa, enlarged prostate, varicocele, hydrocele, urethral stricture, gonorrhœa, and syphilis. In *sexual weakness and impotence,* the genito-spinal centre in the lumbar portion of the cord is either irritable or anæsthetic. The electrical treatment for all cases of loss of the genital functions, of whatever degree or from whatever cause, is the same, and consists of the galvanic and faradaic currents alternated at proper intervals with franklinic insulation and the breeze. The patient is seated upon a well-wetted pad connected with the anode of a high-tension, faradaic, secondary coil, and the spine and the nerves proceeding from the same tested with the cathode, using a current intensity plainly perceptible to the patient. Note all the conditions, whether anæsthetic or irritable. Anæsthetic areas are to receive the cathode in treatment and all irritable or painful portions the anode—whether the current used be galvanic or faradaic. Sittings may be given for fifteen minutes, three times a week, with the faradaic high-tension current for ten minutes, closing each sitting with five minutes' use of the galvanic current as indicated, with an intensity of from five to ten milliampères. The inguinal region should also receive attention in like manner. After a few weeks of such treatment the genitalia may be placed in a bowl of water and the current applied directly through them; or the patient may be placed on a table with one pad under the back and another to the genitals and either current given as desired. Where stimulation to the nerve centres as well as to the parts seems desirable, frequent changes of polarity may be made, but without shock. In some cases the faradaic brush may be used with good effect, applying it to the penis and the pubic region. The seat of the disability being, however, located in the nervous mechanism governing the parts, the genitospinal centre, as well as the whole central nervous system, should receive especial attention. Static insulation is of decided benefit in these cases, as well as the anodal breeze from a pointed wooden electrode applied to the whole spine and the back of the head. After a sufficient time has elapsed sparks may be drawn from anæsthetic areas if they still exist.

Catarrh of Cowper's Glands.—In addition to the foregoing, an insulated bougie connected with the galvanic anode should be kept moving (otherwise it is liable to stick) in the affected part of the urethra, with a current of from three to five milliampères, for from one to three minutes, and the process repeated daily or every other day. *Spermatorrhœa* should be treated as for impotence. *Enlarged prostate* calls for direct applications to the enlarged gland either by electrolysis with a mild galvanic current, or by cataphoric applications of a solution of potassium iodide by means of a hard-rubber catheter, perforated at the distal end with a number of small holes and carrying a metallic stem throughout its length. The instrument is introduced into the prostatic portion of the urethra, the end of the stem wound with absorbent cotton, dipped in four-per-cent. cocaine solution, inserted, and the parts rendered anæsthetic with the galvanic anode, ten milliampères for from five to ten minutes. The stem is then withdrawn and the cotton dipped in a thirty-grain-to-the-ounce solution of potassium iodide, and reinserted, the battery pole charged, and a *cathodal* current passed. The other pad may be on the abdomen or thigh. Treatment once a week. The enlargement may also be attacked *per rectum* by electrolysis, using one or two needles, as deemed best, but the urethral treatment is considered by the author to give better results. Anodal galvanization, three to five minutes with three to five milliampères, and keeping the instrument moving, is useful in irritable conditions of the prostatic urethra. The electrical treatment of *varicocele* consists in galvanic anodal applications by means of a suitable bifurcated electrode, with a current of from fifteen to twenty milliampères every other day, or a milder current every day for ten to fifteen minutes. The anodal current thus applied contracts the dilated vessels, promotes absorption of the hypertrophied portions, and imparts by its inherent qualities the necessary tone to the debilitated structures, with a consequent return to the normal. This method of treatment is absolutely safe, painless, and effective.

For *hydrocele,* electrolysis presents a perfectly safe, sanitary, and effective method of treatment. A suitably insulated trocar and cannula is introduced, and if the sac is very much distended by the contents, a portion may be withdrawn, the rest being left to act as an electrolyte. The instrument is then used as the cathode and a current of from twenty to thirty milliampères applied for twenty minutes. As a result of the action of the current on the sac, it may swell and be slightly painful for a few days; but this will rapidly subside, the whole contents become absorbed, and the tumor disappear. In some cases a repetition of the treatment may be necessary. *Stricture of the Urethra.*—First ascertain the size of bougie that will easily pass the stricture, select one two sizes larger (using what are known as "Neumann's sounds"), insert it up to the stricture, turn on from three to five milliampères of current and pass the bulb through the obstruction with *very* gentle pressure; then bring the instrument back through it in the same manner, and immediately and quickly withdraw the bulb from the canal. Treatment may be given once a week. Forbid the use of dilators or other appliances during the intervals of treatment. At the next sitting the instrument used as an electrode should pass the obstruction; if it does not, use it again. If it passes, use two sizes larger, and so on until the desired calibre has been attained. If the canal is very irritable, a four per cent. solution of cocaine may be injected before operating, but no other application will be required. Time and experience have fully substantiated the claims of this method of treatment to superiority over that by forcible dilatation or the urethrotome. In *gonorrhœa,* treatment should be instituted so soon as the disease first manifests itself. Taken in this early stage, it can be at once checked. After the patient has urinated, a suitable-sized copper bougie, insulated to within half an inch of the distal end (a Neumann's sound will answer) connected with the anode, is passed until it fully engages the prostatic urethra, the cathode being applied to the thigh; from five to eight milliampères of current are then turned on and the instrument slowly withdrawn and released at the meatus by a sudden movement. A green discoloration, the oxide of copper, will appear at the meatus, and its character should be explained to the patient. This chemical, liberated by the action of the current upon the metal in

connection with the salts present, acts as a powerful antiseptic and germicide, penetrating deeply into the surrounding tissues, thus reaching and destroying the gonococci. Treatment may be given every day for three or four days, or every other day, as may be deemed advisable. Some soothing injection may then be given, together with internal medication, if necessary, and the case practically dismissed. Gleet may be treated in the same manner, as may any irritable or hyperæsthetic condition of the urethra; the latter, however, receiving milder currents.

Syphilis.—The initial lesion in this disorder may be acted upon with a copper electrode (anode), and gummatous deposits, if accessible, are reducible by cataphoric applications of potassium iodide.

Medicine, of course, has its place in the treatment of all diseases and conditions that have been considered. The author never uses zinc sulphate or silver nitrate in injections for gonorrhœa, but administers a solution of the tri-bromide of gold and its combinations, in the treatment of syphilis, in place of the mercurials so generally and frequently so injuriously prescribed.

[Attention must be called to the necessity for keeping the electrode moving whenever the anode is applied to mucous cavities, otherwise it is apt to become imbedded in dried clot.]

Osteomalacia.—Dr. W. E. Fothergill (*Edinburgh Medical Journal,* April) in a paper on this subject says that the prognosis in osteomalacia is now much less gloomy than it was some few years ago, several lines of treatment having been rewarded with success. Bone marrow, cod-liver oil, and phosphorus, used with patience, are found to be the most useful drugs. Diet and hygiene are important factors in management, while salt water and other baths have proved very valuable in aiding metabolism.

The surgical treatment of osteomalacia has arisen naturally from the performance of the Cæsarean section as an emergency operation at full term. In most of the earlier cases Porro's operation was done, and as improvement or cure was frequently seen to follow, it was judged that the benefit derived from the operation was due to the removal of the ovaries. Accordingly, in 1887, Fehling began removing the ovaries with a view to curing osteomalacia, quite apart from pregnancy, and double oöphorectomy has become a recognized treatment for the disease even in women who have never been pregnant. Winckel mentions forty cases in which the ovaries were removed; of the sixteen which were observed for some time, twelve were cured and four improved, but he does not consider the results to be definite. Truzzi published in 1894 a table of ninety-eight operations, fifty-two of which were subsequently traced. There was complete cure in thirty-six; partial cure in four; cure after relapse in three; improvement in three; persistent relapse in five; and no change in one. Some authorities hold that the removal of the uterus, together with the ovaries, gives an additional chance of success, but this has also been followed by failure. It seems unlikely that the surgical treatment of osteomalacia, as apart from pregnancy, will become general; indeed, it has probably passed its perihelion, and will soon be less fashionable than it now is.

The consensus of present opinion as to the management of osteomalacia may be briefly indicated: 1. In men and in non-pregnant women, internal medication should always be patiently tried, together with hygienic and dietetic precautions. In females, if the disease continues to progress, double oöphorectomy may be performed, and followed up by continued medication. 2. In early pregnancy, induce abortion and then treat as above. If a living child is specially desired, and the symptoms are slight, pregnancy may be allowed to continue, medical treatment being continued throughout. 3. In late pregnancy it is necessary to decide whether or not a living child can be born at term *per vias naturales.* If not, a choice must be made between the induction of premature labor and a pre-arranged Cæsarean section, as embryulcia should not be contemplated. 4. During labor, the child, if living, must be delivered alive by the method indicated by the circumstances of the case. If the abdomen is opened, the ovaries are removed, whether the uterus is also removed or not. Embryulcia is permissible only when the child is dead. Medical treatment must be continued after operation, as relapses frequently occur.

Hysterical Press Outcries against Hospitals and Ambulances.—An anonymous correspondent in the *New York Times* for May 2d, in a most forcible and dignified letter, protests against the charges made by the "yellow journals" against an ambulance surgeon of the New York Hospital. "Under such headlines," says the correspondent, "as 'She Dies, Ignored by an Ambulance Surgeon' and 'Wealthy Woman's Death is Laid to Ambulance Doctor,' several of the sensational journals of this city published a series of exaggerated and distorted charges calculated to do great injustice and harm to a man who fills this thankless position. Periodically such reports appear in their columns, and each time investigation shows that they have made a mountain of a molehill and only damaged the reputation of a New York physician. In the present instance . . . investigation shows that when first seen the woman refused to be taken to the hospital. When again called to her at the police precinct he [the surgeon] at once took her there. After calling an ambulance the police are obliged to secure some diagnosis to include in their report, and in this instance 'contusion of the arm and alcoholism' was given by the surgeon. It is useless for him to waste time in attempting to make an accurate diagnosis, as a public examination cannot be thorough, and the time lost would mean much to the patient in some cases. For this reason the most probable diagnosis is given and the patient is hurried to the hospital for examination by the house physician or surgeon and subsequently by the visiting physician or surgeon. When the offer of transportation to the hospital is declined the examination is naturally brief, and some diagnosis is given merely as a matter of form. The diagnosis of alcoholism as opposed to various injuries and affections of the head, some forms of poisoning, and certain diseases, is the most difficult which the ambulance surgeon is called upon to make almost instantaneously, and at times is impossible. This accounts for the frequency of confusion between alcoholism and apoplexy or fracture of the skull, conditions often found together. As the most common of these reasons for calling an ambulance is alcoholism, it was most natural that this diagnosis should have been given to satisfy the demand of the police.

"The ambulance surgeon of the 'yellow journals' is painted as young, incompetent, hasty, brutal, and conceited. . . . In reality those who fill this position in the best hospitals are picked men, who, though young, have won their positions by difficult competitive examinations open to all comers, and have served at least six

months in the hospital. Their lives are far from easy. They are on duty all day, assisting at operations and doing routine work, interrupted by hurried ambulance calls, which frequently deprive them of their meals and often arouse them from sleep four or five times during the night. The action of the 'yellow journals' in endeavoring to injure the reputation of such men in the city where they intend to practise is beneath contempt.

"Such reports are more commonly connected with the New York Hospital than any other for the following reason: It is considered a moral and legal obligation for a physician to maintain secrecy concerning the affairs of his patients, and the New York Hospital sets an admirable example to others less conservative in following this principle. The house staff are not allowed to make any statements for publication. All communications must proceed from the superintendent, and, as the hospital regards the affairs of patients as matters of professional confidence, 'yellow journalists' can obtain no assistance in creating sensational articles. For this reason they seize every opportunity to injure the hospital by exaggeration, insinuation, and fabrication. Will they give the acquittal of the ambulance surgeon by the Grand Jury the same prominence as their own damaging charges?"

Medical Society of the State of New York.—We are informed that at the ninety-fifth annual session of the Medical Society of the State of New York, held at Albany, N. Y., on January 29, 30, and 31, 1901, it was moved and unanimously adopted that, in order to increase the facilities for becoming permanent members of the society, each county society should be allowed to send five times the number of delegates it had formerly sent to the State society. These delegates are elected for a term of three years and are eligible for permanent membership if they register twice during that time. This will make the number of delegates from the county society to the State society 750 in all, or one delegate for every eight or nine members of county societies without increase of expense to the county societies.

It was further agreed, in response to a widely expressed desire, that the society hold a semi-annual meeting in the city of New York in the early autumn, to be devoted entirely to scientific work and social intercourse.

The officers of the society announce that they have engaged the New York Academy of Medicine for this purpose and that a meeting of two days' duration will be held there on October 15 and 16, 1901.

Members wishing to read papers are requested to communicate with Dr. Nathan Jacobson, 430 South Salina Street, Syracuse, N. Y. Information of any other nature can be obtained from Dr. Frederick C. Curtis, secretary, 17 Washington Avenue, Albany, N. Y., or from Dr. Frank Van Fleet, associate secretary, 63 East Seventy-ninth Street, New York.

It is further announced that the society will tender a reception to its members, delegates, and guests on the evening of October 15th at Delmonico's. Tickets of admission to this reception will be furnished without cost to all who register at the semi-annual meeting, as well as to the society's guests.

A Bengali Medical Journal.—We have received the March number of the *Chikitsaka-o-Samalochaka,* a monthly journal of medicine, surgery, hygiene, etc., published in Bengali, at Calcutta, and edited by Dr. Satyakrishna Roy. As we have on our staff no parallel to the gentleman who, according to Christian Science accounts, was recently able to think a correction into a carved granite block, for the purpose of thinking the Bengali into plain English, we regret that we are unable to give extracts. Seriously, though, it is gratifying to find such progress of Western medical science among Orientals, as must certainly be the case when a journal devoted thereto, and printed exclusively in an Oriental tongue, can obtain such support, necessarily almost entirely among native physicians, as to reach its seventh volume.

Newyorkitis is the title of a new work by Dr. John H. Girdner. Speculation is rife as to how this new disease differs from the old orchitis.

A Terrible Voyage.—The *Philadelphia Medical Journal* for April 20th relates the terrible voyage of the steamer *Chile,* which left Panama in July, 1900, bound south, and when two days out developed yellow fever. From this moment she was a doomed ship, an ocean outcast, a pariah of the deep. From port to port she sailed, begging in vain for succor and Christian charity, but was refused everything because she had a few cases of yellow fever on board. From port after port she was turned adrift; at one place she was even driven out of the harbor by a gunboat. This sort of thing went on until the west coast of South America had been pretty well skirted and the *Chile's* coal bunkers were exhausted. Then, of course, the helpless steamer could proceed by her own power no further. Gunboats could not drive her away, and it is a wonder that they did not stand off and sink her. The ports that had refused to give her medicines had also refused to give her coal, but the last port had to give her coal in order to get rid of her. So she was towed five miles out to sea, and coal sent to her in an old barge. The *Chile,* with her sick crew, had to unload the coal as best she could, and then sink the barge. No medicines, disinfectants, or supplies were granted at any port—only maledictions and orders to get out! There was no doctor on board; only an impostor, who claimed to be one. For six weeks yellow fever held high carnival; men were dying, and a lot of passengers were terrorized, and their lives put in peril, and all because there was no quarantine port on the west coast of South America, and because of the disgraceful panic that assails some communities at the mere mention of the name of yellow fever.

Yet the report on International Quarantine, adopted by the Pan-American Medical Congress, in the City of Mexico, 1896, provides, according to the *Public Health Reports,* that each government should maintain quarantine stations at its domestic ports.

The Respect Due to the Leaders of Medicine.—A native Indian physician, A. Mitra. Rai Bahadur, chief medical officer, Kashmir (*Indian Medical Record,* April 10th), in some excellent and dignified Words of Advice to Students and Young Practitioners in India, says:

"While attending an annual meeting of the British Medical Association, nothing impressed me more than to see the genuine respect which practitioners in England paid to their more well-known brethren in the profession. In the meeting hall, the entrance of a well-known physician and surgeon was hailed with an outburst of cheers and enthusiasm. No jealous eye, no whispered maligning. A nation in general, and a profession in particular, cannot rise until it learns to praise its great men."

Original Communications.

HYPERACIDITY (SUPERACIDITY, HYPERCHLORHYDRIA, SUPERACIDITAS CHLORHYDRICA); A CLINICAL STUDY.

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As the last two titles indicate, *hyperacidity* refers to a condition of excessive secretion of hydrochloric acid by the gastric mucous membrane under the stimulus of food. It has no reference to any degree of acidity that may be due to extraneous acids, such as lactic, acetic, butyric, and other volatile acids developed from the various food matters taken into the stomach when that organ, for one reason or another, cannot secrete its normal acid or does so only in deficient quantity.

It had long been supposed, having reference now to the normal stomach only, that in the earliest period of the digestive process, preliminary to the secretion of hydrochloric acid, lactic acid was formed in the stomach and could be disclosed in the gastric contents. As late as 1891 this was still taught by Rosenheim in his work on the *Diseases of the Stomach.* The later and very exact investigations of Martius and Lüttke have disproved this and demonstrated that the acidity of the chyme is dependent in its totality (the acid phosphatic bases being in but minute quantity when they are present and, therefore, altogether unimportant factors) upon the hydrochloric acid secreted by the stomach.

The investigations of Bidder and Schmidt gave the proportion of hydrochloric acid in the gastric juice of the human being as about 0.22 per cent. Later investigators, basing themselves on a large number of observations, have given the normal proportion as ranging from 0.1 to 0.22 per cent. (or 1 to 2.2 per 1,000).

My own observations, made in over one hundred cases, seem to me to prove conclusively that for this country 1 per 1,000 cannot be considered normal. In all the cases in which the quantity was below 1.8 per mille, all the manifestations of an enfeebled digestion were present, and all of them were benefited by the administration of such acid. Neither can the figure 2.2 per mille be considered as the maximum normal limit, for some few of these persons had a considerably higher proportion (2.9 and 3.0 per mille) without any disturbance being caused thereby.

French writers place the maximum normal limit much higher than German authorities. Richet places it at 3.4 per 1,000, and Bouveret, while admitting that in general it does not go beyond 2.36, holds, nevertheless, that at times 4 per mille may be normal; for he says very plainly, speaking of the various figures given by different authors, that he regards all degrees of acidity beyond 4.0 as pathological. I have not, so far, encountered any case that could be considered normal with a total acidity as high as that last referred to by Bouveret.

However this may be, this is very evident—a demonstrated fact which cannot be questioned—that there is a considerable range in the degree of acidity within what are considered normal limits. The reason therefor will be set forth elsewhere.

The *total acidity* of a given quantity of stomach contents removed from that organ at the height of the digestive process, usually calculated for 100 cubic centimetres, depends greatly upon the character of the test meal previously taken. It is higher for a test meal of Riegel and the test breakfast of Germain Sée, and lower for the test breakfast of Ewald and Boas, which, for good and sufficient reasons, is the one most commonly employed. Thus, as stated by Riegel, the total acidity after a meal made up partly of meat is about 75 (centimetres of a decinormal solution of potassium hydrate), while that after an Ewald and Boas test breakfast ranges from 40 to 60.

As to the latter figures, there is a decided difference among the various observers. According to Strauss, working in Riegel's clinic, the average total acidity in 170 cases (cancer excluded) examined by him was 62. This must necessarily mean that in quite a number of these cases the total acidity was much higher than 60. The tabulation of 92 cases from a Berlin clinic gives an average of only 47. Here the proportion of cases with a total acidity below 40 must have been quite large, and the number with total acidity at 60 or above it rather small.

My own experience, like that of Strauss, demonstrates that the normal total acidity after a test breakfast of Ewald and Boas has a higher range, at least here, than that given by Riegel. I tabulated 110 cases (cancer excluded) from my private case book, and then eliminated, as not belonging in the category of the normal, all the cases of *hyperacidity;* that is, the cases in which the manifestations of this morbid condition were clearly present, and all the cases of hypoacidity, *i. e.,* all the cases wherein the digestion appeared weakened, retarded, in consequence, as it were, of a deficiency in the hydrochloric-acid element of the gastric juice, and in which the administration of the acid appeared to remedy the trouble. Of the cases so eliminated, 23 were cases of hyperacidity and 20 were cases of hypoacidity, leaving 67 cases that could be considered normal.

The total acidities in those 67 cases were as follows: From 90 upward: One of 90; one of 92—2 cases. From 80 to 89: Two of 80; one of 83—3 cases. From 70 to 79: Five of 70; one of 71; one of 72; three of 73; two of 74; one of 75; two of 77; three of 79—18 cases. From 60 to 69: Five of 60; one of 61; one of 62; two of 64; one of 65; four of 66; one of 67; one of 68; one of 69—17 cases. From 50 to 59: One of 50; three of 51; four

of 53; one of 54; one of 55; three of 56; three of 57; four of 58; one of 59—21 cases. From 46 to 49: Four of 46; one of 48; one of 49—6 cases.*

This tabulation, even if we were to leave out of consideration the cases ranging from 90 upward as exceptional (though there would be really no good reason therefor), shows a much higher range for the normal total acidity after an Ewald and Boas test breakfast than has been set down, and certainly gives a much higher average than even that found by Strauss in the clinic at Giessen.

In *hyperacidity,* the morbid condition now under consideration, it is said—and it would naturally be supposed to be so—that the total acidities found are much higher than otherwise. Thus, we find it stated by Riegel that after a test meal (of which meat forms part) acidities of 100 are almost the rule, while even such as 150, 160, and over are not infrequent. After an Ewald and Boas test breakfast they range from 70 upward, and total acidities of 100 and even over are not rare.

In the 23 cases of hyperacidity coming under my observation, the total acidities after an Ewald and Boas test breakfast (at the height of digestion) were as follows: 52, 54, 56, 61, 69, 69, 69, 72, 74, 78, 79, 81, 82, 83, 87, 93, 93, 94, 94, 101, 104, 120.†

If, leaving out the last three, we compare these acidities with those of the 67 cases tabulated above and set down as normal, we are at once confronted by the facts that the total acidities in hyperacidity are not necessarily so much higher than the normal and that, furthermore, the same degree of total acidity may be normal in one case and abnormal in another.

Talma‡ explains it in this wise: The cases with the symptoms of hyperacidity and a total acidity within what are regarded as normal limits are not cases of hyperacidity at all. There is no undue quantity of hydrochloric acid secreted by the stomach here; what we do have is an abnormal sensitiveness, a hyperæsthesia, of the gastric mucous membrane to hydrochloric acid, and to this the morbid phenomena are due. Now, this explanation does not explain at all; for in fact, so far as lies within our knowledge to-day, that is all there is to hyperacidity. The hyperæsthesia constitutes, if we may so say, the hyperacidity, and it is only in this morbid condition and not otherwise that we find a hyperæsthesia to hydrochloric acid *alone.*

The true explanation that solves all difficulties, that is founded upon well-known physiological laws, is this, and very simple it is indeed: Every stomach has in this regard a physiological individuality of its own, and thus the one organ may perform its function—digestion—perfectly with a degree of acidity that might be insufficient or more than sufficient for another. Any further addition to this normal proportion of hydrochloric acid must render that particular gastric juice hyperacid and provoke the manifestations dependent upon such a condition.

From the foregoing it is very evident that in the great majority of cases we cannot, upon the total acidity alone, predicate a condition of hyperacidity, and that it is only when other symptoms, such as are usually attendant upon this condition, are present, that we are justified in classifying a given case as belonging to this category.

However, as has already been indicated at the outset, it is not a question of total acidity merely. In fact, so long as the great bulk of the hydrochloric acid secreted is taken up by the albuminous food matters introduced into the stomach, there is no hyperacidity. It is only when much more is formed than can be taken up that a hyperacidity may be said to be present. It is a fact well known to all that in the stomach contents extracted at the height of digestion from a fairly normal stomach, a certain amount of free hydrochloric acid, *i. e.,* that has not been taken up by the nitrogenous matters ingested, but has remained in its free state, just as it had been secreted, is found and is recognizable by certain tests which respond to free acid alone. If there is an excessive secretion of hydrochloric acid much more than is required for digestive purposes, the surplus remaining free must naturally be large, and, as Riegel has well said, it is this large amount of free acid that sets up irritation of the gastric mucous membrane and thus provokes the manifestations of hyperacidity.

The important point, therefore, especially important for diagnosis, is to determine the amount of free hydrochloric acid present in a given example of stomach contents. To do this, we need but avail ourselves of the simple method of Mintz—a method upon which all authors are agreed that it gives exact and reliable results. This method has also this advantage, that we can at once learn the proportion of the combined hydrochloric acid present by simply subtracting the proportion of free acid found from the total acidity. The result will represent the proportion of the combined hydrochloric acid.

But there is still another difficulty, namely, this: Having ascertained the amount of free acid in a given specimen of stomach contents, we have no standard of comparison wherewith to gauge whether it is of normal proportion, below normal, or excessive. Some authors, it is true, give certain figures as to what they consider an excess of free hydrochloric acid, but that is not a sufficient guide. We have seen, in the consideration of total acidity, that there is considerable individual* variance in this, and that there appears to be considerable variance

*In the cases eliminated as belonging to the category of hypoacidity the range was as follows: From 40 to 45: One of 40; four of 42; three of 44—8 cases. From 30 to 39: Two of 31; two of 32; one of 33; two of 34; one of 35; one of 37; one of 38; one of 39—11 cases. From 20 to 29: One of 27—1 case.

†In one of the cases a sufficient quantity to measure the total acidity, according to the method employed in the other cases, could not be obtained by reason of an insufficiency of the pylorus, which caused a very early and a very rapid discharge of the ingested material from the stomach.

‡*Zeitschrift für klinische Medicin,* Bd. viii, 1884.

*As regards the different individuals.

in the different countries; it is, therefore, but very reasonable to presume that there should be a similar variance in the proportion of free acid present. Exact and detailed studies on this point, which, so far as my knowledge goes, have not as yet been made, are absolutely necessary if we are to be enabled to draw the correct conclusions from the results of our examinations.

My own investigations in 27 of the 67 cases tabulated above, as having a normal gastric juice, gave the following results:

TABLE A.

Cases.	Total Acidity.	Free Acid (after Mintz).
	Measured by a properly standardized decinormal solution of potassium hydrate.	
1	46	16.
2	46	10.
3	46	04.
4	48	13.
5	49	05.
6	51	21.
7	51	22.
8	53	12.
9	55	27.
10	56	10.
11	57	33.
12	57	26.
13	58	32.
14	58	11.
15	58	26.
16	58	12.
17	60	18.
18	60	46.
19	60	11.
20	62	26.
21	64	21.
22	64	17.
23	65	05.
24	69	43.
25	72	30.
26	73	51.
27	74	39.

In all these cases the same test breakfast—that of Ewald and Boas, was given, and the same time as to extraction, an hour after ingestion, was observed.

The foregoing table would give us the range of normal limits for free hydrochloric acid from 4 to 51, a range as great as that for total acidity. Whether below 5, the point where resorcin ceases to show any reaction, but where the Günzberg test still gives it decidedly, should be considered as indicating a deficiency, I have not, with the material at my disposal, been able to determine and have, therefore, counted in here, in the tabulation of normal cases, the case with free acid of only 4.

The table also shows another and very important point, viz., that we may have a high degree of total acidity and a small amount of free acid, and *vice versa*. Thus, in case 23, with a total acidity of 65, there was but 5 of free acid, while in case 1, with a total acidity of 46, the proportion of free acid was 16. Again, in case 26, with a total acidity of 73, we have free acid 51, while in case 27, with a total acidity of 74, the free acid proportion is but 39.

This but serves as an additional demonstration of the truth of the proposition set forth above as to the physiological individuality of every stomach.

As to the proportion of free acid found in cases of hyperacidity, Riegel says that after a test meal figures of 60, 70 and even 80 (= 2.1, 2.5, 2.9 per mille), are not infrequent, and after a test breakfast of Ewald and Boas, proportions of 50, 60 (= 1.8, 2.1 per mille) are more commonly met with.

Bouveret makes the general statement that he has occasionally found the proportion of free hydrochloric acid to reach 2 and even 3 per mille—a proportion, he adds, much higher than normal.

The results obtained by me in 12 of the 23 cases of hyperacidity already referred to, after an Ewald and Boas test breakfast, were as follows:

TABLE B.

Cases.	Total Acid.	Free Acid.	Per Mille.
12	81	33	1.2
13	69	44	1.6
14	90	40	1.4
15	98	53	1.9
16	120	64	2.3
17	94	53	1.9
18	74	40	1.4
19	54	18	0.6
20	56	33	1.2
21	52	13	0.4
22	61	35	1.2
23	69	35	1.2

The results of this tabulation fully confirm the statements of the authors above referred to. The table demonstrates, furthermore, that after an Ewald and Boas test breakfast the lower proportions of free acid are the rule, while the higher figures (2 per mille and upwards) are only rarely met with.

One point therein deserves particular notice, and that is this: Two of the cases had, as seen, proportions of free acid of only 0.6 and 0.4 (per mille), respectively, and, still, in both the phenomena of hyperacidity were more acutely defined and they responded to the other tests (as to effects of albuminous food, digestion, etc.) more sharply than any of the others of this series of 23 cases.

Comparing the figures of this table with those of Table A, we find that, as a rule, they are higher here than there; still, even there, in the normal cases, we occasionally find proportions of free acid as great as any noted here; therefore this feature also cannot be said to be sufficiently characteristic, pathognomonic, as to justify, upon it alone, a diagnosis of hyperacidity.

The conclusion arrived at and noted above is again confirmed. We cannot upon the *total acidity* alone, upon the proportions of *free* hydrochloric acid alone, or even on both combined, classify a case as one of hyperacidity; for that, the presence of the other symptoms in combination with these is absolutely necessary.

This morbid condition may present itself to us under two forms—the *acute* and the *chronic.*

I. Acute refers here more particularly to time, sudden onset, and rapid transition, but sharpness of suffering is not necessarily excluded. This form, as indicated, is of very transitory character, coming on suddenly and lasting not more than a few hours, when it is relieved either by extraneous measures or by Nature.

II. The chronic form may be of any duration, from one month to ten years.

Hayem* and Mathieu† have described another—a third—form, which they designate *latent hyperacidity.* By this they mean to say that a given person, though he eats well, enjoys his food, has *no manner* of gastric distress at *any time,* looks well, and feels well, must, nevertheless, because his total acidity happens to be somewhat high, be latently sick, have a latent hyperacidity. It has already been shown how deceptive the matter of the total acidity is, and for the further reasons there set forth I should certainly reject any such form.

SYMPTOMATOLOGY.—The symptoms of this morbid condition, and there are morbid manifestations in all cases, are varied both in character and in intensity. Though none of them is pathognomonic, they are, nevertheless, sufficiently characteristic, and in conjunction with the results of the examination of the gastric chemismus, enable us to arrive at a correct conclusion.

Objective Symptoms.—I. The general appearance of the patient is most commonly good, *i. e.,* he is in fair flesh. Though he may give a history of long ailment, though he may have dieted to an extent, even though there be a line of suffering in his face attesting the severity of the pain endured, nevertheless his body does not show any marked loss of flesh; on the contrary, the fulness of his body is in striking contrast to his history of long suffering. In only one case have I noted any considerable reduction in flesh—a veritable leanness—and this was in a boy of twelve, who had, for over six months, reduced himself to a minimum of food (mainly coffee and a roll or cake), and at the conclusion of each meal vomited, or, as he maintained, expressed voluntarily a considerable part of even that, on account of the pain caused thereby and the relief obtained by the discharge thereof. He had refused absolutely to take more food, as entailing even still greater suffering.

The patients are not usually fleshy, but even in this respect there are exceptions, as already noted by Riegel. One of my own patients—a woman with a history of long-standing gastric trouble and decided dieting—showed, nevertheless, a marked adiposity, maintaining a weight ranging from 186 to 192 pounds (according to the season, the greater weight in autumn and winter, the lesser in summer).

II. The appetite is, as a rule, fair. In many cases it is very good. The patients can eat and do eat fairly well, and many eat often, some because they feel empty and hungry, others because they find that when they put something into their stomachs they relieve themselves of the uneasy sensations therein, even of pain. It is only in cases in which the patients have reduced themselves to a very abstemious diet and kept to the same for a long time that I have found the desire for food wanting. It may be that the impression made upon their cerebral centres that more food would be hurtful is responsible for the lack of desire for food, for I have noted that as soon as these patients were ordered to eat well and assured that it would do them no harm, but, on the contrary, would do them good, the appetite returned with the first good meal taken and the experience that no evil had resulted therefrom.

III. Vomiting is of rare occurrence; that is generally admitted. It occurred in but one of my 23 cases—the boy of twelve already referred to—and he maintained, as already stated, that he expressed the surplus, as it were, taken in, voluntarily, because it caused him pain and its discharge relieved him; but he could keep it down if he wished to, only he would have to stand the pain. Later on, after coming under treatment with me and after I had compelled a marked increase in his food, he did occasionally vomit some, more particularly after his noonday meal, and he noticed that the tendency thereto was increased by drinking sweetened tea after the meal.

It is said to follow generally in the wake of a gastralgic attack when the paroxysm is at its height. The vomited matters are very acrid, usually cause a sensation of burning or scalding in the œsophagus, and numb the teeth as they pass over them. This latter effect is a certain indication that free hydrochloric acid is largely present, for it does not occur when this is wanting, even though other acids are present in abundance. Otherwise there is nothing peculiar about the ejecta except that they show a very early and very rapid digestive action.

IV. *Examination of the Stomach, External.*—There is nothing abnormal apparent on inspection, no distention or fulness of the epigastrium. As to pain or tenderness, there is some difference of opinion among authorities. Bouveret says that the stomach is painful to marked pressure, while during a gastralgic seizure even the light pressure of a finger causes pain. Riegel maintains that in the intervals there is neither pain nor tenderness to pressure.

Of the 23 cases forming the basis of this paper, in 15 the patients had no particular or unusual sensitiveness of the gastric region to percussion with either finger or hammer. Eight had more or less tenderness in the epigastrium. In six of these latter, the situation of the greatest sensitiveness was in the median line, beginning at about 1 to 1½ centimetres below the point of the xiphoid cartilage and running down a variable distance, from 4 to 7 centimetres. In one case it was most marked in the left half of the epigastrium, and particularly near

*Société médicale des hôpitaux. May, 1895.
†*Traité de médecine,* Charcot, Bouchard et Brissaud, Vol. iii.

to the border of the costal arch. In the eighth case, in a male, there was, besides the central tenderness in the epigastrium, some sensitiveness in the right and left iliac regions (about 7 centimetres below the umbilicus and 1½ and 2 centimetres respectively to the right and left of the median line).

Of the 15 patients, two had gastralgic seizures, which on the whole were not of very severe character. As in the other cases thus affected, so in these there was more or less tenderness or soreness of the epigastric region, particularly the left half thereof, during the paroxysm and for a short while thereafter.

V. *Examination of the Stomach, Internal.*—The results of the examinations of the stomach contents in cases of hyperacidity, in so far as the hydrochloric-acid element is concerned, separately and together, have been already fully set forth. As to the *peptic* constituent of the gastric juice and the *rennet*, it has been assumed that they also are secreted in increased proportions. Some investigations, however, latterly made, seem to indicate that this is not necessarily so, but that there may be increase of hydrochloric acid without corresponding increase of pepsin or of rennet. Be this as it may, of this much we are certain, that, even if there is no increase, the full normal quantity, *i. e.*, the quantity normal to that stomach, is formed.

In consonance with the increase in secretion of the gastric juice, or at least of one of the most important elements thereof, there is greater rapidity in the digestive process. I have found the Leube test meal (with the addition of stewed fruit or, preferably, stewed tomatoes with a little of the peel retained for purpose of ready recognition) fully digested at the end of five hours and the stomach then either empty or containing but a little scum consisting of fat globules, a very few starch cells, and some vegetable detritus. Riegel has occasionally found digestion completed and the stomach emptied at the end of four hours. There is, however, nothing characteristic in this, and I have obtained similar results in persons with a gastric juice rich in hydrochloric acid, but with none of the other stigmata of hyperacidity.

As a result of investigations made by himself and by others working under his supervision, Strauss* professed to have found that in stomachs affected with hyperacidity the contents, after an Ewald and Boas test breakfast, presented certain peculiarities which were not found with other morbid states of that organ. In an article published more recently, Schuler† has again set forth these peculiarities, affirming that they are pathognomonic and that upon them alone a diagnosis can be correctly based. They are as follows:

1. The stomach contents are unduly large in quantity, even the minimum found exceeding by a considerable number of cubic centimetres the quantity ordinarily met with.

2. The contents are mainly, almost entirely, fluid, but very little solid matter being found therein. To this is added the further qualification, that the stomach is sufficient as to its motor function, *i. e.*, the gastric muscles are of normal force and competent to accomplish their work in a normal manner. In view of the last qualification, the presence at the height of the digestive process of so large an amount of fluid is accounted for by an exaggerated secretion on the part of the stomach of the diluting fluid,* a pouring out so extensive that the authors above referred to speak of a hydrorrhœa gastrica in this connection.

3. The specific gravity of the filtered stomach contents is much lower than that of filtered stomach contents from organs not so affected.

4. Amydulin is present in abnormally large quantities.

(To be continued.)

*See Strauss, *Zeitschrift für klinische Medicin*, Bd. xxix, and Roth and Strauss, *ibid.*, Bd. xxxvii. Tuchendler, *Deutsche medicinische Wochenschrift*, No. 24, 1899.

†*Deutsche medicinische Wochenschrift*, May 10, 1900.

*Strauss and Roth, *Zeitschrift für klinische Medicin*, Bd. xxxvii. As a result of their investigations, they maintain that the stomach secretes two fluids, one the gastric juice proper, and the other a neutral fluid which is supposed to have the function of diluting the acid secretion.

NASAL CONDITION OBSERVED IN THE AGED.†

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Last year, in studying nasal lesions in people who were over forty-five years of age, I made it a particular point to examine carefully all cases which came under my observation in both private and hospital practice. When I began to look for these cases of nasal lesion in old people I was very much impressed with the fact that people more than fifty years of age either did not suffer from nasal lesions or else did not complain of them. I also remarked, in the course of my search, how few elderly people were seen in our clinic at the Post-graduate and in the Manhattan Eye and Ear Hospital, and I was forced to ask my friends and acquaintances to submit themselves for examination that I might determine, if possible, the presence or absence of nasal lesions in the aged.

In this series of cases the age of forty-five years was determined upon as the proper time of beginning old age, principally because the oculists tell us that at the age of forty-five the first appearance of senile degeneration begins in the cornea, and from this time, judging from the eye, we begin to consider men and women old. The few cases which have come under my observation will not permit the drawing of any very full conclusions, but

†Read before the Section of Laryngology, New York Academy of Medicine, April 24, 1901.

some of the cases are so interesting that, although the number is not large, some deductions can be drawn from them, even if not enough for statistical purposes.

The majority of the patients examined were from the middle walks of life, but a few were dispensary cases. All cases in which the intelligence of the patient was insufficient to obtain a complete and satisfactory history, and all cases where there was any doubt in the mind of the patient as to the accuracy of his statement, were rejected, so that the number of cases accepted and presented represents a carefully obtained history of the points studied. I do not know that this class of cases is at all important as a contribution to rhinological literature, or that the deductions which I can draw from so few cases can be considered of much value, nor am I sure but that the experience of other men may completely contradict the conclusions which I have drawn from these cases. At any rate, it is interesting to note that, at least in my experience, very few people over fifty years of age seek advice for the relief of nasal troubles, while the majority of patients who seek advice, either at the hospital or in private practice, are between the ages of sixteen and forty years. Middle age, then, would seem to be the time when nasal affections, particularly of a catarrhal or inflammatory variety, are most rife, when they cause the most symptoms, and when the symptoms are severe enough to cause the patients to seek medical advice. We also remember that it is not uncommon in early childhood to have catarrhal affections of the nose and pharynx so developed that patients and parents seek the necessary advice for the relief of these conditions. It is, indeed, a striking fact that so few people in the declining years of life seek advice for nasal and pharyngeal affections. For in this period of life, with its decreasing vitality, the greater liability to disease is not diminished and we should expect the aged to complain of the effects and symptoms of nasal and pharyngeal inflammation. If then, in the aged, we find so few seeking advice for the relief of these conditions, it must be because in some way, although the lesions are present, they do not then cause the symptoms that they give rise to in earlier life. It is difficult to explain why, if nasal lesions are present, they should not cause as many symptoms in the aged as they do in early life. Perhaps it is because there is a lessened demand for nasal functional activity as age advances, or it may be possible that the system demands that less moisture and less heat should be given to the inspired air. If this is true, although I am not prepared to state that it is so, we could readily understand the fact that few old people apply for relief from nasal affections. If this is not the case, I cannot see any reason why there should be a cessation of catarrhal conditions in the aged. So far as I have been able to observe, there is no diminution of the sense of smell. I have found, by superficial tests, that the sense of smell is very well preserved, even after the senses of sight and hearing have begun to be impaired.

All of the cases observed did not present conditions which could be used in the construction of this paper, for a few of them complained of the ordinary symptoms of catarrhal lesions, and a few suffered from minor conditions, such as papillomata or eczema naris, which did not in any way influence the nasal condition. Many were eminently interesting and illustrated certain points which I wished to develop. Probably, then, the consideration of a few of these cases will be excuse enough for writing one or two rather dull histories.

CASE I.—T. V., a man, aged sixty-three years, had injured the nose, producing obstruction forty years ago. Previous history is otherwise without interest. He does not complain of headaches, but has some pharyngitis. The nasal obstruction is unilateral and has been treated by medical means. Since the accident there has been complete and permanent obstruction of the right naris; the sense of smell is unimpaired. Deafness began twenty-five years ago, with a dry catarrh of the left ear.

The following nasal condition is noted on examination: The left inferior turbinated body is markedly hyperplastic; it is fitted completely into the concavity of the nasal sæptum, the sæptum being deflected to the right side. In the right naris there is marked deflection of the cartilaginous sæptum and of the part of the bony sæptum in the region of the inferior meatus, so that there is absolute obstruction of the right side of the nose, and respiration through this nostril is an impossibility. This obstruction lies firmly against the inferior turbinate body on the right side. In this case, although there has been permanent obstruction for forty years, it is not accompanied by hypertrophy of the middle or inferior turbinate bodies of that side. On the opposite side to the one obstructed, there is marked hypertrophy of the inferior turbinate body, which fills in a concavity produced by the deflection, but not so entirely as to prevent nasal respiration.

This case is interesting, for it shows the possibility of a long-continued nasal obstruction without either hypertrophic or atrophic changes occurring in the obstructed side, while there is a marked inflammation on the free side; viz., marked hypertrophy of the inferior turbinate bones, and the middle turbinate bone of the same side is still normal.

CASE II.—H. R., a woman, aged seventy-five years. This patient has been a trained hospital nurse for more than thirty years. She is, therefore, qualified to speak of her present and previous history, since her whole education would tend to make her observant. Her previous history is absolutely correct. She denies headache, nasal obstruction, digestive disorders, and all other conditions which may have influenced her nasal lesions. She also states that she never has had catarrh and has been subject only to colds which affect the chest, never involving the nose. She has never had laryngitis or pharyngitis, and has had cough only when she has had a cold on the chest. At the present time she denies headache, discharge, obstruction, deafness, cough, and hoarseness, and states that her sense of smell at the age of seventy-five is not at all diminished; if changed at all, it is a little too keen. In view of the absolute absence of any history of coryza or any nasal trouble, the examination of this patient is very interesting.

In the left naris the mucous membrane is of good color and there are two thickened localities on the nasal septum, one opposite the inferior, and another opposite the middle, turbinate bone. The left middle turbinate bone is very much enlarged, filling up the whole middle meatus, and its surface is fairly flat, not rounded or bulbous as in hypertrophic conditions. The inferior turbinate also presents a plane surface and is without contact with the septum. Its tissues are non-contractile under cocaine. This middle turbinate body is much enlarged and probably contains an accessory bony cell.

In the left naris the mucous membrane is pale, and the middle turbinate body almost entirely hidden by an exostosis of the nasal septum which is in front of this middle turbinate, running slightly from below upward. Between this and the middle turbinate contact with the septum in its lower part is a concavity which further down shows the presence of an ecchondrosis of the septum, which is developed well in front of the inferior turbinate body, and which lies in contact with the inferior turbinate body. Under cocaine these tissues are absolutely non-contractile. The pharynx is normal, the mucous membrane is soft and moist, and the other parts of the respiratory tract are normal.

At the end of the examination the patient repeated her statements that she had never had a cold in the head and the nose had never been affected in any way. She further stated that she had never had to use a handkerchief for nasal discharge.

This case is in some ways remarkable, for it shows that, while this patient has never had acute rhinitis, there are in the nose conditions on the right side which are evidently pathological. If we acknowledge that the cystic turbinate in the left side might be the result of abnormal anatomical development, and even if we do not consider the thickening of the nasal septum as pathological, there still remain on the right side three pathological hypertrophic conditions which cannot be accounted for from the history of the case: The ecchondrosis low down in front, its contact with the inferior turbinate, which is certainly not normal, neither is the exostosis, further back in the middle meatus, nor is the firm contact of this exostosis normal.

Case III.—The next case is one of considerable interest, since it occurs in the person of a man, sixty-one years old. This man has been a specialist in rhinology for several decades and can speak authoritatively upon matters regarding the nose and its conditions. The history runs as follows:

Previous history and family history good. He is, with the exception of digestive disorders, in perfect health; has never had catarrh or anything requiring surgical treatment of the nose. At the present time, has no headache, the sense of smell is good and undiminished; has no cough or hoarseness. He says that there is occasionally some cold in the head, a form of acute coryza which readily subsides, and he has never noticed between times any catarrhal condition. There are no ear symptoms.

The nasal condition on examination is as follows: The left middle turbinate tissue is paler than the other part; there is some difficulty in seeing a considerable part of this turbinate, since it is hidden by the hyperplastic condition of the nasal septum. This hyperplastic condition of the nasal septum is in the region of the middle meatus, lying in front of the turbinate body, and extending far enough backward to meet it and cause a firm contact of this turbinate with the hyperplastic tissue of the septum.

The left inferior turbinate is normal. On the right side the middle turbinate also lies in contact with the septum, the hyperplastic tissue of the septum on this side extending further back than on the left. The septal condition on each side is much the same and consists of two pathological conditions. Above, in the region of the middle meatus on each side, it is considerably thickened; the rest of the septum is normal until near the floor of the nose, only the anterior part of the septum is considerably thickened near the floor. The whole of the septum is deflected toward the right side in such a way that the deflection extends from below in front, upward and behind. The condition of the septal mucous membrane varies so far as swelling is concerned. Sometimes it is swollen so that the right middle turbinate is entirely hidden from view.

Posteriorly on each side of the nasal septum there is a condition known as thickening of the posterior end of the septum. Although no symptoms arise from this condition, we find on the left pharyngeal wall a considerable patch of inflammation behind the posterior pillar. The posterior pharynx contains varicose veins, and the entire posterior pharyngeal wall is in that condition known clinically as granular. The lingual tonsil presents aneurysmal dilatations of the veins, and the veins across the back of the tongue are varicose.

The right vocal cord presents a nodule, but is otherwise normal.

If any one is capable of speaking authoritatively of his history certainly this patient is, and he distinctly states that, with the exception of occasional attacks of acute coryza which have rapidly subsided, he has never had any symptoms of nasal catarrh. Examination of the nose, however, reveals pathological conditions which, if found in patients complaining of persistent nasal obstruction and hay fever, inaptitude for work, and chronic headache, would be considered causative factors in these conditions. In this case the interesting question arises as to why, if pathological lesions are present, the symptoms which so often arise from them are absent; and another query as to why these lesions are present at all without the presence of a chronic catarrh is equally puzzling. These points will be dwelt upon later.

Case IV.—A woman, fifty-five years old, family history good; has suffered only from fresh colds, which have lasted two or three weeks, and the nose has never been involved. In this patient there is some headache; she has complained of a full feeling in the head and headache at the time of taking cold. At the present time the functions of the nose are performed perfectly and there is no sensible nasal obstruction and no ear symptoms. Examination of the nose, however, reveals the fact that this patient has undoubtedly the symptoms of obstruction. On the right side the mucous membrane is hyperæmic, and there is also swelling of the erectile tissue. The inferior turbinate is somewhat shrunken. The right side of the nose is better than the left, the relation of the parts being normal. On the left side the middle turbinate lies in contact with the septum, which is decidedly projecting. The septum is thickened and the mucous

membrane is hyperæmie. In the pharynx there is a condition of granular pharyngitis and the tissue behind the posterior pillar of the fauces is thickened and markedly infiltrated.

It would seem as if this patient complained more of her attacks of rhinitis than the preceding patient, although the lesions are somewhat similar. In this case it is worth mentioning that, between the attacks of cold, which generally occur two or three times a year, there is absolute cessation of all nasal symptoms, this patient being certain that there is no nasal flow.

CASE V.—The next patient, a man, fifty-eight years of age, gives an absolutely negative history, stating that he never has had a cold and never has had to use a handkerchief on account of moisture or discharge from the nose or post-pharynx. The functional activity of the nose is perfect. There is a mucous or watery secretion when the nose is irritated with mechanical means, dust, etc. He states most positively that he has never in his life had any form of disease of the nose, throat, or pharynx; never was sick a day in his life; never had indigestion; and only once had a little rheumatism of the leg which did not prevent his attending to business.

This is a very instructive case because in the nasal examination, in spite of the absolutely negative history, we find a well-marked exchondrosis on each side of the sæptum which, on the right side, impinges upon the inferior turbinate bone. All of the organs of this patient are absolutely normal, as well as the urine.

The right middle turbinated lies against the sæptum and also impinges upon the outer wall of the nose. The right side of the sæptum is deflected through the development of an ecchondrosis, which is large enough to impinge upon the inferior turbinated bone on the same side. It shrinks under cocaine anæsthesia. The left middle turbinated is swollen about its anterior end, is glossy, and gives one the impression that its mucous membrane is œdematous. Another ecchondrosis is developed against the left side of the sæptum, but it does not impinge upon the inferior turbinate bone. The pharynx, larynx, and post-pharynx are normal.

These five cases illustrate the point of view from which this paper has been written. Many of the remaining cases do not illustrate the particular points which I desire to bring out, and need not be considered here. In one of the cases the patient denied all history of having catarrh until after she was sixty years old, and asserted that the form of chronic coryza from which she suffered was developed after that period. Other patients presented varying lesions, such as papilloma, polypoid growths, ethmoiditis, etc.

While there is no denying the fact that aged people may suffer from all the lesions and from the symptoms of which younger people always complain, yet it is rare to find them complaining. In two or three of these patients bits of the hypertrophic tissue were taken for microscopic examination, but no change could be found in the nasal tissue of elderly people that differed in any way from the pathological conditions in the younger cases, except that it seemed to me that the adenoid layer of the mucous membrane just beneath the epithelium seemed, in the few cases examined, to consist of fewer cells than is usually considered normal.

The first point of importance in this class of cases is the occurrence of marked pathological nasal conditions without the production of any symptoms. This is particularly marked in one of the histories where the quality of the testimony places the history beyond doubt; namely, in the case occurring in the person of an eminent rhinologist. You will remember that this person presented marked hypertrophic changes of the nasal sæptum with contacts of the middle turbinated with the sæptum, and yet the patient was quite positive in the statement that this was not the result of previous inflammatory conditions, nor had the condition presented produced any nasal symptoms. The query then arises as to why, if definite pathological conditions are present, they do not always produce symptoms in one case, while in another patient these same lesions would produce profuse catarrhal discharge, constant headache, and a sense of nasal obstruction.

There seems to be, in most cases, a direct relation between the production of a lesion and the symptoms which arise from its presence, and it has not been observed by me, except in aged people, that patients present marked pathological conditions of the nose without symptoms. This is true more particularly regarding discharge than regarding symptoms of pain, for in most patients having hypertrophic, obstructive lesions, it is a fact that, so soon as the lesions are sufficiently developed, discharge is one of the symptoms. Pain may or may not be present.

Now, in these elderly people, hypertrophic lesions have developed without the symptoms of catarrh, such as are usually found in such conditions. What can be their cause?

At once the inflammatory theory, that is, exposure to cold, irritation from dust and fumes, changes of atmospheric condition, must fall to the ground as the causative agent in these cases which have been cited; for, when these act as active producers of lesions, it is safe to assert that they are invariably accompanied by a certain amount of catarrhal discharge, enough, at least, for the patient to notice and complain of; while in the cases cited discharge has been denied. It is also certain that these lesions are not present without some cause, and if we search for external conditions and find them absent, we must look for the production of these hypertrophies without ordinary symptoms from some cause which may be within the body itself; namely, either a blood condition or some agent which acts while the nose is secreting water or radiating heat. If such an irritation could be produced from a blood condition which would act gently and so constantly that it might not produce symptoms, and would yet be sufficient to produce an irritation which would increase the quantity of connective tissue in the mucous membrane, we could have, at least theoretically, a hypertrophic lesion beginning without any inflammatory condition. If the blood or the lymphatic

fluids in the nose contained any substance which would act as an irritant, such as a foreign salt, uric acid, some animal toxine, or some chemical of which we know nothing, a constant and slow irritation might produce the increase in connective tissue which we find in these lesions. Such a condition is not unknown in other parts of the body; for instance, in the liver a cirrhotic condition may be developed through the constant irritation of alcohol or partly digested food products, and the whole liver may be changed microscopically into partial masses of connective tissue without the production of any symptoms. The same is found in the brain, where sclerosis may be established so gradually that the lesion is well advanced before symptoms appear. The same is true in chronic nephritis, where interstitial changes take place in the connective tissue of the kidney without the least production of any condition in the urine which would indicate the presence of such a change. Is it not therefore possible to explain these cases on the same grounds—that these changes may occur so gradually and yet so constantly that the lesions in the nose may be present from internal blood or lymphatic irritation, while active inflammatory symptoms, such as obstruction from paralysis of blood vessels, discharge, and pain, may be entirely absent?

We have already remarked that fewer old people complain of nasal catarrh than do younger or middle-aged people. This series of cases, however, shows that the fact of elderly people having nasal lesions is not uncommon. Why, then, are symptoms of these lesions not presented by elderly people, while the same amount of lesion in younger persons is active in the production of symptoms of which the patient complains enough to seek medical advice?

We know that younger people show an increased tendency to catarrhal symptoms; we know that temperament plays an important part in the production and quantity of symptoms. It is also a fact that, at times, younger people have even developed nasal lesions which have periods of inactivity. This is particularly marked in atrophic lesions. The reason for this is not altogether clear to my mind. It may be explained on two hypotheses: That the physiological activity of the nose has been increased so as to overcome the damage from the lesions, or that the lesion, with its resulting discharge and reflex pain, is, in some way, less active, and allows the nose to resume its physiological functions.

It is possible that as the system grows older elimination is decreased, and there is a lesser demand on the part of the inspired air for heat and moisture to satisfy the physiological function of the respiratory tract. So far as I know, this point is not susceptible of proof; yet the total absence of symptoms in these cases which presented lesions can only be explained in some such way. It would seem as if the theory of increased physiological capacity is better than that of lessened capacity on account of age. For, so far as superficial tests in regard to the sense of smell are concerned, I have not found in elderly people a diminution of this sense. It is impossible to estimate the functional capacity for exudation of water or radiation of heat.

Why symptoms do not develop in these cases where pathological lesions are present is not easy of explanation. In other than aged people we find that nasal symptoms are naturally largely dependent upon active inflammatory conditions. It seems also true regarding the symptoms of secretion and obstruction that they are most apt to be developed in proportion to the degree of irritation from the inflammation present in any given case. If these lesions have been produced without any inflammatory disturbance as we understand it, disturbance of circulation, innervation, and exudation—that is, if the irritation has been so slow and so prolonged as to produce hyperplasia without functional disturbance—we should have these lesions fully developed without their having presented any symptoms sufficient to attract the attention of the patient. It is difficult to recognize such slow, gradual irritation, and we assume the process to be hastened from time to time by slight acute inflammatory disturbances. Probably, in these patients, such conditions have arisen, but have been so slight as to have been quickly forgotten. Symptoms of secretion, that is, alterations in quality and quantity of nasal secretion, seem in some way to be associated with conditions of circulation, loss of blood-vessel tone, chronic congestion of the nasal tissue, with exudation of leucocytes, œdema or serous infiltration of the interstitial connective tissue spaces in the nasal mucous membrane—conditions which give rise to discharge. If the blood circulation is fairly active in the nose and yet is pathological in regard to the solids which it holds in solution (uric acid, unknown salts, organic poisons), it is possible that these dissolved materials may invade the mucous tissue of the nostril, and that exudation from the capillaries or some obstruction in lymphatic circulation may leave them in the tissue. This would produce a very slow mechanical interference with the cell activity, and might account for the increase of connective tissue cells without the production of discharge or symptoms.

The symptom of pain, together with those of reflex phenomena, seems to depend, not so much on the quantity of inflammation or upon the degree of circulatory disturbance and lymphatic obstruction, as upon a certain condition of the nervous structures that are distributed through the nares. Headache, hay fever, reflex cough, asthma, tracheal irritation, throat cramp, and certain functional brain disturbances, such as inability to concentrate the mind, aphasia, and sometimes vertigo, are symptoms which in many cases seem to depend directly upon irritation of nasal nerves. In some patients who have marked lesions without neurotic tendencies these reflex symptoms are entirely absent; while other patients, having marked neurotic tendencies and practically no pathological lesions, at least none visible to the naked

eye, suffer intensely from some one or more of these nervous symptoms. In this class of older people, where the lesions have developed slowly and without marked mechanical irritation from external causes or without circulatory disturbances, it may happen that these patients are not neurotic and that they will never develop any of the symptoms such as have been outlined above. It would then seem as if nasal symptoms were not so much caused by pathological conditions alone as by associated conditions of disturbed circulation and nerve irritation. And if these two conditions, together with absence of the discharge, are lacking in our patients, we may have marked pathological lesions developed without a single symptom.

This paper to-night has been upon an unimportant subject; its results are negative, but it has directed our thoughts to a class of cases which are found very frequently in the aged, and probably, upon more careful inspection, would be found quite often in younger people. It has also emphasized the important fact that symptoms of discharge, pain, or obstruction, are not in proportion to the amount of lesion present, but in certain cases may be entirely absent in the presence of well-developed lesions. It also serves to draw our attention to the fact that chronic congestive interference with circulation, lymphatic obstruction, and neurotic temperament, are very important elements in nasal cases, and that the cure of the patients who suffer from nasal symptoms often will not result from mere mechanical removal of the lesions present in the nose.

WHAT ROUTINE SHALL WE ADOPT IN EXAMINING THE EYE MUSCLES?*

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It is not my purpose in this paper to attempt to discuss all or even a majority of the methods used in measuring anomalies of the eye muscles, but simply to indicate the methods that I myself have worked up to by a gradual experience and at present consider the most satisfactory. In a presentation of this sort nothing very novel can be expected, and I must crave your patience if, in describing my own procedures, I go over ground already well trodden and descant upon methods that everybody employs. Still, there is no unanimity of opinion as to which, even of the familiar methods, is sufficient for an ordinary examination, or as to how they compare with each other in value. It is in order to elicit a general expression of opinion upon this important topic that I present my own views and detail my own practice. I will, then, consider briefly:

1. The routine that I adopt in ordinary cases.

2. The deductions that I have gathered with regard to the relative reliability and availability of the several tests.

3. The way in which the tests are employed specifically in operations.

Routine of Examination.—After making a cursory inspection of the patient to detect the presence of any obvious anomaly, I direct his attention to a cardboard sheet, a foot or more square, hanging on the opposite wall of the room. In the centre of this sheet is a round black spot, one inch in diameter. I cover the left eye with a screen, and, first making sure that he is fixing the spot with his right eye, I pass the screen quickly from the left eye to the right. In so doing I watch for any deviation taking place in either eye, and at the same time ask the patient if he notices any movement of the spot. I then place prisms, appropriately directed,* before the eyes, gradually increasing their strength until there is no longer any deflection behind the screen. This neutralizing prism will indicate the amount and character of the deviation as measured by the *screen test.* The same prism may also abolish the apparent movement of the spot, perceived by the patient. If not, I change the prism until this movement is absolutely nil, and thus measure the amount and character of the deviation by the *parallax test.*

If there is any noticeable deflection behind the screen, I then apply the *screen test in a second way* or by *binocular uncovering.* This well-known procedure consists in covering the left eye and then uncovering both eyes and noticing the movement that takes place. If, on thus uncovering the left eye, the right eye remains steady and the left moves into position, I know that the patient has binocular fixation, and that the deflection was a heterophoria and not a squint. If, however, the right eye should move out of its position and the left eye should move into place, I know that there is a squint and that the left is the fixing eye. If neither eye moves, I know that there is a squint and that the right is the fixing eye. By repeating this experiment with each eye alternately I can tell whether there is an habitual binocular fixation, an alternating fixation, or a unicular squint. The diagnosis between the three may be conveniently formulated as follows:

1. If in binocular uncovering *but one eye moves,* we have heterophoria and not squint.

2. If either *both eyes move* or, in spite of there being an evident deviation, *both eyes remain steady,* there is a squint.

3. In the latter case, if, when the left eye is uncovered, the eyes behave in the same way as they do when the right eye is uncovered (both alike moving or both alike remaining steady, no matter which eye is uncovered), the squint is *alternating.*

4. If, when one eye (for instance, the right) is uncovered, both eyes move, and when the other eye (in this case the left) is uncovered, both eyes remain steady, the squint is *unicular* (confined in this case to the left eye).

I next employ the *Maddox rod* in the usual way, test

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*I. e., base in for an outward deviation, base out for an inward deviation, base up or down for a vertical deviation.

ing first for vertical and next for lateral deviations. For this, of course, I use a light as a test object. Next I employ the *phorometer* (Stevens's model), and again first for vertical and then for lateral deviations.

With the phorometer and Maddox tests I find, like other experimenters, that I get more accurate results if, as the patient is looking through the apparatus, I cover one eye for a few moments, then suddenly withdraw the cover and make the test before the patient has had a chance to fuse or separate the double images.

The phorometer being still in position, I now use it in *testing at near points,* the test object in this case being a fine dot on a rather large card. Any object with lines in it I regard as vitiating the accuracy of the test.

Using the same test object, I then make the *near test with the screen and parallax* just as for distance.

I next ascertain the *convergence near-point,* using any fine object and bringing it up close to the eyes until the patient can no longer converge upon it, and then measuring or estimating the distance of the object from the root of the nose.

Then I determine the *prism-divergence* (abduction) and the *prism-convergence* (adduction) in the usual way with prisms, held respectively base in and base out. In testing the prism-convergence it is a good plan to notice whether the accommodation is called into play as the patient converges. This can be ascertained if we use the ordinary trial card as a test object and observe how much the patient's vision is blurred by the progressive addition of prisms base out.

Lastly, I determine the *field of binocular single vision.* This I do as follows: I place a red glass before the patient's right eye, and, standing at a distance of four feet, carry a candle so as to make it skirt successively all the outlying parts of the field of fixation. That is, I carry it first to the extreme right, then rather quickly back again to the middle line and on to the extreme left, then up (*i. e.,* to the up-and-left position), then back to the middle line (straight-up position) and on to the right (up-and-right position), then down to the horizontal plane, and then below it, so as to skirt the lower field in the same way as the upper. In doing this, I note whether the patient gets diplopia in any part of the field, how great the diplopia is, and in what direction it tends to increase; and at the same time I watch to see whether the excursions of the eyes appear normal in all directions, or whether either eye lags behind in its motions anywhere.

It may often happen that the patient cannot be got to recognize diplopia, although there is an evident deviation present. I then determine the *field of binocular single vision by the screen test, i. e.,* I estimate the deviation behind the screen, first in the primary position, and afterward in the different portions of the field of fixation, and thus ascertain how and where the deviation increases and whether the patient has binocular fixation everywhere.

This routine, which is sufficient for ordinary cases, occupies from ten to fifteen minutes. In special cases I employ two other accessory tests:

1. I determine the *declination* with the Maddox rod clinometer, elsewhere described.* In default of this, a Maddox rod, set in a trial frame, will answer as well.

2. I determine the *field of fixation.* In doing this I use a perimeter and employ as a test object two fine dots set very close together. With such an object the patient, unless fixing sharply, sees the two dots run together. If he sees them separate, it is proof that he is still fixing correctly upon them. This test object I find more satisfactory, particularly in the case of children, than the small letters that are generally employed for the purpose.

The tests recommended and the order in which they are used may be recapitulated as follows:

A.—We determine the deviation for distance by
- (1) The screen and (2) the parallax simultaneously.
- (3) The Maddox rod.
- (4) The phorometer.

B.—We determine the deviation for near by
- (5) The phorometer.
- (6) The screen and (7) the parallax simultaneously.

C.—We next measure
- (8) The convergence near-point.
- (9) The prism-divergence (abduction).
- (10) The prism-convergence (adduction).
- (11) The field of binocular fixation and the excursions of the eyes.

D.—In special cases we ascertain
- (12) The declination by the clinometer.
- (13) The field of fixation by the perimeter.

It goes without saying that in making all the foregoing tests, I note carefully *the conditions under which they are done—i. e.,* whether made with or without correction of the refraction and whether or not under the influence of homatropine.

Reliability of the Various Tests.—Of the four tests, the screen, the parallax, the Maddox rod, and the phorometer, employed in determining the balance of the eye muscles, I regard the *screen test* as by far the most reliable. It is also almost universally applicable, being especially available in the case of children and also with those who no longer have binocular vision. It is fairly accurate, too. The deviation shown by it, if measured with prisms, can be estimated to within 2°.

Next in point of reliability I regard the *parallax test.* It is usually available when the screen test is, and it is extremely precise, deflections of the smallest fraction of a degree being sharply made out.

The *Maddox rod,* although a very useful accessory test, has not in my hands proved as reliable nor as accurate as the others. It is rather apt to indicate an ex-

*In a paper presented to the Third Pan-American Medical Congress, February, 1901.

cess of deviation, especially in esophoria. Many patients, on the other hand, have a strong tendency to unite the line of light and the flame, insomuch that some will always see them united even with prisms of high degree. This source of inaccuracy may be partially avoided by making the test in the way already mentioned, *i. e.*, by screening one eye for a few moments, then suddenly removing the screen and determining the relations of the flame and the line of light immediately, before the patient has had a chance to unite them.

In estimating vertical deviations I find the Maddox rod usually very accurate.

The *phorometer* is also a very useful accessory, but in many instances, particularly at near points, indicates an excess of deviation.

However determined—whether by the phorometer, Maddox rod, screen, or parallax—the deviation should be ascertained *both for distance and for near vision.* This I regard as of essential importance. A comparison of the findings for distance and for near vision will show whether the deviation increases or diminishes as the test object approaches the eyes—an important factor in distinguishing divergence and convergence anomalies—and in the case of squint will show whether the latter is periodic or not.

Also of considerable value as bearing on the diagnosis is the determination of the *convergence near-point.* This is of essential importance in distinguishing a true convergence insufficiency from an exophoria or divergent squint due to a divergence anomaly or due to a simple disuse of the converging power such as we may find in the early stages of an accommodative exophoria. Furthermore, it is of great importance in determining whether in a given case of exophoria or divergent squint we are likely to secure a favorable result by a simple tenotomy of the externi or shall have to do an advancement of the interni. Finally, it is a test that should never be neglected in gauging the effect of an operation on the interni, since tenotomy of the latter should never be carried so far as to make the convergence near-point recede unduly.

Just as the convergence near-point shows the absolute maximum of convergence of which the patient is capable, so the *prism-divergence (abduction)* gives us his absolute maximum of diverging power. Its actual amount in a given case will often indicate whether we are dealing with a divergence or a convergence anomaly. Hence I regard its determination as a very important feature of the examination.

I would not say as much for the *relationship between the abduction and adduction,* upon which some have laid so much stress. This relationship varies so much in the same individual from time to time that I cannot regard it as of importance.

The prism-divergence, in fact, is an absolute maximum, the prism-convergence usually a small and varying fraction of a maximum.

It seems to me unreasonable to institute any comparison between two magnitudes so constituted.

Nor can I find that much importance attaches to the determination of the *abduction at near points.* This also varies so much in the same individual that I cannot see what deductions can reasonably be drawn from its determination, except in special cases.

The estimate of the *field of binocular single vision,* if carefully made, I regard as very important. When a patient has actual binocular single vision he will see a parti-colored light; when he has uniocular vision he will see one light, red or yellow, as the case may be. When he has true diplopia he will see two lights, one red, the other yellow.

By drawing the patient's attention to this point we can in almost all cases decide the kind of vision that he has, and determine accurately the presence and amount of diplopia. And by observing how and where this diplopia increases we can ascertain what muscle or muscles are affected and to what extent. On the other hand, the presence of binocular single vision in the whole field of fixation necessarily excludes a real insufficiency of any ocular muscle.

Hence, by thus determining the field of binocular single vision either with the candle or with the screen test, and by noting at the same time the limits of excursion of the eyes, we can in general distinguish an insufficiency of the interni or externi *per se* from an esophoria or exophoria due to a divergence or convergence anomaly.

I have not been led to attach so much importance to the determination of the *field of fixation* by the perimeter. The limits of excursion for each eye, when examined separately, vary considerably even in the same patient. Again, it is only when the eyes are under the impulse afforded by binocular vision that they move in their natural way, and it is not infrequent to find that when the examination of the field of fixation shows no great limitation there is yet a decided restriction of the excursion of one eye as compared with the other when tested with the red glass and the candle. Nevertheless, in doubtful cases the mapping out of the field of fixation may be of service in showing whether a given deviation is due to a muscular over-action or a muscular insufficiency.

Application of the Tests in Operations.—It is my invariable practice to test a patient carefully, not only just before an operation, but also several times during its performance and immediately after its close. For this purpose I usually rely upon the screen and the parallax tests, at times also using the Maddox rod. If a patient shows diplopia, I also measure its amount, but the measurement of the diplopia affords much less certain results than the test by screen and parallax. These latter tests require no apparatus beyond a few prisms, and even these may be dispensed with, except toward the close of an operation, when we wish our measurements to be quite precise. Furthermore, they can be applied in a moment and without changing the position of the patient, and

they are not confusing to him, so that we are not so likely to have any error owing to his misinterpretation or misstatement of what he sees.

I habitually stop two or three times at least during the course of an operation to make these tests and ascertain by them whether I have gone far enough. If not, I continue, gauging the extent of my next step by the result of the test last made, and pausing only when actual measurement shows me either that I have attained just the effect that I desired to secure or that I have gone as far as safety allows. This method of operating is not brilliant and it is tedious, but it certainly affords satisfactory results and is safe.

49 East Thirtieth Street.

OSSICULECTOMY FOR CHRONIC SUPPURATIVE OTITIS MEDIA.*

By J. A. STUCKY, M. D.,

LEXINGTON, KY.

On account of the peculiar anatomical topography of the middle ear and its very intimate relation to the most delicate and vital portions of the body, any disease to which it is subject becomes of more than passing interest. In this brief paper emphasis is placed upon the word "chronic," and the object is to call attention to a neglected conservative surgical procedure which the writer believes to be of very great utility in bringing about permanent relief of one of the most frequent and obstinate diseases with which the aurist has to deal. The battle confronting him is to secure free and uninterrupted drainage, and the victory is all but won when this is accomplished.

The entire anatomical arrangement of the middle ear favors pathological conditions. The drum membrane is tough, fibrous, and firmly attached to its bony ring. The ossicular chain is irregular and tightly held together, and readily catches and retains suppurative exudation. The cavity itself is crooked and not adapted to drainage. These facts we all not only understand, but fully appreciate, and because of the great importance of this cavity and its close relation to the brain, much time, study, and scientific research have been given by the best minds of our profession to the solution of the problem, What is best to be done for chronic suppurative otitis media? Shall we be radical or conservative? This last question is not for discussion at this time, though a suggestion of caution will not be out of place, lest in our enthusiasm for brilliant surgery and its results we do the radical and extensive operation when possibly less heroic and more conservative methods would have accomplished the same result.

In 1896 the writer published the results of removing necrosed ossicles in fourteen cases, and to-day fifteen are added, making a total of twenty-nine. The results justify the methods used.

Chronic suppuration leads inevitably to necrosis sooner or later, and the fact must not be lost sight of that dead bone in the tympanic cavity, more than in any other part of the body, is apt to produce disastrous results. The method of operation for removal of the drum membrane and the ossicles is so accurately described in the text-books and so thoroughly known that no reference to technique is needed. In only two of the twenty-nine cases of operation was the stapes removed. In none had the disease existed less than seven years.

Given a case of chronic suppuration which has existed for years, if dirty granulation, blocking a perforation through Shrapnell's membrane, the drum remnant soggy, is found, and the probe reveals roughness indicative of necrosis of the malleus or anvil, or both, the hands of the surgeon are tied until the necrotic ossicles and part or all of the tympanic membrane are removed and the cavity thoroughly curetted. When this is done, and the anterior attic wall is removed, we have the free drainage, and can make remedial applications, which could not be done otherwise. The writer would not be understood as advocating this procedure in every case of chronic suppuration, for many of these require the radical operation. In all cases in which there are a large or even medium-sized canal and unmistakable evidence of chronic disease of the attic with perforation of Shrapnell's membrane and all the conditions attending suppuration (with necrosis usually), removal of the ossicles, a portion or all of the anterior attic wall, and remnants of the drum membrane I believe to be the most conservative and satisfactory procedure.

The treatment thus briefly outlined is ably championed by Allport, of Chicago, and Lake, of London. Others eminent in our ranks go a step further and advocate the radical surgical treatment. The writer believes the former should always be resorted to first, because: 1. It gives free drainage. 2. It affords an opportunity to successfully combat the suppurative process. 3. It is free from danger to life and health. 4. In a large percentage of cases the disease is arrested, the hearing improved, only rarely made worse. 5. There is no deformity or scar.

The dry treatment is inadequate, because of the débris collecting around the ossicles. Conservative surgery is justified, because this hindrance is removed.

Chronic suppurative cases with cholesteatoma or necrotic destruction of the posterior superior wall of the canal are not benefited by anything short of the radical operation. Within the last three months I have been called upon to do the radical operation in two cases of acute inflammatory exacerbations of chronic middle-ear suppuration, one of which had existed for nineteen years. The son of a physician, the patient had been treated at

*Read before the Western Section of the American Laryngological, Rhinological, and Otological Society, in Chicago, December 28, 1900.

short intervals during the entire time, and had been advised to submit to a radical operation, but had declined.

When I saw him he had been suffering great pain for several days. The usual remedies, the hot douche, the hot-water bag, and opiates, had given only partial relief, and he was ready now to submit to any surgical treatment that promised relief. The mastoid was swollen and tender, the pulse quick, and the temperature 102.2° F. Inspection with the speculum through an unusually large canal showed remnants of the perforated soggy drumhead and the cavity filled with granulations. I advised the intratympanic operation, suggesting that if that did not relieve all the symptoms in a few hours the radical procedure could easily be resorted to. To this he consented. The granulations and débris were cleaned out, parts of the malleus and incus were found, and the attic and the walls of the cavity were curetted. The patient made a rapid, uneventful, and satisfactory recovery in less time than usual after the radical operation. He feels and hears better than for a long time. This seems a fair illustration.

In the cases of operation by this method—twenty-four—the discharge ceased in a few weeks and the cavity was lined with a vascular fibrous membrane. In eighteen there was no improvement in hearing, but all suppuration ceased and the other symptoms were relieved. In one, in which the stapes was removed, the injury to the facial nerve resulted in paralysis, but this entirely disappeared in nine weeks.

THE IMPORTANCE OF THE EARLY RECOGNITION OF ABDOMINAL INFECTIONS.

By W. D. HAMILTON, M. D.,

COLUMBUS, OHIO.

A LARGE part of the surgeon's work to-day has to do with conditions which were either pathologically unknown or "inoperable" twenty years ago. These advances bring greater responsibility to the physician of to-day. He should be cognizant of those conditions which may call for surgery.

Abdominal physical diagnosis is added to his former duties. The general practitioner is not expected to be an expert in the recognition of these pathological conditions. Lawson Tait said to the members of the Surgical Section of the British Medical Association at Leeds, in Yorkshire, some years ago, that twenty per cent. of abdominal diagnoses were wrong, including his own. This certainly suggests an attitude of extreme modesty on the part of those who do abdominal surgery. The fact remains, however, that early, thoughtful, searching examination of the abdomen should be made when one is called to a case having such possibilities. An inflamed appendix, a perforating gastric or intestinal ulcer, a leaking gall-bladder, extravasation about the kidney, ureter, or bile duct, a subdiaphragmatic abscess, a suppurating extra-uterine pregnancy, are some of the conditions that may demand his attention. On the other hand, a pelvic abscess, a localized tuberculous focus, any of those traumatisms to the abdominal contents, or anything which may cause peritonitis, thereby jeopardizing the patient's life, could properly be considered in this category.

A retrospect of the last few years will, in the writer's mind, bring out clearly this fact with reference to abdominal infections which required operative interference. When the patient has died after an operation, it has generally been apparent that an earlier use of the knife would have offered a better chance of recovery. It would be unjust to assume that the attending physician is always to blame, and the writer accepts his share of the censure; occasionally a surgical consultation or an operation promptly proposed has been declined by the patient or the relatives.

It is not the intention of the writer to leave the inference that every patient should at once be cut who has an intra-abdominal infection. The idea to be conveyed is this, that the history of the patient, palpation, percussion, digital examination, uranalysis, and, if available, a blood examination, in fact, all those means of investigation which could be employed, should be *used early*. A prompt diagnosis is half the battle in these cases. How simple the management of a case of appendicitis that is from twelve to twenty-four hours old can often be made by an operation! When we are called to a case in which there is ground for the suspicion of an intra-abdominal infection, the question to be raised is this: Is it medical or surgical? If the latter, accept or dismiss the idea of operative intervention at the earliest time practicable. It is the object of this paper to minimize the number of those forlorn cases which too often come to the surgeon in which, by delay, the patient has been irreparably overwhelmed by bacterial invasion of the abdomen. In such cases too often an operation cannot be done. If it is tried, it will in all probability simply convert an operation into an autopsy. In other words, as has been said by some writer, the resources of surgery are not often successful when practised on the dying. The writer believes that in doubtful cases there is less risk in an ably conducted exploration than in delay and fruitless speculation.

Within the past year the writer has been told by a general practitioner from Southern Ohio that the last patient (one with suppurating appendicitis, a stout man) was the twentieth one with appendicular infection whom he or his partner had brought under operative treatment; and that all the cases had terminated favorably. This is a commentary on what *prompt diagnosis* on the part of the attending physician may accomplish in the relief of this condition.

The proper attitude to abdominal infections may be summarized in the words of the clever Irishman, Sir Boyle Roche, that "the best way to avoid danger is to meet it plump!"

ANTISTREPTOCOCCUS SERUM IN TWO CASES OF PUERPERAL SEPTIC INFECTION.

By A. J. PRIMROSE, M. D.,

NEW YORK.

I am led to report these cases from the prompt subsidence of septic symptoms following the use of antistreptococcus serum. The cases are briefly as follows:

Mrs. M., thirty-five years of age; has one grown child and has had several subsequent miscarriages. Chronic endometritis, delivered of a nine-months child. Forceps were used and an intra-uterine douche of bichloride given.

On the evening of the third day the patient had a chill, and the temperature rose to 102° F. She complained of severe headache and the lochia was slight and fœtid. An intra-uterine douche of bichloride was given.

Morning of fourth day, patient had a chill, severe headache, the lochia were foul-smelling, temperature 104° F. She was curetted by a consulting physician, but only clot-shreds were removed. An intra-uterine injection of boiled water was given. She had another chill. In the evening the temperature was 103° F. Ten cubic centimetres of antistreptococcus serum (Board of Health) were injected into the right leg. Six hours later the temperature was 102.5° F. Ten cubic centimetres of antistreptococcus serum were injected in left leg.

Morning of fifth day, temperature 101½° F. An antiseptic intra-uterine douche was given. Noon temperature, 102° F. Ten cubic centimetres of antistreptococcus serum injected in abdomen. Evening temperature, 101.5° F.

Morning of sixth day, temperature 101° F. Seventh day, temperature normal; slight increase of watery lochia followed the douches. Three days later patches of erythema appeared over sites of injections. One week later she complained of joint pains and stiffness, lasting a day or so. Patient convalescing.

Mrs. O., twenty-five years of age; delivered of first child at nine months. Got out of bed on the fifth day; ate a heavy meal on the sixth day. This was followed by a chill and severe headache; the temperature was not taken.

When seen on the evening of the eighth day, she was flushed and complaining of severe headache. Temperature, 103° F.; lochia very scanty and somewhat fœtid. A noticeable swelling on the left side of the cervix. The dull curette was used, but only a few clot-shreds were removed. An antiseptic intra-uterine douche was given. Temperature, later in evening, 103° F. Ten cubic centimetres of antistreptococcus serum were injected in left leg.

Morning of ninth day, temperature 101.5° F. The antiseptic intra-uterine douche repeated. Evening temperature, 101.5° F. Patient feeling well.

Noon of the tenth day, temperature 104° F.; no chill observed. Intra-uterine douche given, and ten cubic centimetres of antistreptococcus serum injected in abdomen. Six hours later the temperature was 103° F.; ten cubic centimetres of antistreptococcus serum injected in right leg.

Eleventh day, temperature normal; feeling well. Thirteenth day, the patient sat up several hours with no ill effects.

Several days later she complained of pain and stiffness of the knee and hip joints. Temperature for a few hours rose to 102° F. The symptoms subsided after a few doses of sodium salicylate. The swelling about the cervix uteri was no longer noticeable.

118 West One Hundred and First Street.

Correspondence.

LETTER FROM TORONTO.

A Toronto Physician Knighted.—The Victorian Order of Nurses.—The Canadian Nurses' Association.—A Testimonial to Sir William Hingston.—Dalhousie University.—Bishop's Medical Faculty.—The Montreal Dispensary.

Toronto, *May 18, 1901.*

Dr. George Stirling Ryerson has been gazetted a Knight of Grace of the Order of St. John of Jerusalem in England, in recognition of his distinguished services in connection with Red Cross work in South Africa. Lord Roberts has spoken in the highest terms of his services, and Lord Wantage, as chairman of the Red Cross Society, has written Dr. Ryerson along the same lines. Surgeon-General W. D. Wilson, principal medical officer of the army in South Africa, has also written Colonel Ryerson an appropriate letter of thanks, while the Red Cross Council, at its recent meeting in Toronto, also adopted a resolution of thanks to Dr. Ryerson and further voted $500 toward defraying his expenses. The profession in Toronto is distinctly pleased at the recognition of Dr. Ryerson's services.

The local branch of the Victorian Order of Nurses in Canada held its annual meeting in Toronto not long since. Lady Minto was present from Ottawa and addressed the meeting on her project of cottage hospitals for the Canadian Northwest Territories. Toward this work the Dominion government has contributed $6,000 and Sir William Macdonald, of Montreal, $3,000, while recent contributions to her fund have amounted to from $4,000 to $6,000 more. The annual report of the superintendent of the Toronto branch was submitted to the meeting. It showed that during the past year 249 patients had been cared for, with a total of 4,323 visits paid. There had been added to the list thirty-eight Toronto physicians who had employed these nurses during the year. Out of the 249 patients, only sixteen had been lost by death. The fees collected for the year were $472. Two nurses have been sent out to Cape Breton and Quebec. Dr. James Thorburn, the president, delivered an address on the working of the order in Toronto.

The Canadian Nurses' Association is seeking incorporation from the Dominion Parliament. Before the House Private Bills Committee it experienced a good deal of opposition, the chief objection being to the nurses' themselves passing on applicants. The intention of the bill is not to discriminate against the smaller hospitals. The association will be given power to adopt its own

rules and regulations, while the object of the measure is purely educational and designed to raise the status of nurses in Canada. The ladies named as incorporators represent the best hospitals all over the Dominion. The conditions of qualification as they now stand propose to admit all nurses who have graduated from any hospital approved by the association, and the bill provides that a majority of the advisory board shall consist of medical men. A proposal to hold the bill back for another session was defeated.

Sir William Hingston was the recipient of distinguished honors on the afternoon of the 6th of May from his confrères at the Hôtel Dieu, Montreal, as well as from the Sisters, students, and patients of the institution. The occasion was the celebration of the fortieth anniversary of Sir William's connection with this hospital as a surgeon, and the opportunity was seized to show the appreciation of his services by the staff and Sisters of the hospital. Archbishop Bruchesi began the ceremonies by the celebration of mass in the chapel, after which the surgeons of the Hôtel Dieu presented Sir William with an address and an urn of great value. The gathering then repaired to one of the operating-rooms, where the medical students of Laval University had gathered. They presented their professor with an address and handed Lady Hingston a bouquet of great magnificence. The Sisters of the institution also paid their respects to Sir William and presented him with some relics which had been preserved for over two hundred years and had been brought over from France by Mlle. Mance. Dr. St.-Jacques, in the name of the patients, addressed the distinguished surgeon, thanking him for his many years of service and for the good he had accomplished for them during the forty years of his connection with the Hôtel Dieu. To all these tokens of appreciation Sir William replied feelingly, expressing special surprise at receiving thanks from the patients, when he had always been busily engaged in taking off their arms and legs or taking out their eyes. Sir William Hingston is now in his seventy-third year and is yet actively engaged in his surgical work. His son, Dr. Donald Hingston, has recently received the appointment of superintendent of the Hôtel Dieu, succeeding Dr. St.-Jacques, who has resigned.

At the recent convocation exercises of Dalhousie University, Halifax, some twelve or thirteen persons received their degrees, one being a lady, the first who has graduated in medicine from that university.

A number of changes have been made in the teaching staff of Bishop's Medical Faculty, Montreal. Dr. F. W. Campbell, the dean, will in future give a special course of lectures on insurance law, in addition to his regular lectures in medicine and neurology. He will have associated with him as professor of medicine Dr. J. B. McConnell as vice-dean. The chair of medicine will be further assisted by Dr. W. E. Decks, lecturer on internal medicine; Dr. A. J. Richer, and Dr. W. Grant Stewart. Dr. James Perrigo, professor of gynæcology, will have associated with him Dr. A. Lapthorn Smith, who remains also professor of clinical gynæcology. Dr. H. L. Reddy and Dr. William Burnett retain their professorships in connection with that department. Dr. George T. Ross, professor of laryngology and rhinology, who up to the present time has been registrar of the faculty, has been replaced as such by Dr. James M. Jack, a new member of the staff, who will also lecture on dermatology. The chair of surgery is to be occupied by Dr. F. R. England, with whom will be associated as lecturers Dr. F. J. Hackett and Dr. Rollo Campbell, and as instructors Dr. George Fisk and Dr. Herbert Tatley. Another addition to the teaching staff is Dr. Louis Laberge, the city medical health officer, who replaces Dr. Richer as lecturer in hygiene. Dr. W. G. Reilly has been appointed to the chair of anatomy. Dr. Robert Wilson will hold the chair of materia medica and therapeutics.

The annual meeting of the Montreal Dispensary was held last week, when the reports which were submitted showed a very successful year. The total number of applications for advice and treatment by the sick poor numbered 16,918. During the past two months, Dr. A. E. Vipond has had charge of a special department for the diseases of children, with a very successful clinic attached to it. The treasurer's report showed that the receipts, including a balance from the previous year of $3,545, had been $6,501, and the disbursements had amounted to $2,912, leaving a favorable balance of $3,589. Dr. H. B. Carmichael was elected honorary secretary. The consulting physicians are Dr. W. Wright, Sir William Hingston, Dr. Robert Craik, Dr. F. W. Campbell, Dr. G. P. Girdwood, Dr. George Wilkins, Dr. A. D. Blackader, Dr. J. B. McConnell, Dr. W. Gardner, Dr. F. J. Shepherd, Dr. A. Lapthorn Smith, Dr. G. T. Ross, Dr. F. M. R. Spendlove, Dr. Rollo Campbell, Dr. J. W. Stirling, Dr. E. H. P. Blackader, and Dr. A. E. Orr. The attending physicians are Dr. H. Tatley, Dr. H. B. Carmichael, Dr. G. A. Brown, Dr. R. A. Westley, Dr. A. A. Robertson, and Dr. A. T. Bazin. The assistant physicians are Dr. J. L. Day, Dr. A. Mackenzie Forbes, Dr. J. J. Ross, Dr. W. B. Howell, and Dr. Walter Fisk.

Therapeutical Notes.

Palatable Effervescent Quinine.—The *Journal of Tropical Medicine* for May 1st quotes the following from the *Therapist:*

℞ Quinine sulphate. . . . . 1 drachm;
Citric acid. . . . . 2½ drachms;
Syrup of orange peel. . . . . 15 minims;
Syrup. . . . . 15 "
Distilled water, enough to make.. 5 drachms.
M.

Ten or twenty drops to be added to two ounces of water containing five or six grains of sodium bicarbonate. Ten drops of the mixture contains about one grain of quinine.

Cochineal in the Treatment of Whooping-cough.—In the old days when nitric acid, very much diluted, was largely used in the treatment of whooping-cough, tincture of cochineal was generally added, chiefly to give the medicine an attractive color, but partly also because it was thought to add to the remedial effect. Naegeli (cited in the *Gazette hebdomadaire de médecine et de chirurgie* for April 18th) seems to credit cochineal with medicinal virtues in whooping-cough. He uses the following formula:

℞ Powdered cochineal. . $\frac{3}{4}$ of a grain to 3 grains;
Ammonium carbonate. . . . . 15 to 30 "
Syrup of bitter-orange peel. . . . . 2 ounces;
Distilled water. . . . . 10 "
M. S.
A coffeespoonful every two hours.

A Lotion for Freckles.—*Pratica del medico* for November, 1900, gives the following:

℞ Corrosive sublimate. . . . . 15 grains;
Zinc sulphate. . . . . 30 "
Lead water. . . . . 30 minims;
Rose water. . . . . 8 ounces.
M.
For outward application only.

The following is also said to have given good results:

℞ Valerianate of amyl. . . . . 3 drops;
Sulphuric ether. . . . . 4 "
M.
For one capsule. Six capsules, two at a time, to be taken half hourly.

The following suppositories are given by the author:

℞ Extract of belladonna, } of each. . . $\frac{1}{3}$ of a grain;
Extract of opium, }
Cacao butter. . . . . 30 grains.
M.
For one suppository. One hourly till the symptoms subside, but not more than five must be used in the twenty-four hours.

For Hepatic Colic.—M. Mesnard (*Presse médicale,* August, 1900; *Union médicale du Canada,* December, 1900) recommends a combination of benzoate and salicylate of sodium:

℞ Sodium benzoate. . . . . 75 grains;
Sodium salicylate. . . . . 150 "
M.
Divide into fifteen wafers; three daily at meal times.

For Lepra, Psoriasis, and Lupus.—*Progrès médical* for April 27th ascribes the following to Bocquillon-Limousin:

℞ Gynocardic acid. . . . . 12 grains;
Chaulmoogra oil. . . . . 150 "
Vaseline. . . . . 300 "
Paraffin. . . . . 75 "
M.
For local application.

Serious Diarrhœa of Nurslings.—The *Journal of Tropical Medicine* for May 1st gives the following:

℞ Atropine sulphate. . . . . $\frac{1}{10}$th of a grain;
Distilled water. . . . . 450 minims.
M.
From one to three drops may be given, but the general condition must be closely watched, and three drops must not be exceeded.

For Uterine Vomiting.—According to Lutaud (*Consultations upon the Diseases of Women; Journal des praticiens,* May 4th), the following is considered the best formula for the use of cocaine in these conditions:

℞ Cocaine hydrochloride. . . . . $1\frac{1}{2}$ grains;
Antipyrine. . . . . 15 "
Distilled water. . . . . 1,500 minims.
M.
To be taken in coffee-spoonful doses every half hour until the vomiting ceases. Occasionally the following more concentrated solution may be called for:

℞ Cocaine hydrochloride. . . . . $7\frac{1}{2}$ grains;
Distilled water. . . . . 450 minims.
M.
Ten drops to be taken and repeated at the end of an hour, then after the lapse of three hours if there has been no result. Then give from three to four drops before meals.

In case of pregnancy or acute metritis, apply to the cervix a tampon with the following ointment:

℞ Cocaine hydrochloride. . . . . 15 grains;
Extract of belladonna. . . . . $3\frac{3}{4}$ "
Vaseline. . . . . 150 "
M.
Local applications or slight digital dilatation, as recommended by Copeman, often cause the vomiting of pregnancy to cease. Routh's procedure, paintings of tincture of iodine, is also frequently successful.

In vomitings of less intensity, with nausea, the following may be used:

℞ Tincture of iodine, } equal parts.
Chloroform, }
M.
Five drops, morning and evening, at meal times, in a little water.

Menthol may be prescribed as follows:

℞ Menthol. . . . . 15 grains;
Alcohol. . . . . 300 minims;
Syrup. . . . . 450 "
M.
A coffee-spoonful every hour.

At times it is necessary to have recourse to rectal alimentation, and generally a supporting medication is necessary, *e. g.,* that of Crocq:

℞ Sodium phosphate. . . . . 15 grains;
Distilled water. . . . . 150 minims;
M.
A Pravaz syringeful morning and evening.

Injections of artificial serum may often be employed with advantage.

Chrysarobin in Hæmorrhoids.—Pounne (*Journal des praticiens; Revue médicale de Normandie,* April 25th) has successfully used chrysarobin, in suppository or ointment, in bleeding hæmorrhoids, in the following combinations:

℞ Chrysarobin. . . . . $1\frac{1}{2}$ grain;
Iodoform. . . . . $\frac{3}{100}$ths of a grain;
Extract of belladonna. . . . . $\frac{1}{65}$th of a grain;
Cacao butter. . . . . 30 grains.
M.
For one suppository. Two or three to be used daily.

℞ Chrysarobin. . . . . $22\frac{1}{2}$ grains;
Iodoform. . . . . $7\frac{1}{2}$ "
Extract of belladonna. . . . . 15 "
Vaseline. . . . . 300 "
M. Fiat unguentum.

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NEW YORK, SATURDAY, MAY 25, 1901.

THE PROPOSED REORGANIZATION OF THE AMERICAN MEDICAL ASSOCIATION.

A COMMITTEE consisting of Dr. J. N. McCormack, of Bowling Green, Kentucky; Dr. P. Maxwell Foshay, of Cleveland, and Dr. George H. Simmons, of Chicago, is to present at the St. Paul meeting a formal report embodying a plan for the reorganization of the American Medical Association. The committee's preliminary report is before us, in the shape of advance sheets of the association's *Journal.* In a footnote we find this statement: "A decision as to one or two details has not yet been reached, although practically all that is herewith submitted is approved by the committee." We may expect, therefore, that in its final form the plan reported will not differ in any important feature from what is set forth in the preliminary report, and we are glad to be thus assured of the committee's virtual unanimity. It is within our own knowledge that the individual members of the committee, severally and among themselves and by conference with representative physicians in various parts of the country, have devoted to the elaboration of their plan an extraordinary amount of earnest work; consequently we are confident that at the approaching meeting those who may be inclined to question the expediency of one or more features of the plan will reflect that, in view of the great amount of consideration that the committee has given to those features, the great probability, amounting practically to a certainty, is that the committee's recommendations are judicious.

Fundamentally, the committee's plan provides for vesting the legislative functions of the association in a body to be known as the House of Delegates, to consist of not more than 150 members, namely, one delegate for every 500 members, or fraction of that number, of each State and Territorial organization recognized by the association, one delegate from each of the sections of the association, to be elected like other section officers, an one delegate each from the Army Medical Corps, th Navy Medical Corps, and the Marine-Hospital Servic The members of the association are to consist of perma nent, honorary, and associate members, in addition to th delegates. All officers of the association are to be electe by the House of Delegates, but no delegate shall b eligible. No person shall be elected a member of th House of Delegates who has not been a permanent mem ber of the association for two years. Nobody shall b elected to any office unless he is present at the annu meeting at which the election occurs. This curtailmen of the legislative and electoral body, it will be seen, is i complete accord with the leading suggestion which w made in our issue for April 20th, in an article entitle The Growth of the American Medical Association. W do not see how the committee could have failed to tak the view that it has taken, and we believe that the associa tion could in no way more strengthen itself than b adopting the recommendations embodied in the repor We are quite prepared for some delay in carrying the into effect, but we shall be much disappointed if the S Paul meeting does not take the necessary steps to insu their early enactment. If the report fails of adoptio it will be due, in our opinion, to the fact that the prese organization is unwieldy even to the degree of making practically impossible to distinguish delegates from pe sons who, although having no right to vote, are almo sure to make themselves heard and felt as voters. By a means, let the report be adopted.

A GREETING TO THE NEW GRADUATE.

AT this season of the year, when our metropolita schools are conferring the much-coveted parchment, w are reminded of an anecdote concerning the late D Alonzo Clark. When Dr. Clark, who was professor c the principles and practice of medicine in the Colle of Physicians and Surgeons, was in his prime, so th story goes, a member of the graduating class called o him at his house one morning for the purpose of havin his chest examined, for he feared that he had incipie pulmonary disease. Having undergone the examinatio and received the welcome assurance that his lungs we sound, the young man asked the doctor what his fee wa "Oh, nothing, sir, nothing at all." "Why, how is that? "Well, you know, dog doesn't eat dog." "What do yo mean, sir?" "Simply that one doctor doesn't charg another doctor for professional services." "But, yo know, Professor Clark, I'm not a doctor; I'm only

dent." "Very well, dog doesn't eat pup." And ere was nothing for the young man to pay.

It is in this brotherly spirit, dear young graduate, t we battered old fellows welcome you to our ranks. ere is no trade-unionism in medicine. Hard as we have to work for our mere living, we seek not to melt ay our difficulties by setting a limit on the number of prentices, by forbidding work after hours, or by per-uting those who set a more modest value on their ser-es than we set upon ours. No sooner do the young aduates of each year secure the right to practise than y become our brethren. What is the lot of the young ysician? Almost that of a suppliant. After working rd for long, weary years—far harder and longer than her the clergyman or the lawyer—he must incur the pense and endure the waiting that are the inevitable gs to even moderate progress in his practical career. the clergyman success is apt to come all at once or t at all. The lawyer, like the doctor, generally has to it, but he can do his waiting at a cheap rate, for, with sk-room in a decent locality, he may live in the suburbs in the slums. The doctor, however, must have an ex-nsive outfit, and in this part of the country he must nost of necessity live in the fair neighborhood in which makes his bid for patronage.

We say this, dear youngster, not to dispirit you, but give you a lively realization that we have all gone rough the mill," and thus to let you know that an all-e Providence has not singled you out for the dreari-s of waiting unprofitably. It is because we have all your forlorn experience that we unhesitatingly and hout reservation stretch out to you the hand of wel-ne. This is all in the way of sentiment, as, of course, understand; we may shortly add something in the of advice.

SUCTION IN THE TREATMENT OF MAMMARY CANCER.

From Junod's boot down to the once familiar cup-g-glass, with the single exception perhaps of the st-pump, all forms of suction apparatus appear to e practically vanished from our armamentarium, gh possibly the pneumatic cabinet is still employed me extent. But this desuetude would shortly come n end if Mr. Cecil H. Leaf, assistant surgeon to the cer Hospital and to the Gordon Hospital for Rectal ases, London, should turn out not to have been too nistic in his scheme for the amelioration of "inoper-' cases of cancer of the breast, as set forth in the May number of the *Edinburgh Medical Journal.* There was nothing enticing at the outset about the treatment of cancer with Chian turpentine, which excited some attention a few years ago, chiefly by reason of the eminence of its proposer; but suction, intended to prevent or restrict the central migration of the cancer germ, whatever it may be, commends itself *à priori* as at least rational.

Mr. Leaf's device differs in no essential particular from a cupping apparatus. A large hard-rubber shield is made so that its rim fits accurately on the skin around the breast, including as large an area as is practicable. In the dome of the shield there is a tap to which an ordinary air-pump can be adjusted. "The whole of the air in the apparatus can thus be thoroughly exhausted," says Mr. Leaf. This we may question while at the same time admitting that there may be effected a sufficient approach to a vacuum to make the appliance exert a very considerable suction force. He says that with a perfectly fitting instrument the suction action will last about half an hour, and, other things being equal, the more capacious the shield the longer will it continue. It does not appear from the account that the air-pump is employed again at the end of the half-hour or more; nevertheless, the author seems to think it important that the apparatus should be worn continuously for several hours, though he does not explain how it can have any beneficial effect after its suction action has once ceased. He admits that, to be really effective, the contrivance should be worn all the time, night and day, but patients will not do this, though, as a rule, they will wear it for six or seven hours, and he has one patient who will tolerate it for fifteen hours out of the twenty-four.

Mr. Leaf declares that the suction causes very little pain, but it occasions bleeding and "brings a good deal of discharge to the surface," thus in most cases relieving the pain very materially. So convinced is he of the beneficial influence of suction, and particularly of the bleeding and increased discharge caused by it, that he is considering whether in cases unaccompanied by ulceration it would not be advisable "to cause a breach of surface either by multiple punctures or by the scalpel." Even if sepsis should take place, he adds, there is every reason why, with the suction at work, there should be no absorption. He gives brief notes of three cases in which the apparatus has been used, and he is of the opinion that in all of them the march of the disease was delayed. Incidentally he makes the suggestion that the movements of the arm of the affected side should be restricted, as such movements quicken the current in the lymphatics.

Of course Mr. Leaf does not expect to cure cancer by means of suction. At the first glance, his plan for preventing or retarding its dissemination may seem to be well founded, but we fear that the mechanical difficulties in the way of any close approach to incessant suction and the inability of the sufferer to bear continuously even the degree of suction that his apparatus is capable of exerting will prove insurmountable obstacles to its successful employment. Moreover, in many cases of cancer of the breast the fatal issue has been rendered certain long before ulceration occurs.

THE MEDICAL SCHOOLS OF NEW YORK.

To those of us who remember the spirit of commercial competition which pervaded our medical schools but a few years ago their present cooperative attitude seems as wonderful as it is admirable. The spirit underlying it was well pictured by the president of Columbia University, the Hon. Seth Low, on the occasion of the recent opening of the handsome and well-equipped new building of the Medical College of Cornell University. "I never think of universities as competitors," he said, "in the business sense of that word. We are rather all allies, fighting shoulder to shoulder against ignorance and in order to spread the domain of truth. When men are striving for what they can get, I can understand a certain feeling of envy, how little admirable it may be even then, when others appear to be more fortunate than ourselves. But when men are striving for what they can give, when each is simply endeavoring to do the best service for the public that he can, it is impossible for me to understand how any one can fail to rejoice in every piece of good fortune that comes to anybody similarly engaged. . . . The College of Physicians and Surgeons, the Medical School of Columbia University, is not likely to be any the worse school because it has to maintain its reputation side by side with the Medical School of Cornell University, amply endowed as that now is. Neither is the Medical School of Cornell University likely to cherish lower standards because it has to make itself worthy to command the attendance of students in the field in which the College of Physicians and Surgeons has been so long at work. Each school will help to make and to keep the other thoroughly effective. . . . This is the spirit in which we try to do our own work, and this is the spirit in which we gladly recognize the good work done by our sister universities everywhere and in every field."

So recently as in the seventies there was not a medica school in the city of New York that dared to take the in itiative in lengthening the course. Each of them fel that to take such a step would inevitably jeopardize it very existence, for they all derived their entire revenu from students' fees, and they knew that the majority o students would be driven away by any considerable aug mentation of the requirements for the degree. Perhap the College of Physicians and Surgeons was really stron enough to make the move, but was too timid to do sc When that school received its splendid endowment fron Mr. Vanderbilt—the first adequate endowment of medical school in the history of the country—the wa was opened for its actual incorporation with Columbia with which it had before had little more than a nomina connection. But it was felt that wholesome competitio was still desirable; hence the joy at the elevation of th College of Physicians and Surgeons was perceptibly tem pered by the foreboding that the two other schools woul have to go to the wall unless something unexpected hap pened. But the unexpected has happened, and we hav still our three schools, though not precisely the sam three, each with a substantial university connectio The Medical Department of the University of the Cit of New York and the Bellevue Hospital Medical Colle have become consolidated as the medical school of Ne York University, and the vigorous young Cornell Un versity has established its medical school in New York.

Thus there are now in the borough of Manhatta three medical schools unexcelled anywhere in the En lish-speaking world, and there is an excellent school the borough of Brooklyn. We believe there are few, any, who really regret that the opening of the Corne school, which admits women to its classes, led to t abandonment of the Woman's Medical College; that a mirable institution never put its own perpetuity befo the welfare of the community, and its supporters reco nize thoroughly that the career of women students notably facilitated by the new order of things. Nev before was New York better fitted to turn out capal physicians and surgeons, and nowhere else has such advance been made in medical education during the l twenty-five years, with one exception, that of Chicago.

QUARANTINE AND LIFE INSURANCE.

A recent newspaper statement was to the effect t in a city in the northern part of the State of New Yo a woman, having been compulsorily secluded for ab six weeks on account of small-pox, notified the board

health that her policy of life insurance was likely to lapse, inasmuch as her detention was preventing her from getting the money necessary for the payment of a premium, and that the board paid the premium, holding that if the policy lapsed and the woman died, there would be a case against the city. We believe the feeling was well founded, and we hope the board's act will serve as a precedent.

A SENSIBLE FAITH-HEALING CONVICTION.

The sentence passed by the county court judge at White Plains, and reported in our news items, upon a man who had allowed his young daughter to die from pneumonia without summoning medical aid, is an eminently just one. The man, who appeared to glory in his recalcitrance, was sentenced to a fine of five hundred dollars, and failing payment, to imprisonment at the rate of a day for each dollar until the amount was cleared off. We have at times expressed ourselves as adverse to prosecutions in cases in which it could be clearly shown that the patient himself, being of age, conscious, and in full possession of his normal faculties, preferred the services of a faith healer to those of a physician. But in the case of those dependent on others it is an entirely different matter. When a miser chooses to starve himself to death, or otherwise to court death by obstinate penurious self-abnegation, he is not usually interfered with. But let the same man neglect to provide his family, more especially young children, with food or other necessaries of life, and he is at once prosecuted for criminal neglect. Whatever may be urged, rightly or wrongly, as to a man allowing himself to die from lack of proper provision, there can be no question that he has no right to allow those dependent solely on him to do so. And, in such a case, the provision of proper therapeutic measures is an exact parallel to the provision of proper food and other necessaries. White Plains may be congratulated on the wisdom of both its jury and its judge; and we trust that the object lesson that this case affords will not be lost on juries and judges elsewhere, till fanatics are compelled to pay attention to it also.

ZOSTER ASCRIBED TO ERGOT.

The subject of drug eruptions is always one of much interest. That unfortunately named affection known as zona or herpes zoster has in several instances been traced to the action of drugs, but not until now, if we are well informed, to that of ergot, and we must ask for some indulgence if we record our skepticism regarding a case reported by M. Druelle in the *Progrès médical* for May 4th. Some dragées of ergotine were prescribed for a syphilitic young woman who had menorrhagia. On the very next day, and in the morning at that, she complained of the neuralgic pains preliminary to the eruption which soon showed itself on the thigh. We are hardly prepared to admit the probability of such a profound idiosyncrasy as would entail so prompt an effect, and M. Druelle himself appears not very positive about it.

TRUE AND SPURIOUS MELÆNA.

If we accept the distinction ordinarily made between the true and the false forms of melæna—namely, that in the former the blood comes from below the cardiac orifice of the stomach, and in the latter from above that point—true melæna is shown by Swoboda (*Prager medicinische Wochenschrift,* 1900, No. 49; *Centralblatt für Gynäkologie,* April 27th) to be rare, if indeed it ever occurs. In many instances he has found the nasal mucous membrane to be the source of the hæmorrhage, but in the majority of cases purulent otitis media to be its cause. Endomeningeal hæmorrhage is rather a frequent concomitant, so that the prognosis can hardly be improved by plugging the nares.

THE OLEANDER LOUSE AS A TRANSMITTER OF MALARIA.

The part played by insects in the transmission of diseases is meeting with constantly growing consideration. M. Vicente (*Archives générales de médecine,* March; *Gazette hebdomadaire de médecine et de chirurgie,* April 28th) thinks he has found a vehicle of malaria in the *Aspidiotus nerii,* a crustacean insect that infests the oleander. A certain family included a person who for many years had been subject to frequent malarial attacks. Some oleanders were added to the ornaments of the house, and three children promptly showed signs of malarial disease. The hæmatozoon of malaria was found on the lice parasitic on the plants.

THE NEW PRESIDENT OF THE NEW YORK STATE COMMISSION IN LUNACY.

We are glad to learn that, before accepting the presidency of the commission, Dr. Frederick Peterson took pains to ascertain that the duties of the office could be thoroughly performed without his devoting to them so much time as to interfere materially with the continuance of his regular professional work. It is seldom, if ever, wise for a physician to abandon his practice to take public office, even if the duties of the office are of a medical character.

A NEW SANITARY JOURNAL.

The first number of a monthly journal called the *Public Health Record,* dated May, has reached us. It is described as the official organ of the Sanitary and Hygienic Society of New York. It is edited by Dr. M. B. Feeney and Dr. Herman Betz. The issue contains twenty-two full pages of reading matter and a fraction of another page, the pages of reading matter and those of advertisements being numbered continuously.

News Items.

Society Meetings for the Coming Week:

MONDAY, *May 27th:* Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, *May 28th:* New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynæcology); Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, *May 29th:* Auburn, N. Y., City Medical Association: Berkshire, Massachusetts, District Medical Society (Pittsfield).

SATURDAY, *June 1st:* Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera and plague were reported to the surgeon-general during the week ending May 17, 1901:

Smallpox—United States and Insular.

Prescott, Arkansas	May 8	5 cases.	
San Francisco, California	May 4-11	3 cases.	
Forty Counties in Colorado	Apr. 1-30	430 cases.	
Chicago, Illinois	May 4-11	9 cases.	
Freeport, Illinois	May 4-11	2 cases.	
Clinton, Iowa	May 4-11	1 case.	
Lexington, Kentucky	May 4-11	8 cases.	
New Orleans, Louisiana	May 4-11	10 cases.	
Boston, Massachusetts	May 9	1 case.	
New Bedford, Massachusetts	May 14	1 case.	
Detroit, Michigan	May 4-11	1 case.	
Grand Rapids, Michigan	Apr. 29-May 11.	6 cases.	
Omaha, Nebraska	May 4-11	18 cases.	
Manchester, New Hampshire	May 4-11	8 cases.	
Camden, New Jersey	May 4-11	1 case.	
Newark, New Jersey	May 4-11	3 cases.	
New York, New York	May 4-11	107 cases.	19 deaths
Cincinnati, Ohio	May 3-10	8 cases.	
Cleveland, Ohio	May 4-11	32 cases.	
Dayton, Ohio	May 4-11	1 case.	
Philadelphia, Pennsylvania	May 4-11	3 cases.	
Pittsburgh, Pennsylvania	May 4-11	7 cases.	
Memphis, Tennessee	May 4-11	27 cases.	2 deaths
Nashville, Tennessee	May 4-11	8 cases.	
Tacoma, Washington	Apr. 27-May 4	2 cases.	
Huntington, West Virginia	Apr. 13-May 11.	27 cases.	
Milwaukee, Wisconsin	May 4-11	1 case.	
Ponce, Porto Rico	Apr. 22-29	3 cases.	

Smallpox—Foreign.

Hong Kong, China	Mar. 23-Apr. 6	22 cases.	17 deaths
Panama, Colombia	Apr. 29-May 6	4 cases.	1 death
Paris, France	Apr. 22-27		20 deaths
Bremen, Germany	Apr. 13-20	1 case.	
Sheffield, England, Great Britain	Apr. 13-20	1 case.	
Glasgow, Scotland, Great Britain	Apr. 26-May 3		3 deaths
Bombay, India	Apr. 8-16		6 deaths
Calcutta, India	Mar. 23-Apr. 13.		339 deaths
Karachi, India	Apr. 7-14	3 cases.	3 deaths
Madras, India	Mar. 30-Apr. 3		3 deaths
Naples, Italy	Apr. 22-29	149 cases.	30 deaths
Mexico, Mexico	Apr. 28-May 5	1 case.	
St. Petersburg, Russia	Apr. 13-20	13 cases.	1 death
Corunna, Spain	Apr. 1-30		2 deaths

Yellow Fever.

Havana, Cuba	Apr. 28-May 4	1 case.

Cholera.

Bombay, India	Apr. 8-16	3 deaths
Calcutta, India	Mar. 23-Apr. 13.	194 deaths

Plague.

Lam Ko District, China	Feb. 14-Mar. 26.		10,000 deaths
Bombay, India	Apr. 8-16		681 deaths
Calcutta, India	Mar. 23-30		2,557 deaths
Karachi, India	Apr. 7-14	229 cases.	214 deaths
Nagasaki, Japan	Apr. 19	1 case.	1 death.

(On Japanese steamship Taichu Maru.)

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending May 18, 1901:

DISEASES.	Week end'g May 11		Week end'g May 18	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	29	10	42	4
Scarlet Fever	679	49	702	59
Cerebro-spinal meningitis	0	0	0	0
Measles	315	8	368	7
Diphtheria and croup	314	52	299	39
Small-pox	107	19	105	13
Tuberculosis	254	156	310	135

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for Two Weeks ending May 18, 1901:

BIDDLE, C., Surgeon. Detached from the Philadelphia Navy Yard and ordered to the *Indiana.*

DIEHL, O., Surgeon. Detached from the *Indiana* and ordered to the Philadelphia Navy Yard.

GROVE, W. B., Passed Assistant Surgeon. The order appointing him a member of the examining board at Annapolis is revoked.

WISE, J. C., Medical Director. Appointed a member of a board for the physical examination of candidates for appointment to the Naval Academy.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from May 11 to May 18, 1901:

BLOCK, WILLIAM H., Captain and Assistant Surgeon, United States Volunteers, is granted leave of absence.

CARLING, JOHN, Captain and Assistant Surgeon. The leave of absence granted him is extended one month.

CUTLIFFE, WILLIAM O., Captain and Assistant Surgeon, United States Volunteers, is granted leave of absence for one month.

MASON, CHARLES F., Captain and Assistant Surgeon, will proceed to Fort Sam Houston, Texas, to relieve CHARLES P. BYRNE, Lieutenant-Colonel and Deputy Surgeon-General, who will proceed to St. Paul for duty as chief surgeon of that department.

WILKINSON, H. BROKMAN, Captain and Assistant Surgeon, United States Volunteers, will, upon the expiration of the leave of absence granted him, proceed to San Francisco for transportation to Manila.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending May 16, 1901:

DUFFY, FRANCIS, Acting Assistant Surgeon. Granted leave of absence for two days from May 21st.

FOX, CARROLL, Assistant Surgeon. To proceed to Sitka and Juneau, Alaska, for special temporary duty.

GODFREY, JOHN, Surgeon. Upon being relieved by Surgeon J. J. KINYOUN, to proceed to Wilmington, North Carolina, and assume command of the service, relieving Surgeon T. B. PERRY.

GREENE, J. B., Passed Assistant Surgeon. Granted leave of absence for ten days from May 15th.

MASON, M. R., Hospital Steward. Relieved from duty at San Francisco and directed to proceed to Dutch Harbor, Alaska, and report to the medical officer in command for duty.

NYDEGGER, J. A., Passed Assistant Surgeon. Granted leave of absence for one day.

PERRY, T. B., Surgeon. Upon being relieved from duty at Wilmington, North Carolina, to proceed to Baltimore and report to the medical officer in command for duty and assignment to quarters.

STIMPSON, W. G., Passed Assistant Surgeon. To proceed to Guthrie, Oklahoma, for special temporary duty.

THORNBURY, F. J., Assistant Surgeon. Relieved from duty at Chicago and directed to proceed to Dutch Harbor, Alaska, and assume command of the service.

ULRICH, C. F., Acting Assistant Surgeon. Granted leave of absence for twelve days from May 14th.

VASDIN, EUGENE, Surgeon. Bureau order of May 14th, directing Surgeon WASDIN to proceed to Gardner, Illinois, is revoked.
OODWARD, R. M., Surgeon. Granted ten days' extension of leave of absence.
OUNG, G. B., Passed Assistant Surgeon. Granted leave of absence for two months and twenty-two days from May 30th.

A Knighthood for Mr. Treves.—Mr. Frederick reves, C. B., F. R. C. S., was knighted by King Edward 1 May 4th, in recognition of his services in South frica.

A New York City Physician Knighted by the King Italy.—Dr. Carlo Savini, of New York, has been ade by the King of Italy a Knight of the Order of the own of Italy.

The Medical Club of Philadelphia gave a dinner on ay 23d at Philadelphia, the guest of honor being Dr. alter Wyman, surgeon-general of the United States arine-Hospital Service.

The New York State Bureau of Bacteriology and thology.—Dr. George Blumer, of the Bender Laboray at Albany, has been appointed director of the new ureau of Bacteriology and Pathology, established by State of New York.

A New Federal Quarantine Officer for San Francisco. We learn that Dr. D. A. Carmichael, the recently apnted Federal quarantine officer for San Francisco, has ived in that city. Dr. Carmichael's success in suppssing the plague in Honolulu may account for his apntment.

A Physician Celebrates his Golden Wedding Annisary.—Dr. and Mrs. John F. Heinz, of St. Joseph, ., celebrated their fiftieth wedding anniversary retly. They were married in Chicago in 1851. Dr. inz has been a practising physician for many years is still active in the profession. In the early days he a minister of the German Methodist Church.

Louisiana Citizens Object to a Lepers' Home.—The jected establishment of a lepers' home in the parish efferson, on the river, some eighteen miles above New eans, La., has thrown the residents into a fever of eiment. The citizens of the parish have entered a test with Governor Heard. If this fails they openly ounce their intention to prevent the establishment he institution by force of arms.

Changes of Address.—Dr. H. A. Bernstein, to No. West One Hundred and Eighteenth Street, New k; Dr. Isaac M. Heller, to No. 2121 Bathgate Ave- New York; Dr. Dwight W. Hunter, to the Bryant x Studios, No. 80 West Fortieth Street, New York; Robert H. Pierson, to No. 505 South Warren Street, cuse, N. Y.

Magnetic Healers are Fined in Missouri.—Professor hen A. Weltmer and Joseph H. Kelly, who operated 'American School of Magnetic Healing" at Nevada, were fined $1,500 each in the Federal Court on l 26th. The charge was one of using the United s mails for the purpose of fraud, by promising, for sideration, to cure persons of poverty and all known y ills through "absent treatment" and "mental sugon."

Cuban Physicians Inspect Bellevue Hospital.—Two Cuban physicians and a Cuban commissioner appointed by the governor-general of Cuba to examine hospitals for the insane in the States of New York and Pennsylvania, visited Bellevue Hospital on May 19th. They were shown through the wards and inspected the insane pavilion under the guidance of Dr. Young.

Philadelphia has more Deaths than Births.—The report of the chief registrar to the Board of Health on May 7th was rather startling, in that it showed that during the preceding week and last year there were in Philadelphia more deaths than births. It has generally been thought that this condition applied only to the city of Paris. During the last week there were in this city 413 births and 565 deaths. During the last year there were 10,013 births and 10,510 deaths.

The Governor of Minnesota Reverses the Action of the State Medical Board.—Governor Van Sant, of Minnesota, has reversed the action of the State Board of Medical Examiners in the case against Dr. Edward N. Flint, who was charged by the board with unprofessional conduct, and action looking to the revocation of his license taken last January. The Governor's action is based upon an opinion from Attorney-General Douglas, who found that the complaint and evidence in the case were too widely at variance to render the charge effective.

The Chicago Eye, Ear, Nose, and Throat College is now established in its own building, No. 206 East Washington Street. The two lower floors are devoted to the dispensary, clinic, and college lecture rooms, while the upper three floors are devoted to hospital purposes. The operating rooms, one for nonpurulent and the other for purulent cases, and the sterilizing room are furnished in the most approved style and equipped with the most modern instruments and apparatus.

Delegates from the Georgia Medical Society Attend a Pharmaceutical Convention.—Among those who attended the meeting of the Georgia State Medical Society at Augusta was Dr. George F. Payne, representing the Georgia Pharmaceutical Society. Dr. Payne invited the society to send delegates to the pharmaceutical convention, which was to meet in Atlanta on May 21st. This invitation was cordially accepted and the convention appointed Dr. H. R. Slack, of LaGrange; Dr. Virgil Hardon, of Atlanta, and Dr. K. P. Moore, of Macon, delegates to meet with the pharmacists at their Atlanta convention.

Funeral of Dr. Charles Rice.—The funeral of Dr. Charles Rice took place on May 16th in the chapel of Bellevue Hospital. Men prominent in medicine and scientific pursuits and the representatives of many medical and scientific institutions were present. Henry St. George Young, the Bellevue chaplain, conducted the services. The honorary pallbearers were Professor Joseph P. Remington, of Philadelphia; Professor Henry Kraemer, of Philadelphia; Professor Henry H. Rusby, of the New York College of Pharmacy; Ewen McIntyre, first president of the New York College of Pharmacy; Thomas S. Brennan, Deputy Commissioner of the Department of Charities, and James Gerrity. Eulogies of Dr. Rice were made by Professor C. F. Chandler, Commissioner of Charities John W. Keller and Professor J. P. Remington. The burial was at Woodlawn Cemetery.

The New York County Medical Association Honors its Counsel.—As a token of its appreciation of the legal work he has done for it within the last year, the New York County Medical Association presented to its counsel, Mr. James Taylor Lewis, at a recent meeting of the members held at the New York Academy of Medicine, a bronze figure designed by Paul Daudez, about thirty-seven inches high. The figure is that of a youthful warrior and is emblematic of "Duty." Dr. E. Eliot Harris made the presentation speech.

The Craig Colony for Epileptics.—The legislature of New York, just adjourned, passed a special appropriation bill giving the colony $137,050. The chief item in the bill is one of $90,000 for additional cottages for patients. There are now some twenty-eight cottages and buildings at the colony, which are occupied by seven hundred patients. The new appropriation will provide for eight or ten additional cottages and increase the epileptic population to a thousand. An appropriation of $125,000 was also given the colony for maintenance, beginning October 1, 1901.

New Buildings for the Harvard Medical School.—A magnificent group of buildings for the Harvard medical and dental schools is to be erected in Boston at a total cost of over $2,000,000. Five buildings will be devoted to the medical school and one to the dental school, and there will also be a power-house. All are to be classical in style and built on the unit system, which will admit of almost unlimited harmonious addition. The five buildings of the medical school will surround three sides of a court. All the buildings will have a light stone exterior and will be fireproof.

Gifts to the New York Academy of Medicine.—The New York Academy of Medicine has recently received a number of gifts. Dr. Abraham Jacobi presented to it on his fiftieth anniversary as a physician, a collection of old German text-books. It has just received from Dr. Charles L. Dana, one of its vice-presidents, a collection of framed photographs of the statues and temples at Epidaurus of Æsculapius, and the trustees of the institution have received a gift of $10,000 from Mrs. Sarah Barker Gibbs and Miss George Barker Gibbs for the establishment of a fund to be known as the Edward N. Gibbs memorial prize fund. The income of this fund is to be awarded triennially to the American physician who shall present the best original essay on the ætiology, pathology and treatment of the diseases of the kidney.

Hindoo Physician Arrested for Practising without a Certificate.—Dr. Albert De Sarak, of No. 413 West Fifty-seventh Street, New York, was arraigned in court on May 7th by agents of the County Medical Society on a charge of practising medicine without a medical certificate. One agent testified that he had called at the office of the alleged physician and had been treated three times for imaginary ills. Dr. De Sarak says he is a Hindoo, an Oriental scientist, a general delegate to the Scientific Academy of Sauceteur, of Paris, and a member of the Oriental Society of Thibet and Calcutta. He admitted that he was not registered, but said that he was not practising as a physician and had made no pretense at practising medicine. Magistrate Meade held him in $300 bail for trial.

The Cornell University Medical College Acquires a Valuable Library.—The Cornell University Medical College has acquired the library of the late Dr. Feli Victor Birch Hirschfeld, professor of pathology an pathological anatomy at the University of Leipsic ar director of the Leipsic Pathological Institute. This l brary, which contains about five thousand volumes, said to be one of the most valuable pathological librari in existence. It is a collection of the periodical liter ture of Germany, France, and England on pathologic subjects for more than fifty years, and contains detail descriptions of the many discoveries made in that tim Many of the publications are no longer in existence, a copies of them are unobtainable. The purchase w made by Professor James Ewing in the name of t Loomis Laboratory. About $10,000 was paid for t books.

New York City will Appeal from Barren Isla Decision.—Although the Appellate Division of the S preme Court has declared that the law passed by t legislature last year to prevent the rendering of garba on Barren Island is unconstitutional, the fight in t courts to prevent the Sanitary Utilization Company fr carrying on its business in the disposal of garbage is r ended. The case will be carried to the Court of Appea The action on which the Appellate Division gave its d cision was brought by the Health Board to enforce t provisions of the law against the Sanitary Utilizati Company. The decision says that the act of driving t Sanitary Utilization Company from Barren Island neither just, fair, nor reasonably connected with any e beneficent to the community. Justice Patterson char terizes the act of the legislature as arbitrary, and i framed in the interest of the general public of New Yo city.

Consumptive Immigrants to be Excluded from th Ports.—Persons afflicted with consumption or tuberculosis of the lungs are among those whom the immigrat commissioners have been directed to exclude from United States. The following order was issued so time ago, directed to the Commissioner of Immigrat at New York: "Sir—The bureau acknowledges the ceipt of your letter of 1st instant, requesting that opinion be procured and promulgated for the infor tion of officials of this service as to whether tubercle lung can be classed as a contagious disease. Your letter was referred to the supervising surgeon-gene Marine-Hospital Service, and was returned by h under date of 3d instant, with the following indo ment: 'Respectfully returned to the commissioner ge eral of immigration, Treasury Department, with statement that tuberculosis of the lungs is now con ered a contagious disease.' The officers under your ju diction should be informed as to this opinion, for th guidance in considering the admissibility of aliens, ur Section 1 of the act approved March 3, 1891."

The New Medical Member of the State Commis in Lunacy.—Governor Odell has appointed Dr. F crick Peterson, of New York, the medical member of State Commission in Lunacy, in succession to Dr. P S. Wise. Dr. Peterson becomes by virtue of the appo ment also president of the commission. Dr. Peters appointment is for six years, and he will receive a sa of $5,000 a year and $1,200 annually for expenses. Dr. Peterson was born in Minnesota in 1859 and gradu from the medical department of the University of B falo in 1879. Subsequently he studied for several yr in Vienna, Strassburg, Leipsic, Stockholm, Paris,

London. He practised medicine in Buffalo for several years, and then for three years was first assistant physician in the Hudson River State Hospital for the Insane, at Poughkeepsie. In January, 1888, he began practice in this city. He was professor of general pathology and director of the laboratory in the University of Buffalo from 1882 to 1884, and was pathologist to the State Hospital for the Insane and Erie County Insane Asylum at Buffalo. As a member of the State Charities Aid Association he took an active part in the establishment of the Craig Colony for Epileptics, at Sonyea, N. Y., and has been president of the board of managers of the colony from its establishment, in 1894. He was president of the New York Neurological Society from 1898 to 1901, and professor of insanity at the Women's Medical College until it was merged with Cornell University.

A Faith Curist Sent to Jail in Default of a Fine of Five Hundred Dollars.—A Faith Curist and Dowieite churchman of Valhalla, N. Y., who allowed his two-year-old adopted daughter to die of pneumonia without medical attention was sentenced on May 22d. The judge, in speaking of the prisoner, said: "The trouble with him is that he takes the ground that he is all right, and will do the same thing over again—he would do it to-morrow. He says he did this deliberately. He violates the laws because he wants to. It might be applied just as reasonably to murder or any other crime. Feeling as I do, I cannot suspend sentence. He has no defense, except that he does not wish to obey the law. He sets up his religious views against the laws of the State. I believe he is honest in his views, but they lead him into violation of the law. The child died from neglect, and the law requires that a man shall care for those depending upon him."

When asked what he had to say in his defense, the prisoner replied: "Nothing."

The judge then said: "The maximum punishment for the crime of which you are convicted is one year in prison or a fine of $500, or both."

"I refuse to pay the fine," exclaimed the prisoner.

"You wait until I get through," said the judge, "before you say what you will or will not do. The jury recommended you to the mercy of the court. In view of this, the sentence of the court is that you pay a fine of $500, and in failing to pay it you stand committed to the county jail at $1 a day until it is so paid. You can pay it or be a martyr to your faith if you wish to."

The Clark County (Ky.) Medical Society, at its recent meeting, elected the following officers: Dr. H. C. Sharp, president; Dr. Cad Jones, vice-president; Dr. J. T. Davis, secretary and treasurer.

The Washington County (Pa.) Medical Society has elected these officers for the next year: President, Dr. W. R. Thompson; vice-president, Dr. G. A. Linn, of Monongahela; secretary, Dr. J. A. McKean, and treasurer, Dr. A. E. Thompson, all of Washington.

The Kansas Eclectic Medical Association has elected the following officers: Dr. E. G. Locke, of Holton, president; Dr. M. Averill, of Barkley, first vice-president; Dr. M. Michener, of Wichita, second vice-president; Dr. E. B. Packer, of Osage City, secretary; Dr. W. C. Hamilton, of Topeka, treasurer.

The Schuylkill County (Pa.) Medical Society has elected the following delegates to the Convention of the American Medical Association, in St. Paul, Minn., in June: Dr. T. J. Birch, Dr. David Taggart, Dr. R. W. Montelius, Dr. G. H. and Dr. A. H. Halberstadt, Dr. G. W. Farquhar, Dr. J. C. Williams, and Dr. J. C. Biddle.

The Clinical Society of the District of Columbia will give its annual banquet in Washington, D. C., on Tuesday evening, May 28, 1901. An elaborate programme has been arranged by the committee, of which Dr. W. M. Barton is chairman, and Dr. Wells, Dr. James, Dr. Ramsburgh, and Dr. De Vries are the other members. The society then adjourns for the summer.

The Cayuga County (N. Y.) Medical Society.—The ninety-fifth annual meeting of the Cayuga County (N. Y.) Medical Society was held on May 8th. Officers were elected as follows: President, Dr. D. A. White, of Montezuma; vice-president, Dr. S. E. Austin, of Auburn; secretary, Dr. A. J. Forman, of Auburn; treasurer, Dr. A. W. Gilmore, of Auburn.

The Savannah Academy of Medicine.—A new medical society has effected permanent organization at Savannah, Ga., under the name of the Savannah Academy of Medicine, with the following officers: President, Dr. A. A. Morrison; vice-president, Dr. Frederick Wahl; secretary, Dr. J. Oliver Cook; treasurer, Dr. G. L. Harman. The society will meet twice a month, viz., on the first and third Mondays.

Texas State Medical Association.—At its recent meeting at Galveston, the following officers of the Texas State Medical Association were elected for the ensuing year: President, Dr. H. Taylor Hudson, of Belton; first vice-president, Dr. S. C. Root, of Houston; second vice-president, Dr. W. C. Nixon, of Gonzales; third vice-president, Dr. W. A. Watkins, of Kemp. El Paso was selected as the next meeting place, and April 4, 1902, was named as the date.

The Mississippi State Medical Association recently elected the following officers: President, Dr. J. M. Buchanan, of Meridian; vice-presidents, Dr. C. M. Mitchell, of Pontotoc, and Dr. Anthony Miller, of Pantherburn; secretaries, Dr. C. H. Trotter, of Winona; Dr. B. L. Culley, of Jackson, and Dr. D. S. Humphreys, of Greenwood; treasurer, Dr. J. F. Hunter, of Jackson; delegates to the American Medical Association, Dr. Barr, of Starkville, and Dr. Featherstone, of Macon.

The Kansas Medical Society.—At the recent meeting of the Kansas Medical Society at Pittsburg, Kans., the following officers were elected for the ensuing year: President, Dr. L. H. Munn, of Topeka; vice-president, Dr. Ryan, of Coffeyville; recording secretary, Dr. W. A. McVey, of Topeka; corresponding secretary, J. W. May, of Kansas City, Kans.; treasurer, Dr. W. E. Barker, of Chanute. The society also decided to conduct and publish a medical journal at Topeka.

The New York Medical Society for Clinical Research held its meeting on Monday evening, May 13th, at 311 East Broadway. The subjects for discussion were: The Regulation of Admission to Membership and The Lodge Question. The question of cooperative drug stores was also dwelt upon, but for lack of time this question was postponed to the next meeting, to be held on Monday, May 20th, when a paper will be read on Infantile Diarrhœa, by Dr. Heller and Dr. Lubman.

Meeting of the Society of Medical Jurisprudence.—The principal speaker at the meeting of the Society of Medical Jurisprudence of New York City, on May 13th, was William P. Mason, professor of chemistry at Rensselaer Polytechnic Institute. His address was on the subject of the danger lurking in the present method of harvesting ice and the necessity of having the ice industry placed under the supervision of the board of health.

The American Gastro-Enterological Association, at its recent meeting in Washington, elected the following officers: President, Dr. John C. Hemmeter; first vice-president, Dr. W. D. Booker, of Baltimore; second vice-president, Dr. S. J. Meltzer, of New York, and secretary and treasurer, Dr. Charles D. Aaron, of Detroit. The three members of the council are Dr. Max Einhorn, of New York; Dr. D. D. Stewart, of Philadelphia, and Dr. A. L. Benedict, of Buffalo.

The Medical Association of Howard County (Md.) met at Baltimore on April 23d. The following officers were elected: President, Dr. John U. B. Rogers, Ellicott City; vice-president, Dr. W. W. L. Cissel, Highland; secretary and treasurer, Dr. Wm. B. Gambrill, Alberton. Dr. F. Dyer Sanger, physician-in-chief to Child's Hospital and professor of clinical medicine, College of Physicians and Surgeons, Baltimore, read a paper on the Pharyngeal Tonsils, and Dr. John M. B. Rogers, of Ellicott City, one on Phosphaturia.

The Western Ophthalmologic and Oto-Laryngologic Association, at its sixth annual meeting, held in Cincinnati on April 11th and 12th, elected the following officers: President, Dr. C. R. Holmes, Cincinnati, O.; first vice-president, Dr. W. L. Dayton, Lincoln, Neb.; second vice-president, Dr. J. O. Stillson, Indianapolis, Ind.; third vice-president, Dr. H. W. Loeb, St. Louis, Mo.; treasurer, Dr. O. J. Stein, Chicago; secretary, Dr. William L. Ballenger, Chicago. The next meeting will be held in Chicago, April 10, 11, and 12, 1902.

The Fifth International Congress of Physiologists will be held this year at Turin, Italy, from September 17th to September 23d. In addition to the general secretaries for the work of preparation toward the fifth congress, Professor Frederic S. Lee (Columbia University, New York), secretary of the American Physiological Society, kindly consented to discharge secretarial duties in America. American physiologists who intend to be present are requested to notify him, in addition to communicating with Dr. Z. Treves, local secretary, Corso Raffaelo, 30, Turin, Italy.

The Hunterdon County (N. J.) Medical Society has elected the following officers: President, Dr. G. W. Bartow, of Three Bridges; first vice-president, Dr. Howard Servis, of Junction; second vice-president, Dr. William H. Schenck, of Flemington; treasurer, Isaac S. Cramer, of Flemington; secretary, Dr. H. Sproul, of Flemington; reporter, Dr. G. N. Nest, of Rosemont; delegates to the American Medical Society, Dr. Leidy, Dr. Cramer, and Dr. Closson; delegates to the New Jersey Medical Society, Dr. Ewing, Dr. Closson, Dr. Johnson, and Dr. Romine.

The Association of American Physicians.—At the closing session of the sixteenth annual meeting of the Association of American Physicians at Washington the following officers were elected: President, Dr. James C. Wilson, Philadelphia; vice-president, Dr. James Stewart, Montreal; recorder, Dr. S. Solis-Cohen, Philadelphia; secretary, Dr. Henry Hun, Philadelphia; treasurer, Dr. J. Crozier Griffiths, Philadelphia; councillors, Dr. Frank Billings, Chicago, and Dr. Francis P. Kinnicutt, New York; representative on executive committee of congress, Dr. William Osler, Baltimore; alternative representative, Dr. Francis H. Williams, Boston.

The Baltimore County (Md.) Medical Association, at its annual meeting, elected the following officers: President, Dr. J. F. H. Gorsuch; vice-president, Dr. R. Percy Smith; recording secretary, Dr. W. P. E. Wyse; treasurer, Dr. H. S. Jarrett; executive committee, Dr. H. B. Stevenson, Dr. J. E. Benson, Dr. Charles J. Hill; historical committee, Dr. Jackson Piper, Dr. H. L. Naylor, Dr. W. J. Todd; committee on medical jurisprudence, Dr. Charles G. Hill, Dr. P. F. Sappington, Judge N. Charles Burke; committee of honor, Dr. W. J. Todd, Dr. L. G. Smart, and Dr. B. F. Bussey.

The New York Academy of Medicine.—A stated meeting of the Academy was held on Thursday evening, May 16, 1901, at 8.30 o'clock. A memorial address on the late Dr. S. S. Purple, formerly president of the Academy, was presented by Dr. Stephen Smith, and papers were read on Sitophobia of Enteric Origin and on Syphilis of the Liver, by Dr. Max Einhorn; and On the Intestinal Intoxication Occurring in Mucous Colitis in Young Children, by Dr. Henry Koplik.

The New York Academy of Medicine.—At the meeting of the Section on Obstetrics and Gynæcology, held on Thursday evening, May 23d, the following programme was presented: Presentation of patients. Exhibition of specimens, (*a*) Hydrosalpinx; (*b*) echinococcus-cyst of mesentery (?), by G. H. Ballery, M. D. Papers on Palliative Treatment of Fibroids, by H. C. Coe, M. D.; Fibroids Complicating Pregnancy, by Ch. Jewett, M. D.; Vaginal Hysterectomy for Fibroids, by J. Riddle Goffe, M. D.; Abdominal Hysterectomy for Fibroids, by Ch. N. Dixon Jones, M. D. General discussion by Dr. P. F. Munde, Dr. A. P. Dudley, Dr. J. Brettauer, Dr. H. N. Vineberg, Dr. E. J. Ill, Dr. LeRoy Broun, and others.

The Medical Society of City Hospital Alumni of St. Louis met on May 2d. The following papers were read: Report of a Case of Obstructive Prostatic Hypertrophy, with Remarks on the Bottini Operation, by Dr. Bransford Lewis; Observations on Migraine, by Dr. Frank R. Fry; and demonstration of specimens showing explanation of non-suppurative nasal headaches referable to the middle meatus of the nose, by Dr. Greenfield Sluder. At its meeting on May 16th the following papers were read: Surgical Operations on the Aged, with Report of Illustrative Cases, by Dr. A. H. Meisenbach; Vesico-vaginal Fistula (operation according to technique of Freund), Report of a Case, by Dr. F. L. Reder; The Use of the Double-knife in Histopathology, with Demonstration, by Dr. R. B. H. Gradwohl. Dr. Moore and Dr. Dorsett will contribute to the programme for June 6th.

The St. Paul Meeting of the American Medical Association.—We are informed that arrangements have been perfected with the Chicago & Northwestern Railway to run a special train from Chicago to St. Paul at 7.30 P. M. on Monday, June 3d, for the accommodation of such members of the American Medical Association and their friends as desire to attend the fifty-second an-

nual meeting. The train will be known as the "Medical Association Special," and will be composed of the latest pattern Pullman sleeping and buffet cars, and will run through to St. Paul without change. The fare will be $13.50 for the round trip from Chicago, and tickets are good on the Medical Association special trains and also on all regular trains over the Chicago & Northwestern Railway, leaving Chicago May 27th, 28th, 30th, 31st, June 2d and 3d. Trains leave Chicago daily at 9 A. M., 6.30 P. M., 10 P. M., and 10.15 P. M. Sleeping-car rates on the Medical Association special and other trains will be $2 for a double berth from Chicago to St. Paul. Each double berth provides sleeping accommodation for two persons. Those desiring special location may arrange for their reservation, either by letter or by personal application to Mr. Chas. Truax, of Truax, Greene & Co., 42-46 Wabash Avenue, Chicago, or at any office of the Chicago & Northwestern Railway (the city ticket office at Chicago is located at 212 Clark Street). On Monday, June 3d, a representative of the Chicago & Northwestern Railway will be at the office of Truax, Greene & Co. from 10 A. M. to 6 P. M.

A special trip to Yellowstone Park has been arranged for, including all charges, sleeping-car and dining-car service, hotel bills, stage-coach charges, etc., $85 for each person. General arrangements for this train are in the hands of a special committee, consisting of C. A. L. Reed, M. D., Cincinnati, Ohio; Harold N. Moyer, M. D., 103 State Street, Chicago; F. C. Stanton, M. D., 34 Washington Street, Chicago; I. N. Love, M. D., 49 West Forty-fourth Street, New York city; John F. Fulton, M. D., St. Paul; and Charles Truax, 42 to 46 Wabash Avenue, Chicago.

The National Association for the Study of Epilepsy and the Care and Treatment of Epileptics held its first annual meeting in Washington, D. C., on May 14th and 15th. Papers were read on Condition of Epileptics in Russia, by Professor Paul Kovalevsky, of St. Petersburg; Condition of Epileptics in Belgium, by Professor Jules Morel, of Mons, Belgium; Care and Treatment of Epileptics in Switzerland, by Professor F. Kalle, director of the Swiss Institution for Epileptics, and Dr. T. Kalle, director of the private institution, Schloss-Pfullingan; Relating to Epileptics in Sweden, by Oskar Medin, M. D., professor at the Karolinska Institute, of Sweden; Relating to Epileptics in Turkey, by Dr. S. C. Zavitiano, president of the Imperial Society of Constantinople; Report on the Work at Bielefeld (Germany), by Pastor Siebold; Care and Treatment of Epileptics in Italy, by Professor C. Mangozzini, of Rome; Treatment of Epileptics in Brazil, by Dr. Horelburg, medical deputy of the consul-general in Rio de Janeiro; Condition of Epileptics in Brazil, by Dr. Secundino E. Sosa, specially appointed by the National Academy of Medicine of Mexico to furnish information to the association; Report on the Work of the National (British) Society for the Employment of Epileptics, by G. Penn Gaskell, Esq., secretary of the society, London, England; Epilepsy, by Frederick Peterson, M. D., president of the board of managers of the Craig Colony; An Ideal Colony for Epileptics and the Necessity for Broader Treatment of Epilepsy, by William P. Spratling, M. D., superintendent of the Craig Colony for Epileptics; Massachusetts State Hospital for Epileptics, by W. N. Bullard, M. D., president of the board of managers; Special Provision for Epileptics in Pennsylvania, by Wharton Sinkler, M. D., president of the board of managers of the Pennsylvania Epileptic Hospital and Colony Farm; The Ohio State Hospital for Epileptics, by General R. Brinkerhoff, member of the Ohio State Board of Charities; The New Jersey Village for Epileptics, by H. M. Weeks, M. D., superintendent; Condition of Epileptics in Virginia, by William F. Drury, M. D., of Petersburg; Report on Condition of Epileptics in Connecticut, by Max Mailhouse, M. D., of New Haven; A Typical Case, by Mrs. S. A. Monroe, of Buffalo, N. Y.; State Provision for Epileptics in Texas, by B. M. Worsham, M. D.

The Physicians' Business Association, successor to the Physicians' Protective Association, at a recent meeting in Detroit, elected officers for the ensuing year as follows: President, Dr. G. L. Kiefer; vice-president, Dr. H. L. Obetz; secretary, Dr. W. J. Cree; treasurer, Dr. S. H. Knight.

Diphtheria.—A death from malignant diphtheria has been reported from Jersey City.——The schools of Dunellen, N. J., have been closed on account of the appearance of diphtheria there.——At Princeton, N. J., a distinguished patient is Esther Cleveland, daughter of Ex-President Cleveland. Her condition was at last accounts critical.

Small-pox.—As though the United States was not already supplied with an over-abundance of small-pox cases, recent incoming European steamships have brought more of the stricken to these shores. According to Dr. Alvah H. Doty, the Health Officer of the Port, most of the cases come from Naples, which is seriously infected. Dr. Doty has asked Surgeon-General Wyman, at Washington, D. C., to instruct his inspectors abroad concerning the existence of the disease at Naples, and to direct them to have lodging houses inspected and to look after vaccinations. A conference with the various steamship companies trading to Naples, at which he told them of the existing conditions, brought about their hearty cooperation. They have cabled to their agents, and have obtained promises to assist in enforcing the regulations. Fortunately, the time of passage from Naples to New York is about fourteen days, so that the incubation period is about covered.——The discovery of small-pox in a policeman resulted in the vaccination of the entire police force of New York city (about 1,200 men) last week. ——Many places about New York, such as Long Island, Jersey City, Greenwich, Conn., and other points report sporadic cases.——Cities further west and east, where the epidemic has made its presence known, are Kansas City, Mo.; Chicago, Ill.; Grand Rapids, Mich.; Cleveland, Ohio, and Leominster, Mass., while reports from Alaska are that the scare there has not yet entirely abated.

The Pennsylvania Hospital Celebrates its One Hundred and Fiftieth Anniversary.—The one hundred and fiftieth anniversary of the founding of the Pennsylvania Hospital was celebrated at Philadelphia on May 11th. The commemorative exercises were opened by T. Wistar Brown, who read St. Luke's version of the parable of the Good Samaritan. Benjamin H. Shoemaker, president of the Board of Managers, extended a welcome to the "little provincial hospital" petitioned for by Franklin in 1751, and John B. Garrett, a member of the board, delivered the formal address. He entered exhaustively into the early history of the hospital.

The Annual Report of Roosevelt Hospital, New York city, for 1900 calls especial attention to the discrepancy between the resources of the hospital and its expenses. This condition of affairs, says the report, makes it necessary for the hospital either to decrease its work or increase its endowment. Last year 3,251 patients were under treatment, of whom 2,462 were treated without cost to the patients. In addition 7,614 cases were treated in the emergency department, but not detained for ward treatment, and there were 64,293 visits to the dispensary. The cost of maintaining the hospital and dispensary was $155,296.76, which made a deficit for the year of about $11,000. As the work of the hospital is growing every year the report says that an additional endowment of $500,000 is needed.

Reception Hospitals for the Insane.—The overcrowding of the New York State hospitals for the insane having been relieved and the question of providing for the yearly increase of insane patients having been in a large measure solved, the State Charities Aid Association finds what it considers a complete solution of the problem in a plan which will at the same time relieve Bellevue Hospital of the necessity of receiving insane patients. After the new hospitals now being built have been completed there will remain to be found accommodations for six hundred patients in order to provide for the yearly increase for the next three years. It is proposed to build reception hospitals in this city and others of the larger cities of the State. In these would be gathered all cases of supposed insanity and recent cases of the committed insane to be examined and classified. Possibly curable cases would be kept for some time in the reception hospitals. The committee says that several of the best-known alienists and neurologists of New York will gladly serve as attending and consulting physicians if such a hospital were established at a convenient point. In speaking of the annual cost of maintaining the State hospitals the report says that it has been reduced from $216.12 a patient to $165.36 a patient.

Hospital Staff Changes.—Dr. S. Lewis Ziegler has been elected attending surgeon at the Wills Eye Hospital, Philadelphia. Dr. Ziegler is a graduate of the University of Pennsylvania, class of '85. He served as resident physician in the Germantown and Episcopal hospitals and was for two years house surgeon at the Wills Eye Hospital, where he was also assistant surgeon for seven years.——Dr. Harriet M. Balch, of Amityville, L. I., has been appointed physician at the Long Island State Hospital.——Dr. William D. Bacon, resident physician at the Baltimore (Md.) University Hospital, has resigned and been succeeded by Dr. Thomas H. Magness, of Baltimore. Dr. Edward C. Moriarty will leave the hospital shortly, and it is understood that his position will be filled by Dr. Joseph T. Devine, of New York city.——Dr. Luther H. Reichelderfer has been appointed superintendent of Garfield Hospital, Washington, D. C.

Hospital Buildings and Endowments.—Work will shortly be begun on a hospital at Montrose, Col. The estimated cost is about $12,000.——Plans for an addition to the County Hospital at Milwaukee, Wis., have been accepted. The cost will reach $80,000.——The will of the late Miss Anna Cohen, of San Francisco, bequeaths $5,000 each to the Children's Hospital and the Mt. Zion Hospital of that city.——Plans have been completed for the $50,000 sanitarium which is to be erected by a citizen of Fond du Lac, Wis., for the Sisters of St. Agnes, near that city. The building will be ready for occupancy by November 1st.——Mrs. C. B. Newbold has given $25,000 for the erection of an obstetrical amphitheatre for the maternity department of the University of Pennsylvania, as a memorial of her mother, the late Mrs. Thomas A. Scott. ——The new maternity hospital building, the gift of J. Pierpont Morgan to the Society of the Lying-in Hospital of the City of New York, is nearing completion and will be ready for occupation early in the autumn. It occupies an entire block on Second Avenue, from Seventeenth to Eighteenth Street, and is eight stories high. ——The work of converting the East Side Dispensary, at Nos. 322 and 324 East Third Street, New York, into the Austro-Hungarian Hospital, with thirty beds, free to members of all nationalities, was begun on May 1st. The sum of $10,000 has been subscribed and another $10,000 is pledged.——The will of N. C. Brockway, of New Haven, Conn., bequeaths $2,000 to the Albany (N. Y.) City Homœopathic Hospital and Dispensary. ——The Red Cross Medical Association of Detroit, Mich., has purchased what was formerly the Lafayette Hospital, in that city, and the building is now the Red Cross Hospital. An ambulance service will be installed. ——The establishment of a Norwegian hospital in St. Paul, Minn., under consideration for the past two months, is a certainty, and by August 1st next the institution will be in operation. Property has been selected and will shortly be purchased.——The Women's Hospital Association of Batavia, N. Y., has received a check for $500 from Mrs. Lawrence Williams, of New York. ——J. Howard Wright, of New York, has given $10,000 to the Muhlenberg Hospital of Plainfield, N. J., for an operating pavilion in connection with the new buildings of the hospital.——The will of the late Joel Goldenberg, of New York, bequeaths $5,000 to the Mt. Sinai Training School for Nurses, $4,000 to the Montefiore Home for Chronic Invalids, and $3,000 to the Mt. Sinai Hospital. The entire residuary estate of the testator is bequeathed to Mt. Sinai Hospital for the purpose of creating and maintaining a ward in the hospital to be known as the Joel Goldenberg Ward. The diseases which are to be treated in this ward are to be determined by his nephew, Dr. Herrman Goldenberg, so soon as the arrangements for its establishment are completed. Should the estate be insufficient for the creation of a ward such as the officials of the institution deem proper, the funds are to be used for the maintenance of perpetual beds in the hospital.——The will of Leopold Feiss, of Cincinnati, Ohio, leaves $500 to the Jewish Hospital, of that city. ——By the will of Edward A. Hammond, of Long Branch, N. J., over which there is to be a contest, there is bequeathed $5,000 to the Monmouth Memorial Hospital, at Long Branch.——A *crèche* for the children of women working in the factory, and a hospital for employees and sufferers in the immediate neighborhood, are to be provided by Crane Bros., manufacturers, of Chicago. The cost is estimated at $50,000.

Births, Marriages, and Deaths.

Born.

FISKE.—In Richmond Hills, Long Island, on Wednesday, May 15th, to Dr. and Mrs. William Clarence Fiske, a daughter.

Married.

BLY—ORR.—In New York, on Tuesday, May 14th, Dr. Perry Amidon Bly, of Rochester, and Miss Julia Dodge Orr.

COCHRANE—RANDALL.—In Albany, on Thursday, May 9th, r. H. B. Cochrane and Miss Angelica Randall.

GORDON—TAYLOR.—In Abilene, Kansas, on Saturday, May 3th, Dr. R. N. Gordon, of Tacoma, Washington, and Miss Pearl aylor.

MERCHANT—SHEPHERD.—In San Miguel, Batopilas, Mexico, ı Tuesday, May 7th, Dr. Francis D. Merchant and Miss Grace ıepherd.

Died.

ESTABROOK.—In Denver, on Saturday, May 11th, Dr. Luther aniel Estabrook, in the sixty-ninth year of his age.

GAFFORD.—In Buena Vista, Colorado, on Friday, May 10th, r. John Lawrence Gafford.

HAYES.—In Plainfield, N. J., on Sunday, May 12th, Dr. ımes Hayes.

MCDERMOTT.—In Avondale, Ohio, on Wednesday, May 8th, r. George Christie McDermott. in the fifty-third year of his age.

WEBB.—In Washington, on Tuesday, May 14th, Dr. Frank J. 'ebb.

Pith of Current Literature.

Boston Medical and Surgical Journal, May 16, 1901.

The Treatment of Psoas Abscess by Incision. By 'r. Robert W. Lovett.—The practical conclusions of this ıper are: That fever is not necessarily an accompaniıent of psoas abscess formation; that where it does ocır, the prognosis is not so good as where it is absent; ıat the best method of operation is by a lumbar or an iac incision, preferably the latter. It seems, on gen·al principles, better to avoid recumbency for long periıls, which, of course, makes drainage by an iliac incision most impossible. It seems, therefore, best to put on a laster jacket almost immediately after operation, to ıable the patient to sit erect and to allow the abscess to rain almost from the first. In this way the author has ɔtained better results than by any other method.

Infantile Scorbutus. By Dr. John Lovett Morse. -The treatment in this constitutional disease consists of ·gulation of the diet and the administration of orange · lemon juice. Either method alone is useful, but the ɔmbination is far preferable. The diet should be that ıitable for the infant of the given age—breast milk, odified cow's milk, beef-juice. Modified milk should, ıless contraindicated by complicating conditions, be ven uncooked. The juice of half or the whole of a mon or orange should be given daily. No drug is of e slightest use. During convalescence, iron may be dicated for the anæmia. Complicating gastro-enteric sturbance should be treated symptomatically, if necesry. The tenderness of the back and limbs demands at the infant be kept quiet. In the severer cases reımbency on a Bradford frame or light splints to the fected limbs will afford much relief after the first few ys; they are rarely needed for a longer time.

Neuritis Recurring after Atrophy of both Optic erves in a Case of Brain Tumor. By Dr. Edward R. illiams.—An interesting feature in this case is the disɔnancy that exists between the great size of the tumor d the indefinite and mild clinical symptoms. A large rt of the corpus callosum was totally destroyed, and ɔ apex of the new growth appeared in the interduncular space, where it compressed the second and ird cranial nerves. The only effect on the third nerve s to irritate it sufficiently to cause a temporary dilataɔn of the left pupil. There was no paralysis of the ɔ muscles.

A Case of Accidental Inoculation of Cancer in a esh Wound. By Dr. A. T. Cabot.—This case illusıtes the importance of taking great care, during the removal of a cancerous growth, to go wide of the disease, so as to avoid the possibility of inoculation. It is also interesting to note that the antiseptics used to cleanse this wound did not suffice to prevent the survival and growth of the cancer elements.

Massachusetts General Hospital. Clinical Meeting of the Medical Board.

Medical Record, May 18, 1901.

The Recent Buffalo Investigations Regarding the Nature of Cancer. By Dr. Roswell Park.—As the result of study comes the conviction that cancer, in its inception, is purely local, and that the process of generalization is relatively slow, save in certain rare instances. Only by a combination of ante-mortem and post-mortem studies can its nature be solved. In the State laboratory the general lines of investigation include, not alone the histological and bacteriological methods, but the study of the subject also from a biological and a chemical standpoint. The studies already made seem to render it clear that death, in cases of cancer, comes about, as in so many other diseases, by a sort of terminal infection, which is a conspicuous feature of the disease, and has not hitherto attracted sufficient attention. It appears that the end is brought about by a distinct toxæmia, and particularly by a sort of hæmatogenous infection. It would appear that the so-called fatty degeneration of carcinoma cells is, at least in some part, due to the presence of organisms which have been mistaken for fat droplets or for epithelial cells in advanced fatty degeneration. The cancer juices, or so-called cancer milk, consist almost entirely of pure culture of these organisms. With regard to the yeasts and the fungi, which the Italians, in particular, believe to be the actual parasites of cancer, nothing has yet been established to prove that they may not in occasional instances produce cancer, but, so far as the Buffalo researches are concerned, the Italian observations have been neither absolutely disproved nor confirmed.

The author wishes to make it as evident as possible that carcinoma as a type of disease is, in every instance, an example of epithelial infection. Sarcoma, on the other hand, is an infection of connective tissue, probably by the same organisms, the tissue cells reacting somewhat differently. As there are three distinct types of malarial parasite, so, we may suppose, do cancer organisms manifest specific inclinations. As to the possibility of spontaneous retrocession, or disappearance of malignant growths, there is nothing in the protozoan theory of cancer which make this appear less possible or plausible than before, nor is there anything which shows it to be impossible.

Contracture of the Neck of the Bladder. By Dr. Charles H. Chetwood.—In treating the subject of contracture of the neck of the bladder, the author encroaches upon the more discussed subject of prostatic hypertrophy, because these two maladies have much in common, and also for the purpose of introducing a substitute for the Bottini galvanocaustic operation. He notes that the most ardent advocates of the Bottini technique admit that some cases are not suitable to this mode of procedure, and should be submitted to the more radical method of prostatectomy. Yet the distinction cannot be made before operating. Cystoscopy is of doubtful expediency in advanced cases of prostatic hypertrophy, especially when there is evidence of pyelonephritis. This operation consists in adopting the perineal route as a means of approach to the neck of the bladder, and the galvanocautery knife as a means of removing the obstruc-

tion or the obtruding inflammatory or hypertrophied outgrowth.

Medical News, May 18, 1901.

On the Modern Treatment of Acute Gonorrhœa. By Dr. George Knowles Swinburne.—The author hesitates to lay down any one method of treatment as the ideal one assuring success. The truth is that the treatment of this disorder is as much an art to be cultivated as is the treatment of disease in any other department of medicine or surgery. Every case is a law unto itself. The diagnosis of an ordinary acute gonorrhœa is generally easy; in no case should the microscopic examination of the secretion be omitted, no matter how sure one may be of one's diagnosis. The gonococci arranged in fours, pairs, eights, etc., appear in groups within the pus cells, but they may also be seen outside and between the pus cells, and on or within the epithelial cells. They are best seen with an oil immersion lens, and an easy method of finding them is by means of the methylene blue stain. The knowledge that, after a negative diagnosis has been made, a patient may return in three or four days with an increased discharge containing a pure culture of gonococci, should prevent us from arriving at too hasty a conclusion. As to treatment, the use of permanganate of potassium solution, or perhaps a saline solution, is advised, to be used in irrigations several times a day, as hot as can be borne. The anterior urethra only is treated so long as the anterior urethra alone is affected. The germicide chosen should be used twice a day for three or four days and once a day for the rest of the first week; during the second week, every other day; during the third week twice, the fourth week once, and at the end of the fifth week. If there have been no discharge and no gonococci, the beer test is given—drinking beer every day for a week. If the patient stands this test he is discharged, but a final examination should be made only from four to six weeks later. This last examination, in the author's opinion, is specially important.

Chronic Gonorrhœa. By Dr. John Van Der Poel.—A hard and fast rule for the hygienic management of chronic gonorrhœa would be impossible to formulate. Each case must be judged upon its individual merits. As to the internal treatment: Alkalies in case of scalding, if reinfection is present; oleoresins when this has subsided; and later, antiseptics, as salol and urotropine. For the local treatment, the general rules are: (1) Care and conservatism in all procedures; (2) avoidance of overinstrumentation and injuries to the mucous membrane; (3) sufficient rest after passing through one system of treatment before beginning another in case the other is necessary; (4) regular and systematic use of the microscope in the control of the treatment—this is most essential; (5) surgical cleanliness and sterilization of all instruments.

On Gonorrhœal Conjunctivitis. By Dr. Ward A. Holden.—The author advocates the establishment of a public hospital in New York for the treatment of contagious diseases of the eye as being most desirable, not only for its humane features, but also as a purely economic measure.

Treatment of Gonorrhœal Stricture of the Urethra. By Dr. James R. Hayden.—As a broad, general rule, it may be safely stated that the best routine treatment for recent cases, and even fairly recent cases, of gonorrhœal stricture, is careful and gradual dilatation, combined with instillations or irrigations, and appropriate diet and internal medication to render the urine bland and non-irritating; if gradual dilatation fails, or for any reason cannot be employed, we then resort to one of the cutting operations, being guided in our choice of procedure by the location and extent of the contraction, which is readily ascertained by the *bougie à boule.*

The Treatment of the Complications of Acute Gonorrhœal Posterior Urethritis. By Dr. James Pedersen.

Journal of the American Medical Association, May 18, 1901.

Amputation through the Hip Joint, with a Synopsis of Two Hundred and Sixty-seven Cases in which the Author's Method was Employed. By Dr. John A. Wyeth.—The author gives his method in detail and compares it with the methods of others. Of the two hundred and sixty-seven cases of disarticulation at the hip joint for all causes, fifty-three, or nineteen and eight-tenths per cent. of the patients died. Every fatal case is recorded, and the list includes a number that died from intercurrent disease, such as pneumonia and apoplexy, although the cause of death was not justly referable to the operation. Several died from sepsis, one on the twenty-sixth day, from an avoidable cause of death. The author's method has met with almost universal approval, and the few objections which have been advanced, as, for instance, the difficulty of disarticulation, and the free oozing from the large muscular surface divided, can no longer hold in the present improved technique of the operation. In suitable cases there is no longer any use for procrastination, and we are justified in urging operation in cases which up to now we have been content merely to recommend.

The Ocular Expression of Intranasal Lesions. By Dr. Robert Sattler.

A Brief Note on the Pathology, Diagnosis, and Treatment of Nasal Accessory-sinus Affections. By Dr. E. Larne Vansant.—The author draws attention to the excellent results obtained from forcibly syringing the openings and sinuses with hot dry air used under pressure.

The Reduction of Temperature in Fevers by Evaporation, Warm Water being Used for Baths. By Dr. Francis H. Williams.—In brief, the directions for giving evaporation baths are: Give a bath whenever the temperature rises to 102° F. Have the patient lie on a blanket during the bath, cover him with one thickness of surgeon's gauze, which, when moistened, will fit the skin perfectly, and sprinkle the skin with water at about 115° F. Be guided by the amount of water evaporated in giving the bath. So long as the temperature is high have as little clothing on the patient as possible. The author's statistics commend the procedure.

The Streptococcus Pyogenes in Gynæcological Diseases. By Dr. G. Brown Miller.—The author calls attention to the characteristic signs by which the diagnosis of streptococcic pelvic infections that have extended beyond the uterus and have not caused a general peritonitis or systemic infection, can be made, and to the principles of operation.

Menière's Disease, with Report of a Case. By Dr. R. A. Bachmann.

The Financial Relations of the Medical Profession to the People and Public. By Dr. J. J. Conner.—The author believes that it is now time for the medical profession to form protective associations, and the one he is in favor of forming first is one for the weeding out of dead-beats, and the devising of ways and means for the better collection of our just debts.

A Study of the Ætiology and Pathology of Rheumatism, with Special Reference to "Rheumatic Diathesis." By Dr. A. P. Stoner.—According to the author, the difference between the gouty and the rheumatic subject is that one contains that special ingredient requisite to the propagation of the gouty poison, while that of the other harbors a rheumatic poison. He believes that both conditions are brought to the acute crisis by the agency of an infecting germ, the true biologic nature of which remains yet to be discovered.

A Case of Acute Dermatitis Caused by the Use of a Hair-dye having for its Base the Hydrochlorate of Paraphenylene Diamine. By Dr. A. D. Mewborn.

Difficulties and Dangers of Anæsthetics. By Dr. Daniel Eisendrath.

The Vesicular Murmur and its Relation to Pulmonary Health and Disease. By Dr. Thomas Neil McLean.

On the Relation between the Variety of Microorganisms and the Composition of Stone in Calculous Pyelonephritis. By Dr. Thomas R. Brown.

Complete Inguinal Extraperitoneal Hernia of the Bladder; Recovery. By Dr. J. F. Baldwin.

Philadelphia Medical Journal, May 18, 1901.

The Disinfection of Wounds with Pure Carbolic Acid. By Dr. Von Bruns.—The author does not hesitate to recommend the application of pure carbolic acid in small quantities and for one minute, followed by immediate irrigation with absolute alcohol, as a remedy that forms a valuable adjunct to our mechanical procedures in infected wounds. It would be a special providence if that remedy, which was the foundation of the whole antiseptic era, and which since then has again been generally discarded, were called upon to serve us anew in the battle against wound infection.

A Further Report on a Case of Presystolic Murmur Associated with Pregnancy. By Dr. James Tyson.

An Exceedingly Rare Case of Imperforate Anus. By Dr. Charles B. Kelsey.—The patient—a man, twenty-four years of age—fairly well nourished, though weighing only 107 pounds, was born with an imperforate anus. An opening was made in the perinæum during the first few days of life, but there has always been a free communication between the bladder and rectum by which urine has escaped *per rectum* and fæces *per urethram.*

The Relations of the Public to the Medical Profession. By Dr. William H. Thomson.—The author regrets that one of the most creditable features of our profession in its acknowledgement of a code of professional ethics, which, as the term implies, relates to questions of honor in professional life and conduct, is interpreted by many as a purely trades-union code of the most despotic nature. The author wishes that some suitable plan of teaching anatomy and physiology in every high school, academy, and college could be devised. Legislation is relied upon to guard against the Christian Scientist.

Gastric Tetany, with Report of Cases. By Dr. William Gerry Morgan.

The Functional Tests of Hearing. By Dr. William Lincoln Ballenger.

Report of a Case of Rupture of the Eyeball from Contusion—Luxation of the Lens. Hernia of the Iris and Ciliary Body. By Dr. J. W. Sherer.

Anisometropia. By Dr. Norburne B. Jenkins.

Lancet, May 11, 1901.

The Pathology and Diseases of the Thyreoid Gland. By W. Edmunds, F. R. C. S.—In the first of the Erasmus Wilson lectures upon this subject, the author discusses the anatomy of the thyreoid and parathyreoid glands, and the effects produced upon dogs, monkeys, and other animals by their excision. In monkeys and dogs the symptoms commence generally about forty-eight hours after the operation. One of the first symptoms is a fibrillar twitching of the muscles, followed within a day or two by general convulsions. The respirations are hurried, and the temperature raised. These attacks last an hour or more and completely pass off, but the animal becomes apathetic, its hair falls out, and it has a difficulty in maintaining its equilibrium. Later the legs become rigid, ulcers appear on the skin, and the animal usually dies on about the fifth day. The prominence of the eyes is much affected; the palpebral fissures become narrower, and the eyes less prominent. The operation produces no effect whatever upon rabbits, which is due to the fact that two of the parathyreoid glands lie separate from the thyreoid, and consequently escape removal. The fatal termination in dogs cannot, as a rule, be prevented by thyreoid gland feeding.

The Importance of the Teaching of Insanity to the Medical Student and Practitioner in Relation to the Prevention of Insanity. By Dr. R. Jones.

Local versus General Anæsthesia in Certain Cases of Abdominal Surgery. By T. H. Morse, F. R. C. S.—The author has observed that when abdominal sections have been performed with local anæsthesia, little or no shock has followed. The causes of shock are twofold, viz., the anæsthetic, and the extent of injury to nerve structure produced by the operation. Shock varies in proportion to the skill of the administrator of the anæsthetic, and is often dependent upon the duration of the operation, and hence upon the amount of the anæsthetic which is inhaled. There are some patients whose condition of extreme exhaustion is such that the additional shock of general anæsthesia will just take away their only chance of life; in these cases the author recommends the use of local anæsthesia. He reports five cases in which freezing with ethyl chloride was used with great success to produce anæsthesia. No shock followed the operations, and, although all the cases were severe ones, three recoveries took place. It is extremely probable that pain is less acutely felt when the patient is *in extremis.*

The Ætiology and Treatment of Convergent Squint. By C. Worth, F. R. C. S.—In a case of squint there is, in addition to (1) the deformity, (2) a defective development of the fusion faculty, (3) nearly always a suppression of the vision of the deviating eye, (4) in the great majority of cases more or less amblyopia of the deviating eye, and (5) refractive error.

The deviation of a convergent squint consists in abnormity of the converging mechanism, whereby zero of convergence becomes some cross-eyed pos instead of parallelism of the visual axes. It is espe important to remember that squint is not a muscu fection. The one essential cause of squint is a de development of the fusion faculty. This is free associated with other developmental defects, such a abnormal shortness of the eyeball (hypermetropia) and congenital amblyopia. Hypermetropia, anisometropia, and congenital amblyopia, may any or all be present, but with a normal fusion faculty there will be no squint. The rational method of treatment is to endeavor to re-

move the cause of the squint by training the fusion faculty at an age when binocular vision should normally be developed. The author describes an instrument devised by himself for this purpose, which he calls an "amblyoscope," by means of which an amblyopic eye is trained to take its share in vision.

Operation is indicated when the periodic measurements of the angle of deviation show no decrease. The author has devised a special advancement operation which he describes in detail.

Diseases of the Maxillary Antrum, their Symptoms, Causes, and Treatment. By Dr. A. Brouner.—The commonest disease of the antrum is the so-called empyema, or purulent catarrh of the lining mucous membrane. In acute cases, which usually follow influenza or scarlet fever, the symptoms are well marked. Severe pain, neuralgic or throbbing, which increases on pressure or rapid movements of the head. The pain is generally intermittent and depends greatly on the amount of fluid in the antrum. The teeth are often painful, especially on pressure, thus leading to erroneous diagnoses. The cases mostly heal spontaneously without operative interference. Chronic empyema of the antrum is extremely common, but generally escapes diagnosis. The subjective symptoms are very slight. There is often recurrent infra-orbital neuralgia or a dull aching pain in the cheek, accompanied by swelling of the soft tissues. The only symptom complained of may be a bad smell in the nose. Distention of the cheek is not a sign of empyema of the antrum, but of cysts. These empyemata are usually of nasal, not dental, origin. The points in treatment to be aimed at are: (1) To open the antrum at the lowest possible point, so as to get good drainage of the cavity; and (2), to keep this opening patent until the disease has been cured. The author prefers opening the antrum through the alveolar process when possible. Under the use of eucaine it can be done with very little pain. The after-treatment is of great importance; it is usually stopped much too soon. Cysts of the antrum are not very common and are mostly of dental origin. Tumors of the antrum are frequently met with, the most common being carcinoma. The first symptoms are severe pain in the cheek and nasal discharge; nasal polypi are usually present and bleed freely on removal. If diagnosticated early and the whole of the upper jaw removed, the prognosis is fairly good.

Mental Fatigue in School Children. By J. Bellei, M. D.—The author has studied the phenomena of mental fatigue in children, and has arrived at the following conclusions: (1) No conclusion could be drawn as to the influence of any single subject of teaching; (2) the first hour of lessons is a useful mental exercise because the children are able during that time to overcome the state of inattention in which they were at the time of coming to school; (3) the morning lessons do not produce great mental fatigue; (4) the midday rest is of great use to the children because it does not destroy the good effects of the mental exercise in the morning; and (5), though immediately after the midday rest the children are in the best condition of mind, an hour or so of application in the afternoon is sufficient to produce such a fatigue as to lead at the end of the afternoon lesson to the worst work of the day.

Three Cases of Myxœdema of Varied Type. By W. Wyllys, M. R. C. S.—The author reports three cases of myxœdema, all occurring in women past middle age. One case was quite acute, dementia developing rapidly, and passing into acute mania, and terminating in death within a few months. The two other cases were markedly benefited by the thyreoid treatment.

British Medical Journal, May 11, 1901.

Pancreatitis. By A. W. Mayo Robson, F. R. C. S.—The essential and immediate cause of the various forms of pancreatitis is bacterial infection, this having been proved both clinically in the human subject and experimentally in animals. Though the infection may arise from the blood, as in pyæmia, or by direct extension from the neighboring tissues, as in ulcer of the stomach, yet the most usual channel is through the duct, as in the cases arising from gall-stones in the common duct, and from gastro-duodenal catarrh. Fat necrosis is commonly found in association with pancreatitis, but the fact that it is not found in all acute pancreatic diseases and that it has been noted during abdominal operations for other ailments, appears to show that the condition giving rise to it is not essentially a pancreatitis. As regards hæmorrhage in diseases of the pancreas, the author comes to the following conclusions: 1. That in certain diseases of the pancreas there is a *general* hæmorrhagic tendency which is much intensified by the presence of jaundice. 2. That hæmorrhage may apparently occur in the pancreas unassociated with inflammation or jaundice or a general hæmorrhagic tendency. 3. That both acute and chronic pancreatitis can and do frequently occur without hæmorrhage. 4. That some cases of pancreatitis are associated with local hæmorrhage. Inflammations of the pancreas may, therefore, be more conveniently and scientifically classified, like inflammation of other organs, as acute, subacute, and chronic; there is no reason to use the term hæmorrhagic pancreatitis except as a variety of acute pancreatitis. In acute infective pancreatitis treatment practically resolves itself into that of peritonitis commencing in the superior abdominal region. In the early stages the symptoms are usually so indefinite and the collapse so marked that no surgical procedure would generally be justified. The subacute form of pancreatitis is much more amenable to treatment as the indications are so much more definite and there is more time for careful consideration. By the time operation is performed an abscess has usually formed and is making its way toward the surface. Chronic pancreatitis must also be treated by abdominal section and drainage, but in this case the drainage is indirect and obtained by draining the gall-bladder by cholecystotomy, cholecystenterostomy, or duodeno-choledochotomy. The exact line of treatment cannot be determined until the abdomen is opened. The results of treatment of this class of cases have been most encouraging; of twenty-two cases operated on, only one died directly from operation. Of those recovering from operation, with the exception of two that died a few months later, complete recovery ensued.

Notes on a Mild Type of Small-pox (Variola Ambulans?) By Dr. F. Montizambert.—The author calls attention to the mildness in type of the small-pox that is at present epidemic in the United States and Canada. Between December 28, 1900, and March 29, 1901, 11,964 cases of small-pox were reported, with only 157 fatal cases; a mortality of 1.31 per cent. The extreme mildness of the disease, from time to time, defies all efforts to prevent its entrance into a community. There is, as a rule, but little initial fever, a very sparse, discrete eruption, and no secondary fever. In the country it is usually spoken of as chicken-pox or measles; in many lumber camps it goes by the name "cedar itch." Those affected by it go on with their work or business, and travel in public conveyances. Whether it is small-pox is doubted

by many, but it only attacks the unvaccinated or those not recently vaccinated; it attacks adults as often as children, and here and there a susceptible person develops a severe confluent or even fatal case. Vaccination is not compulsory in Canada; the author thinks it should be made so, as it furnishes the only means of stamping out the disease.

Note on the Probable Relationship of Vaccinia to the Inoculated Form of Small-pox in Man. By Dr. S. M. Copeman.—The author holds that it was not improbably from the inoculated form of small-pox, rather than from the ordinary variety, that much of the cow-pox, in the prevaccination era, was derived. The inoculation of small-pox is still carried out in Nubia; the author obtained some human small-pox material from that country, and found that while it could not be found to "take" directly on the calf, nevertheless results typical of ordinary vaccinia were obtained when the strain of lymph, after inoculation with it of a series of monkeys, was again transferred from the inoculation vesicles on this animal to the epidermis of the calf.

Note on a Case of Enormous Dilatation of the First Part of the Duodenum, Causing Great Dilatation and Proptosis of the Stomach; Gastro-jejunostomy; Necropsy. By G. Barling, M. B.

A Case of Gastro-jejunostomy for Complete Rupture of the Intestine at the Duodeno-jejunal Flexure. By B. G. A. Moynihan, F. R. C. S.—The case here reported was that of a boy aged six years, upon whom a gastro-jejunostomy was performed for complete rupture of the intestine at the duodeno-jejunal flexure following injury. A Murphy button was used and the patient did well for ten days, when he was seized with overwhelming abdominal pain and collapse, and died. At the autopsy a perforation of the duodenum was found, due to the button which lay in the ulcer that its pressure had produced. The case is especially interesting in that it shows that the passage of all the bile and all the pancreatic juice secreted into the stomach does not interfere in any degree with the functions of that viscus. The mere presence of aseptic bile alone in the stomach is insufficient to cause vomiting.

Case of Sarcoma of the Stomach. By Dr. A. C. Wilson.—The author reports a case of this comparatively rare affection, the tumor being situated on the greater curvature of the stomach, extending into the duodenum, and of the size of a small orange. The tumor was excised, a gastro-duodenostomy performed, and the patient made a perfect recovery, returning to work at the end of a month. Histological examination showed the growth to be a sarcoma of the mixed-cell type.

Perforating Gastric Ulcer; Operation Twenty-eight Hours after Perforation; Recovery. By H. W. Shettle, M. R. C. S.—The author reports the case of an anæmic girl, aged seventeen years, who suddenly showed all the symptoms of a perforating gastric ulcer, although no symptoms of ulcer had been previously present. Operation was not performed for twenty-eight hours after perforation, yet the patient made an uninterrupted recovery.

A Case of Tuberculous Disease of the Cæcum. By Dr. J. Maitland.—The author reports the case of a Hindu, aged forty-four years, who had suffered for eight years with attacks of pain in the region of the appendix. On examination, a cylindrical tumor was felt in the right umbilical region, firm in consistence, and fixed in one position. On opening the abdomen the tumor was found to be the tuberculous cæcum; eleven and a half inches of gut were removed, lateral anastomosis performed by means of a Murphy button, and the patient made an uninterrupted recovery. Although the cæcum was extensively ulcerated, yet there had been no diarrhœa or hæmorrhage. There is reason to think that tuberculous disease of the cæcum is more common than is generally believed, and that some of these cases are mistaken for inflammatory disease of the appendix.

The Spontaneous Cure of Hydatid Cysts. By Dr. W. M. Stevens.—The author reports a case of apparent spontaneous cure of hydatid cysts, occurring in a man who had died of some other affection. The various explanations offered as to the cause of "spontaneous cure" are: 1. Natural death of the parasite. 2. Toxic action of the bile from its entrance into the cavity of the cyst. 3. Absorption of hydatid fluid. 4. Inordinate multiplication of the internal brood. 5. Changes in the ectocyst. The author reviews these various theories, and dismisses them all as unworthy of credence, with the exception of the last. The ectocyst, sometimes called the pseudocyst, is the external covering of the hydatid cyst and is derived from the tissues of the host. Changes take place in the ectocyst which result in an interference with the supply of pabulum to the parasite, leading to its death and to degenerative changes in the cyst and its contents. The changes which occur in the ectocyst are fibrotic in nature, and the changes in the cyst are comparable to those occurring in a tuberculous nodule undergoing caseation. Spontaneous cure is most likely to take place in organs in which fibrous overgrowths are common, *e. g.*, the liver. But the only rational treatment for cases of hydatid cyst is removal.

Experiments upon the New Specific Test for Blood. By Dr. G. H. F. Nuttall and Dr. E. M. Dinkelspiel.—The investigations of the authors confirm and extend the observations of others with regard to the formation of specific precipitins in the blood serum of animals treated with various serums. These precipitins are specific, although they may produce a slight reaction with the serums of allied animals. The substance in the serum which brings about the formation of a precipitin, as also the precipitin itself, is remarkably resistant. We have in this test the most delicate means hitherto discovered of detecting and distinguishing bloods, and one worthy of being put to forensic use.

Responsibility and Crime. By Dr. A. Robertson.

Centralblatt für Gynäkologie, April 20, 1901.

Atmocausis and Zestocausis.—Dr. Ludwig Pincus, in a critical review of the subject, regards Stöckel's innovation of lengthening the tube carrying the steam into the uterus as a great advantage. As a measure for the cure of uterine hæmorrhages, it is far superior to curetting, especially in cases in which the bleeding is dependent upon hæmorrophilia. Atmocausis must always be attempted as a curative measure hereafter before extirpation of the uterus is performed, on account of uncomplicated uncontrollable bleeding occurring at the menopause. After abortion, it also stimulates uterine contractions in a manner in which no other agent works. When atmocausis is immediately employed in septic, puerperal endometritis, its effect is marvelous and far superior to that of the curette.

Zestocausis (hot air at a temperature of 239° F., introduced into the uterus for from two to four seconds) acts as a cauterizing agent and is valuable in treating cases of uncomplicated dysmenorrhœa by anæsthetizing the over-sensitive endometrium.

April 27, 1901.

Sterile Yeast in Gynæcology.—Dr. Walter Albert writes that a method has been found of devitalizing yeast without affecting any of its well-known attributes. He has used ordinary brewer's yeast prepared in this way, by mixing one drachm of the yeast with one-half drachm of a twenty-per-cent. solution of sugar. This mass is carefully injected into the vagina and held in place with a tampon. It is permitted to remain for from six to eight hours. By this means he has reduced materially the virulence of the vaginal bacteria, has changed the severity of the vaginal secretion and has rapidly cured extensive erosions of the cervix. The author recommends the use of the yeast also as a preparatory step for vaginal operations.

Influence of Steam upon the Uterine Mucosa. By Dr. M. Koslenko.

Wiener klinische Rundschau, April 21, 1901.

Cysticercus Cerebri; Extirpation; Recovery.—Professor Maydl reports this case, giving in detail a most interesting recovery.

Reform of Hospital Service. By Dr. Paul Federn.

April 28, 1901.

Dental Cyst of the Superior Maxilla.—Dr. Josef Preindlsberger and Dr. R. Wodynski report such a case. The patient recovered after operation. The authors enter into the pathology and genesis of the condition.

A New Soap. By Dr. Heinrich Paschkis.

Centralblatt für innere Medicin, April 27, 1901.

Observations on Dialyzed Digitalis.—Dr. Schwarzenbeck says that the only advantage he finds in this preparation of digitalis lies in the fact that it may be taken for a considerable period without producing gastric disturbance; but this is not absolutely uniform, and he urges that when the patient has received the benefits of the drug, it should be temporarily withdrawn.

Deutsche Medizinal-Zeitung, April 25 and 29, 1901.

Cardiac Area as Influenced by External Causes. By Dr. Abée.

Treatment by Light.—Dr. E. Lindemann says that baths in artificial light stimulate the circulation, the metabolism, and the sweat secretion. The baths have a therapeutic value in anæmia, in chronic articular rheumatism, gout, and sciatica, and aid in obesity cures. The electric light, reflected upon the body in the strength of from fifteen to thirty ampères, provokes an active hyperæmia of the skin, which may become corrosive in its action. It has a decided bactericidal action that may be therapeutically employed for the cure of sluggish ulcers, acne pustules, furuncles, etc.

Münchener medicinische Wochenschrift, April 23, 1901.

Acute Intestinal Obstruction at the Junction of the Duodenum and Jejunum.—Professor Bäumler reports such a case. He enumerates the causes which may lead to the condition as follows: (1) Unusual length of the mesentery of the small intestine; (2) gastroptosis; (3) enteroptosis as influencing the position of the duodenum and the root of the mesentery: (4) the position of the duodeno-jejunal junction as related to the vertebral column; (5) pronounced lumbar lordosis; (6) extensive emaciation and weakness, as after a long and wasting illness; (7) chronic dilatation of the stomach in consequence of pyloric stenosis; (8) prolonged dorsal position after operation; (9) too complete evacuation of the intestines before operation; 10) over-distention of the stomach by food or fluids; (11) chloroform narcosis; (12) operations on the biliary tract; (13) laparotomy, and (14), the application of a plaster-of-Paris corset. The last five may be classed as exciting causes, with the others as predisposing causes. Prophylaxis by avoiding the various elements above cited, so far as possible, is desirable.

Atropine Treatment of Ileus. By Dr. Bofinger.—A casuistic article.

Ileus Relieved by Atropine and Olive Oil. By Dr. Adam.

Deformity Following Fracture, and its Treatment. By Dr. Carl Beck.

Removal of the Fœtal Head Left in the Uterus. By Dr. L. Knapp.—A casuistic paper.

Manual Perforation and Extraction of the Fœtal Head. By Dr. H. Cramer.

Septicæmia and Amputation. By Dr. H. Dœrfler.

April 30, 1901.

The Action of Bactericidal Sera. By Dr. Max Neisser and Dr. Friedrich Wechsberg.

Blood, Cell-bodies, and Bacteria. By Dr. L. Heim.

Extracranial Syphilitic Disturbances of the Eyes.—Professor O. Schwarz describes gummata of the lids, tertiary papules, and syphilitic tarsitis, as well as luetic affections of the bones of the orbit and of the connective tissue of the eye. The cornea, the sclera, the iris and the ciliary bodies can also be affected. (*To be concluded.*)

Blood-poisoning and Amputation. By Dr. H. Dœrfler. (*Conclusion.*)

Prevention of Self-extubation. By Dr. E. Schlechtendahl.

Wiener klinische Wochenschrift, April 18, 1901.

Gastro-intestinal Symptoms of Renal Calculus.—Dr. Maximilian Sternberg says that, in addition to the other symptoms, certain gastro-intestinal phenomena are usually to be observed. These are mainly painful defæcation and the accumulation of flatus. This usually disappears with the renal colic and is best treated by the administration of opium. An increased arterial pressure usually accompanies the intestinal disturbance. Sometimes the gastro-intestinal symptoms are so prominent as to give verity to a form to be described as "alimentary renal colic." Diagnostically, it must be remembered that, in atypical cases of this kind, sensitiveness over McBurney's point may be present (being elicited by pressure upon the ureter), and changes in the urine may be absent.

Case of Otitic Abscess of the Brain Cured by Operation. By Dr. Otto Pfiffl.

Lyon médical, April 28, 1901.

Camphorate of Pyramidon in Phthisis.—M. B. Lyonnet and M. C. Lancon have used this drug in fifteen patients suffering from tuberculosis. They gave fifteen grains daily, which was administered in solution. There was diminished temperature in all cases, as well as a diminution of the night sweats. They believe it to be a valuable remedy.

Formation and Evolution of Obesity, Normal and Pathological. By M. Dufourt.

May 5, 1901.

The Sugars of the Blood. By M. Lepine and M. Boulud.

So-called Traumatic Serofibrinous Pleurisy.—M. F. Barjou and M. C. Lesieur doubt the rôle of trauma in direct production of a pleurisy, although their studies show that, when a latent infection is present, injury may call forth a serofibrinous pleurisy sooner than it might otherwise have developed.

Gazette hebdomadaire de médecine et de chirurgie, April 28, 1901.

Lateral Strangulation of the Intestine in an Umbilical Hernia.—M. Savoriaud reports a case of this character in which the patient developed gangrene of a portion of the small intestine in a strangulated umbilical hernia, which followed the removal of an ovarian cyst. Recovery followed the operation, which was complicated by the presence of a pelvic abscess.

Presse médicale, April 24 and May 1, 1901.

Intra-arachnoid Anæsthesia.—M. Tuffier defends the injection of cocaine by the intra-arachnoid method for the purpose of anæsthesia. He says the injection must be made slowly, should be done in the operating-room, and the technic must be closely followed. He is not discomfited by the one death in 2,500 following the use of cocaine in the spinal canal, saying that it is a low percentage of mortality, and the cases of death reported have occurred in those who were previously diseased, and the technics of the operation are not given in any case.

The Non-specificity of Grippe. By M. G. Rosenthal.

Treatment of Paralytic Luxation of the Shoulder. By M. Bothezat.

Journal des praticiens, April 20, 1901.

Cardiac Asthma. By M. Marklen.—A clinical lecture.

Enteroptosis.—M. Glénard says that women are more subject to the condition than men, the corset being a contributing cause, as well as the puerperium. Laparotomy, hepatism, and nervous conditions also aid the development of enteroptosis. Among the determining causes are those of a *traumatic* nature (falls, pregnancy, and its sequels) and those of *hepatic* origin, typhoid fever, dysentery, alcoholic excesses, paludism. Toxic influences or nervous or emotional shocks may also aid in bringing about the condition. The treatment must include the elevation of the viscera, the increase of abdominal tension, the regulation of the stools, the stimulation of the secretions of the alimentary tract and their accessories, the regulation of the diet, and tonic treatment of the entire organism. Insomnia, nervousness, pain, and weakness must also be relieved. An abdominal binder, daily laxatives, the administration of alkalies and the daily regimen are the four great bases of treatment. Hydrotherapy, massage, and electricity may also be called into therapeutic use. The diet allowed is liberal and embraces the wasted meats, milk, wines, fish, fresh vegetables, cheese, fruit, chocolate, beer, cider, and the cereals.

Progrès médical, April 20, 1901.

Comatose Pernicious Fever.—M. Jean P. Cardamatis says that this is the most frequent and most dangerous of the forms of paludism as seen in Greece. It most often appears in June or July, becomes more rare during the autumn, and practically disappears in winter. The predisposing causes are malarial infection supervening upon an organism previously debilitated by anæmia, the cachexias, physiological abuses, intellectual and physical fatigue, insolation, alcoholism, the puerperium, etc. Two forms are distinguished, the mild and the severe. The former is an exaggeration of the ordinary intermittent fever; the latter is accompanied by complete abolition of consciousness, of intellectual and physical function, and threatens the patient's life. In the pernicious form, tremendous rises of temperature are seen. If the temperature rises above 106° F., however, and a microscopic examination of the blood is not available, insolation must be given the preference in diagnosis. The mortality in favorable cases is about twenty per cent.; in unfavorable cases, about fifty per cent.

Riforma medica, April 3, 4, 5, and 6, 1901.

Four Cases of Congenital Cystic Lymphangeioma. By Dr. E. Ligorio.—The cases reported were as follows: 1. A child, aged fourteen months, with a tumor on the right side of the chest in front, about the size of an orange. The presence of this growth was noted at birth, but it grew in size until it reached its present volume. It was independent of the mammary gland, and on palpation it seemed to be lobulated. The tumor was removed and proved to be a cystic lymphangeioma. 2. A child, aged eleven months, with a tumor of the size of a walnut, situated in the scapular region, and covered with healthy-looking skin. The further history was the same as in the first case. 3. A girl, aged six years, with a lymphangeioma of the size of an orange on the arm and forearm. The tumor proved to be a lymphangeioma of mixed cystic and cavernous types. 4. A boy, four months old, with a tumor of the size of a hen's egg on the side of his neck at birth. The clinical characteristics of this growth pointed to a cystic tumor of some sort, and on removal a lymphangeioma was found.

April 8, 1901.

Nitroglycerin in the Treatment of Epilepsy. By Dr. Romano Pellegrini.—The preparation usually known as nitroglycerin is not a well-defined compound, but an ether composed of glycerin, glycerin nitrate, and glycerin trinitrate. Field used nitroglycerin in epilepsy, and the author gives the results of a series of experiments with this drug in the treatment of epileptics. He found that a one-per-cent. solution of nitroglycerin in alcohol is always efficient as a sedative in epilepsy, preventing the recurrence of the attacks. In fifteen patients he found that during the three months in which nitroglycerin had been used there were fewer attacks than during the preceding three months in the same group of individuals. In ten cases out of fifteen the effect of nitroglycerin was better than that of bromides, for in these patients there were fewer attacks during the three months in which nitroglycerin was used than during the three months in which bromides were employed in the same persons. In seven cases, after the use of nitroglycerin, there was, in addition to this diminution in the number of attacks, also a diminution in the extent of the excitement which used to precede, accompany, or follow the attacks. Contrary to the observations of Koronocki and Andrews, no untoward effects were noted during the three months in which the treatment was tried. The author recommends an alternate use of nitroglycerin and of bromides in order to avoid the protracted use of either drug.

April 9, 1901.

An Elastic Bandage Allowed to Remain Tied Around an Arm for Twenty-seven Hours. By Dr. Oswaldo Cabibbe.—The patient was a man fifty-seven years old,

who had accidentally cut himself on the radial side of the left forearm near the styloid process. The hæmorrhage was very severe, and an elastic bandage was applied to the junction of the middle and lower thirds of the arm. After the arm had remained in this condition for twenty-seven hours, the patient was brought to the clinic. The lower part of the extremity was cold, blue, insensible, and immovable. The wound was treated, the arteries tied, and the ligature on the arm removed. Subsequently, it was found that the patient was suffering from arterio-sclerosis and that a phlegmonous process had developed in the constricted extremity. The absence of sensation and the paresis remained for a long time, and the patient was discharged from the clinic without having been completely cured of these nervous disturbances. This case is without an equal on record, as the longest period during which an elastic bandage was known to have been left on an extremity was twelve hours in a case reported by Esmarch.

April 10, 1901.

On the Variations in Weight in Persons Confined in Prisons. By Dr. Giuseppe Cao.—The author has found that the majority, *i. e.*, seventy-five per cent., of prisoners confined in cells lose in weight during the first part of their term of imprisonment. Of these, about twenty per cent. lose a considerable amount of body-weight, say from five to ten kilogrammes (about ten to twenty pounds). Another group of prisoners, about fifty-five per cent., lose from about two to five kilogrammes (four to ten pounds). The remainder lose one or two kilogrammes only, or gain in weight. The gravity of the offense and the possibility of an acquittal or of a pardon have a great deal to do with the loss in weight of prisoners. Prisoners confined in rooms instead of cells increase in weight so soon as they are transferred from the cell to a better apartment.

April 12, 13, 15, and 16, 1901.

On Delusions of Jealousy (Jealous Insanity). By Dr. Romano Pellegrini.—The author treats of a form of insanity which is characterized by delusions of jealousy and persecution. There are also hallucinations of various kinds, particularly such as relate to the supposed infidelity of wife or husband. He reports five interesting cases of this kind which he has had under observation. The patients became very jealous of their wives, imagined that they were being deceived, and took all sorts of precautions and resorted to all kinds of expedients in order to detect the unfaithful one in *flagrante delicto.* In addition to this they, as a rule, abused their wives, constantly questioned them, and maltreated them, so that confinement in an asylum was necessary. In the first case, the patient, a man aged fifty years, whose wife was said to be a model of virtue, was cured of his delusions by a two months' sojourn at the asylum, where he was employed in gardening. The second patient remained in the asylum for two years and then went to America, where he lived for a few years, whereupon he returned to Italy and lived peacefully with his wife. He was a teacher of elementary schools, aged forty-eight years. In these two cases the jealousy was limited to questions of marital fidelity, and both patients were physical and psychical degenerates. Both were "excessively religious." In the three other cases the delusions and hallucinations were so violent that there was a strong tendency to homicide. The three patients killed their wives in accesses of jealousy. All three had been hard-working men of peaceful disposition before the onset of the delusions.

Vratch, March 21, 1901.

The Balantidium Coli as a Cause of Severe Diarrhœas. By Dr. N. S. Solovieff.—The author has observed a case of severe diarrhœa in which the balantidium was present in the discharges. Since 1857, when Malmsten first found the balantidium in the fæces of a patient with diarrhœa, until 1900, there have been seventy cases of this kind recorded in literature. The present case is the first of its kind to be reported in Siberia. The patient, a man aged fifty-four years, was admitted complaining of bloody stools, pain in the abdomen, anorexia, weakness, thirst, and chills. He was severely emaciated and anæmic, with a swollen abdomen and a desire to evacuate the bowels every twenty or thirty minutes. The discharges were mixed with blood, and contained *Balantidium coli* in abundance. Preparations of tannin, etc., were tried in vain; the patient became rapidly weaker and died on the third day after admission, this being the thirteenth day of the disease. The autopsy showed ulcerative colitis caused by the balantidium; fibrinous inflammation of the serous covering of the liver and spleen; emphysema of the lungs; œdema of the pia, and thickening of the aorta and cerebral vessels. The walls of the large intestine were thickened, congested, and œdematous, without connective tissue growth, and the mucosa was studded irregularly with round or ovoid ulcers up to a centimetre in diameter. The edges of these ulcers were red, slightly undermined and thickened in places. (*To be continued.*)

The Action of the Alkaloid Johimbin in the Animal Organism, and its Significance in the Treatment of Impotence. By Dr. N. P. Krykoff.—(*Concluded.*)—Experiments on dogs show that the alkaloid causes a fall of blood pressure almost immediately after injection, but the pressure rises again in a short time. The pulse rate is almost doubled. This fall of pressure depends upon a paralysis of the vasomotor centre, and the rise in the pulse rate is a compensatory phenomenon to the fall of pressure and is not dependent on any action of johimbin on the vagus. Large doses cause irregularity of the heart's action and finally paralysis of the heart, due to a gradual paralysis of the cardiac motor centres. The erection of the genital organ as a result of the administration of johimbin is therefore due to the fall of blood pressure, and the drug cannot be classed as an aphrodisiac in the usual sense, because the sexual centre and the sensory nerves of the penis have nothing to do with the erection. The author found, moreover, that the erection and swelling of the penis as a result of the administration of johimbin coincided with symptoms of general intoxication with this alkaloid, and therefore only came on when the system was already poisoned. The physiological data thus obtained do not indicate that the drug can be useful as a therapeutic agent in impotence. The author tried the drug on six physicians who offered to serve as subjects of experiment. Some of these men were relatively impotent as neurasthenics; the rest were healthy. They each took 0.005 grammes of johimbin three times daily for two or three days. In three cases this dose was followed by vertigo, headache, nausea, sweating, a feeling of heat, congestion of the conjunctivæ, and general malaise, without a trace of the specific action of the drug. In the other three patients there was no effect on the sexual function, but there was a feeling of general lassitude, inability to concentrate thoughts, and irritability of temper. The author concludes that neither is johimbin a harmless drug, nor can it be called an aphrodisiac.

A Case of Intussusception. By Dr. A. P. Krymoff.

Fibromyoma and Pregnancy. By Dr. I. S. Kalabine.

Excision of the Conjunctival Fornix. By Dr. A. A. Kahn.—An account of the value of this operation in trachoma. The author strongly advocates this radical measure in cases of chronic granular ophthalmia.

A Few Words Concerning the Heredity of Consumption. By E. E. Miller.

Roussky Archiev Patologyi, Klinitcheskoi Meditsiny i Bakteriologyi, January, 1901 (Russian Archives of Pathology, Clinical Medicine and Bacteriology.).

Absorption of Minute Quantities of Carbon Monoxide by the Blood, and a New Method of Determining the Presence of this Gas in the Air. By Dr. S. I. Kostine.—The fact that the blood has the property of absorbing carbon monoxide from the air has been known since the time of Claude Bernard. It has also been shown that minute quantities of this gas may be absorbed daily by the organism and may cause a chronic carbon-monoxide poisoning in the course of time. The methods of determining the presence of carbon monoxide in the air are very complicated and in most instances of poisoning by this gas only the cruder tests have been used. The author has found that the presence of oxygen hinders the absorption of carbon monoxide by the blood, and that the spectroscopic test is not so useful as it might be because the presence of reduced hæmoglobin masks the carbon-monoxide hæmoglobin by obscuring its absorption line. He has devised a new method of analysis for air containing carbon monoxide. The results of his investigations lead him to conclude as follows: It is impossible to determine the presence of carbon monoxide in quantities smaller than one part in ten thousand, unless one removes all the oxygen first. The absorption of carbon monoxide becomes greater as the quantity of oxygen in the air is diminished. Complete removal of the oxygen is effected most conveniently by means of an apparatus devised by the author. When the oxygen has been removed from the air it is possible to determine the presence of one part of carbon monoxide in forty thousand parts of air by shaking blood with air deprived of oxygen and then testing the mixture. Cooling the blood assists the absorption of carbon monoxide.

Miliary Tuberculosis of the Mammary Gland. By Dr. N. N. Michailoff.—The author reports a case in which he removed the mammary gland for tuberculosis. The patient was a woman aged thirty-three years. On examination the gland was found to be the seat of miliary tuberculosis. This condition was primary, as there were no other tuberculous lesions in the patient's body. The infection probably took place during lactation through the lactiferous ducts.

The Decomposition of Potassium Iodide in the Digestive Tract. By Dr. A. Stepnoff.—The author discusses the question as to the cause of the decomposition of potassium iodide in the gastro-enteric tract. The decomposition of the salts usually takes place only in the presence of oxygen derived from a substance which is easily reducible. Most pharmacologists do not admit that potassium iodide is decomposed in the stomach. On the other hand, some observers state that hydriodic acid is probably present in the stomach after the administration of potassium iodide, but that this compound is so unstable that it is impossible to separate it from the stomach contents. Kueltz fed dogs with potassium iodide and potassium bromide, and tested the stomach contents for hydriodic and hydrobromic acids. He found that the quantity of hydrobromic acid exceeded that of hydriodic acid in these dogs. There is no doubt that potassium iodide is decomposed in the stomach, however, and this fact is still more evident from the gastric disturbances that often follow the use of the iodides. The causes of this decomposition are probably the nitrates of the saliva and the free acids of the gastric juice. The iodine thus liberated is immediately taken up by the albuminous compounds, even by the mucosa itself, and then by the alkaline salts of the blood. It is also probable that the iodides are decomposed in the duodenum, as the pancreas contains nitrites. The diarrhœas which have been observed after the use of iodides also speak in favor of decomposition of these salts in the small intestine.

The Bacteriolysis of the Anthrax Bacillus. By Dr. J. Malfitano.—It may be stated with certainty that protoplasm has the property of forming ferments which eventually may destroy the very cell in which they have been formed. The author studies the question as to the possibility of such ferment-formation in the bacillus of anthrax. This self-digestion on the part of bacteria has been called bacteriolysis and the ferments causing the process are styled proteases. The author has found that if a pure culture of the anthrax bacillus on agar is emulsified with sterilized distilled water and kept at about 30° C. for a few hours, the bacteria will lose their shape and gradually become masses of detritus. He has also performed a series of experiments with antiseptics, as regards their influence upon bacteriasis, and has found that while some of these substances destroy protoplasm, they also hinder the activity of the ferment. Others change the reaction of the nutrient medium and thereby inhibit the action of the protease. The best results were obtained with chloroform, xylol, and thymol.

On Hyperkeratosis Diffusa Congenita. By Dr. M. Sniesareff.—The author reports a case of this rare congenital dermatosis. Congenital keratosis, or ichthyosis, is comparatively little known as yet, in spite of the fact that the first case was reported by Richter in 1792, and that, since then, over thirty cases have been recorded.

Chirurgia, February, 1901.

Gunshot Wounds Caused by Shells and by Ordinary Leaden Bullets. (Notes of the Recent Campaign in Manchuria.) By Dr. V. A. Svenitzky.—The author gives an account of his experiences with gunshot wounds in the recent military operations of Russia against the Boxers in Manchuria. The weapons of the Chinese soldiers consisted of the greatest possible variety of firearms, beginning with a buckshot rifle and ending with a gun of the Mauser or Mannlicher type, and including all sorts of old types, Winchesters, etc. These old guns were used with the old-fashioned leaden bullets. The same may be said as to the Chinese artillery, with its wooden guns bound in metal, and its Sané and Hotchkiss types of modern construction. The Chinese shoot rapidly and a great deal at a time, but entirely aimlessly, says the author. They also use explosive bullets, as the author had seen several cases where bullets exploded in the tissues, but he was unable to secure samples of such bullets. They do not regard the Red Cross as a badge of non-combatants. The Russians use a triple-barreled rifle with nickel-plated shells. The author saw 115 cases of gunshot wounds in this campaign, one third of which were wounds with Mauser or Mannlicher rifles. The leaden bullets cause broad, gaping wounds, the shells

narrow, penetrating wounds. The modern bullets cause very little crushing, while the old ones often tear and crush the tissues, so that healing does not take place so quickly as with the modern shells.

Mesenteric Growths. By Dr. N. Trinkler.—A case of reticular sarcoma of the mesentery in a man aged thirty years. Removal was successful.

On Acute Intestinal Obstruction. By Dr. I. A. Bondareff.—The author reports five cases of acute intestinal obstruction, including one of volvulus of the sigmoid flexure, two of incarceration of the ileum, one of carcinoma of the ileum, and one of compression of the ileum. Four of these patients recovered after operation. The author attributes this good result to the facts that most of these patients applied, early in the disease, for relief, and that the obstruction was localized before the laparotomy.

Lamium Album in Uterine Hæmorrhages. By Dr. I. S. Kalabine.—The author has conducted some experiments with a view to determining the physiological action of *Lamium album* in uterine hæmorrhages, a remedy which he has used for fourteen years with success. He injected an infusion of *Lamium album* (1:10, 25 to 50 cubic centimetres) into the femoral veins of dogs, and registered the results of the injections on a kymograph by means of a uterine oncometer devised by Lindeman, which he attached to the uterus of the dog. He found that the drug produced contractions of the uterus which lasted for a considerable time. The blood-pressure was raised within a few minutes after the injection. The author uses the tincture of *Lamium album* in doses of forty drops in half a wineglassful of water every two hours, until the menorrhagia or metrorrhagia ceases. Good results were obtained in interstitial fibroids, in hæmorrhages due to inflammatory conditions of the adnexa, in postpartum hæmorrhages, incipient abortion, etc.

Inguinal Hernias. By Dr. Aleksei Martynoff.

The Radical Treatment of Inguinal Hernia. By Dr. N. A. Zviagintzeff.

American Journal of the Medical Sciences, January, 1901.

A Case of Multiple Fibromata of the Nerves, with Arthritis Deformans. By Dr. Robert B. Preble and Dr. Ludwig Hektoen.

The Relation of Cholelithiasis to Disease of the Pancreas and to Fat Necrosis. By Dr. Eugene L. Opie.

A Report of a Case of Typhoid Pleurisy. By Dr. Herman Camp Gordinier and Dr. August Jerome Lartigau.—Pleurisy is not a common complication of typhoid fever; when present it is ordinarily secondary to pneumonia, to an infarction, or to gangrene. Primary pleurisy is regarded as very rare. Bacteriological study usually shows the presence of the more common members of the pyogenic group of micro-organisms. However, a few isolated reports in literature demonstrate the ætiological relationship of the typhoid bacillus to certain cases. In the authors' case, the patient was a physician, aged fifty-seven years. Thirty years ago he had typhus fever, and, in 1885, he was ill for four months with what was diagnosticated as typhoid fever. On July 10, 1899, he was obliged to take to his bed. Upon examination, a diagnosis was made of typhoid fever, with œdema and congestion of the lungs, the result of cardiac failure. On July 19th the physical evidences of a large, right-sided pleural effusion were found. Two quarts of a greenish-yellow opalescent fluid were aspirated with much temporary relief to the patient. On July 24th and 30th, he was again aspirated, nine pints being removed in all. Upon bacteriological examination, the *Bacillus typhosus* was found in pure culture. Few cases have been reported as occurring early in the attack of typhoid fever; the third week of the disease seems to be the favorite time of onset. One of the most striking features of these pleurisies is the almost uniform character of the pleural exudate. In the majority of instances the aspirated fluid, as in this case, has been found to be purulent in character.

Asthenic Bulbar Palsy. By Dr. Charles W. Burr and Dr. D. J. McCarthy.

A Study of a Case of Gonorrhœal Ulcerative Endocarditis, with Cultivation of the Gonococcus. By Dr. August Jerome Lartigau.

Obstructive Biliary Cirrhosis. By Dr. William W. Ford.

Dorsal Dislocation of the Trapezoid. By Dr. John Glendon Sheldon.—This is an exceedingly rare occurrence, and the author has been able to find but one other instance in the literature. In neither case was it possible to effect reduction, though the usefulness of the wrist was unimpaired. The author believes, as the result of experiments on the cadaver, that there was a congenital weakness, absence of the ligaments, a maldevelopment of the carpal bones, or a combination of these conditions, which rendered it possible for an uncomplicated dorsal dislocation of the trapezoid to be produced.

Edinburgh Medical Journal, January, 1901.

The Borderland. By Dr. G. W. Balfour.—The author's article deals with the borderland between sanity and insanity, and he cites many interesting instances of modified mental derangement. Socrates, Van Helmont, Joan of Arc, Mohammed, and many others, furnish striking examples of the influence of delusions upon an excitable temperament, of the fact that hallucinations are often associated with an indomitable will and with considerable strength of intellect, and of the manner in which insanity has moulded history and influenced the fate of nations. Epilepsy often plays a part. Mohammed was epileptic from childhood; as in other epileptics, the fits were often followed by periods of prolonged unconsciousness, during which he had hallucinations of sight and hearing. In the realm of letters, some of the noblest works in literature have been produced by those who have all their lives dwelt in the borderland; Swift, Cowper, and Smart are examples.

Just as mental influence alone is of itself sufficient to give rise to stigmata and to other morbid affections, so the general prevalence of any special excitement, such as the English invasion of France in the days of Joan of Arc, may give rise to special forms of cerebral excitement quite apart from the presence of insanity, but which may also be variously modified by the co-existence of special delusions.

Experiences with the Medical Department of the Army in the South African War. By J. Chiene, F. R. C. S. Ed.—The author speaks of the lessons learned by him in the hospitals in South Africa under the following heads: Ambulance; anæsthesia; x-rays; hospital trains and ships; bullet wounds; injuries of the head; injuries of blood-vessels; injuries of the thorax and abdomen; medical cases; sanitation; burning *versus* burying; the work of the civil surgeon in South Africa.

Address Delivered to the Edinburgh Obstetrical Society, at the Opening of its Sixty-second Session, 14th November, 1900. By R. M. Murray, M. D.

On the Operative Procedures for Simple Fractures which Have Been Unscientifically Treated. By W. A. Lane, M. S.—The author began to operate upon cases of simple fractures in the belief that, owing to a shortening of the ties in the length of the limb by hæmorrhage and subsequent inflammation in fractures of the long bones, and especially in those of the leg, it is impossible by manipulation, except under special and rare conditions, when the factors resisting replacement are in abeyance, to restore to their normal relationship fragments which have been displaced off one another, whether the direction of the fracture is transverse or otherwise. The radiograph, introduced later, has verified in every detail, and in the most complete manner possible, the conclusions arrived at by the author. He reports twenty cases of operative treatment of simple fracture, in all of which excellent results were obtained. Several of the cases are illustrated by reproductions of radiographs, which are more than usually excellent.

Book Notices.

Comparative Physiology of the Brain and Comparative Psychology. By Jaques Loeb, M. D., Professor of Physiology in the University of Chicago. Illustrated. New York: G. P. Putnam's Sons, 1900. Pp. x-309.

In this volume are brought together numerous observations and experiments, a great number of which are due to the thoughtful ingenuity of the author himself, in support of the theory that many complex manifestations of life are nothing but reflexes. For these reflexes the central nervous system is not necessary. Irritability and conductivity, which are the essentials of the reflex mechanism, are the property of protoplasm and can act independently of nervous control. By means of the nervous system, reflex acts are refined and brought into harmonious relationship with each other. But the central nervous system itself is not necessary for their occurrence.

In the earlier chapters this theory is unfolded in regard to lower forms of life. The later chapters have to do with the vertebrates and to some extent with man. The theory is developed in a most suggestive and convincing way, and furnishes substance for much thought regarding all vital phenomena.

Thomas Sydenham. By Joseph Frank Payne, M. D. Oxon., Fellow and Harveian Librarian of the Royal College of Physicians, etc. New York: Longmans, Green, & Company, 1900. Pp. xvi-1 to 264.

No work in this *Masters of Medicine* series has given us the pleasure that we have had in reading the life of Sydenham. This is not the result of the interest necessarily attaching to Sydenham only, but also of the very great skill with which the author has handled his subject. The book—and this can rarely be said of a medical biography—is a very readable and an exceedingly interesting volume. Sydenham's fame as a physician and his contributions to medical science are too well known to require enumeration here, but nowhere will one find their presentation more excellent than in the book before us, and, too, he will find great pleasure in the description of the stirring times in which Sydenham lived.

Histology of the Blood, Normal and Pathological. By P. Ehrlich and A. Lazarus. Edited and Translated by W. Myers, M. A., M. B., B. Sc.; John Lucas Walker, Student of Pathology. With a Preface by G. Sims Woodhead, M. D., Professor of Pathology in the University of Cambridge. Cambridge: The University Press, 1900. Pp. xiii-216. [Price, 5s.]

This little volume is a translation of a contribution to *Nothnagel's Specielle Pathologie und Therapie.* Many of our readers who are interested more particularly in the study of the blood are no doubt familiar with the work in its original form; for the benefit of those who are not, we may say that it is the most satisfactory presentation of blood histology and pathology with which we are familiar. It is exhaustive so far as facts are concerned, but it is pithy to the last degree. The fact that the translation was done under the guidance of Professor Ehrlich adds special value to the book, and we heartily commend it to the attention of our readers.

Encyclopædia Medica. Under the General Editorship of Chalmers Watson, M. B., M. R. C. P. E. Volume V, Herpes to Jaws. Volume VI, Joints to Liver. New York: Longmans, Green, & Company, 1900. Pp. vi-536; vi-562.

The fifth and sixth volumes of this *Encyclopædia* are of an excellence equal to that of the four preceding volumes. Of necessity the condensation in a work such as this must be exceedingly great, and the entire subject of insanity, for example, is discussed in but little over a hundred pages, and yet this condensation in by far the greater number of subjects has been so skilfully done that one is not impressed by the slightest sense of incompleteness.

Pulmonary Consumption, Pneumonia, and Allied Diseases of the Lungs: Their Ætiology, Pathology, and Treatment, with a Chapter on Physical Diagnosis. By Thomas J. Mays, A. M., M. D., Professor of Diseases of the Chest in the Philadelphia Polyclinic, etc. Illustrated. New York: E. B. Treat & Company, 1901. Pp. 8 to 539. [Price, $3.]

No doubt most of the readers of the *Journal* are familiar with the theories of the author of this volume concerning pulmonary tuberculosis. He seeks to prove that the generally accepted views of the scientific world are erroneous. The tubercle bacillus is not the cause of phthisis, but is found, according to him, as a secondary element. Pulmonary tuberculosis is primarily a neurosis, the pathological changes in the lungs being only secondary. The author goes even further, and insists that any agent, influence, or condition which undermines the integrity of the nervous system is likely to engender pulmonary phthisis or some other form of pulmonary disease. Pulmonary tuberculosis is not contagious, the tubercle bacillus having been found in the respiratory passages of healthy persons. Acute pneumonia is always affiliated with a disordered nervous system. The main treatment of pulmonary phthisis consists in the injection of nitrate of silver over the vagi in the neck. The author reports a large number of successful results by this method, and adds that but fifty abscesses formed as the result of over 2,000 injections. But it is significant that he did not neglect other and important means of treatment at the same time.

This is the gist of the contents of the book. There is no need of further comment, except to compliment the author upon having the courage of his opinions. The book is fairly well printed and is profusely illustrated.

Handbook of Practical Hygiene. By D. H. BERGEY, A. M., M. D., First Assistant, Laboratory of Hygiene, University of Pennsylvania. Easton, Pa.: The Chemical Publishing Company, 1901. Pp. 164. [Price, $1.50.]

THE author has included in this little manual directions for the sanitary analysis of air, water, soil, and the principal food materials, and has added a chapter on ventilation and heating. The multiplication of books of this character shows the increasing interest taken by the profession in sanitary science. The present volume appears to be quite complete in its special field.

Disinfection and Disinfectants. A Treatise upon the Best-known Disinfectants, their Use in the Destruction of Disease Germs, with Special Instruction for their Application in the Commonly Recognized Infectious and Contagious Diseases. By H. M. BRACKEN, M. D., Professor of Materia Medica and Therapeutics, University of Minnesota, etc. Chicago: The Trade Periodical Company, 1900. Pp. 85.

THIS is really a very valuable little work. In the first chapter the general field of disinfection is outlined, including the several applications of disinfectants to the living as well as those in use upon the dead. The potency of disinfectant drugs and methods is briefly stated in tabular form in the second chapter. In the third chapter the disinfectant drugs and procedures are taken up and considered in alphabetical order, and their relative advantages or disadvantages set forth. The fourth chapter treats of disinfecting apparatus and contains a fully illustrated description of formicaldehyde generators. It is an exceedingly useful chapter. In the fifth chapter the proper disinfectant surroundings for patients ill of infectious diseases are described, and in the sixth the use of the rubber gown by medical attendants is considered. The forms of disinfection adapted to rooms, etc., are the subject of the eighth chapter, with the varieties of disinfection adapted to the various infectious diseases. This last chapter is of some length and is an excellent discussion of a very important matter. As a whole, the little volume is most useful and, presenting as it does the modern views upon disinfection, cannot but be of value. It is not exhaustive, it is true, but it is exactly the sort of guide the practitioner wants.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, etc. Assisted by H. R. M. LANDIS, M. D., Assistant Physician to the Out-patient Medical Department of the Jefferson Medical College Hospital. Volume I. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. 4-17 to 440.

BEGINNING with a very moderate enthusiasm for this publication, we have found ourselves more and more its admirers as each new volume has been issued. It is not that the contents differ so materially from those of other annuals, or that the editorship, though of the best, is unique, or that the form of the production, though novel in its quarterly appearance, is the essential. There is a quality to the text, however, that, in our opinion, makes *Progressive Medicine* the best of its class. It is particular and detailed, it is exhaustive, it is authoritative, and it has a rare quality of continuity and sequence which the much-paragraphed annuals that have come under our notice sadly lack. It is this quality, though the others are all to its credit, that makes this work so valuable.

BOOKS, ETC., RECEIVED.

A Text-book of the Practice of Medicine. By Dr. Hermann Eichhorst, Professor of Special Pathology and Therapeutics and Director of the Medical Clinic in the University of Zurich. Authorized Translation from the German. Edited by Augustus A. Eshner, M. D., Professor of Clinical Medicine in the Philadelphia Polyclinic, etc. Volume I. With 84 Illustrations. Pp. 7 to 628. Volume II. With 85 Illustrations. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 11 to 590. [Price per set, $6.]

Eczema, with an Analysis of Eight Thousand Cases of the Disease. By L. Duncan Bulkley, A. M., M. D., Physician to the New York Skin and Cancer Hospital, etc. Third Edition of *Eczema and its Management,* entirely Rewritten. New York and London: G. P. Putnam's Sons, 1901. Pp. xii-368.

Essentials of the Diseases of Children. Arranged in the Form of Questions and Answers prepared especially for Students of Medicine. By William M. Powell, M. D. Third Edition, thoroughly Revised by Alfred Hand, Jr., A. B., M. D., Dispensary Physician and Pathologist to the Children's Hospital, Philadelphia, etc. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 5 to 259. [Price, $1.]

Points of Practical Interest in Gynæcology. By H. Macnaughton-Jones, M. D., M. Ch., Q. U. I., Master of Obstetrics (Honoris causa), Royal University of Ireland, etc. With 12 Plates. New York: William Wood & Company, 1901. Pp. ix-124.

Atlas of the Nervous System, including an Epitome of the Anatomy, Pathology, and Treatment. By Dr. Christfried Jakob, Head of the Pathologic Institute for Nervous and Mental Diseases at the University of Buenos Ayres, etc. With a Preface by Professor Dr. Ad. v. Strümpell, Director of the Medical Clinic, Erlangen. Authorized Translation from the Second Revised German Edition. Edited by Edward D. Fisher, M. D., Professor of Diseases of the Nervous System, University and Bellevue Hospital Medical College, etc. With 112 Colored Lithographic Figures and 139 other Illustrations, many of them in Colors. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 3 to 218.

Atlas and Epitome of Ophthalmoscopic Diagnosis. By Professor Dr. O. Haab, of Zurich. Authorized Translation from the Third Revised and Enlarged German Edition. Edited by G. E. de Schweinitz, A. M., M. D., Professor of Ophthalmology in the Jefferson Medical College, Philadelphia, etc. With 152 Colored Lithographic Illustrations. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 3 to 85.

Anatomical Atlas of Obstetrics, with special Reference to Diagnosis and Treatment. By Dr. Oskar Schaeffer, Privatdocent in Obstetrics and Gynæcology in the University of Heidelberg. Authorized Translation from the Second Revised German Edition. Edited by J. Clifton Edgar, A. M., M. D., Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College, etc. With 122 Figures on 56 Lithographic Plates, and 38 other Illustrations. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 3 to 315.

Atlas and Epitome of Labor and Operative Obstetrics. By Dr. Oskar Schaeffer, Privatdocent in Obstetrics and Gynæcology in the University of Heidelberg. Authorized Translation from the Fifth Revised German

Edition. Edited by J. Clifton Edgar, A. M., M. D., Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College, etc. With 14 Lithographic Plates in Colors, and 139 other Illustrations. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 3 to 111.

Golden Rules of Aural and Nasal Practice. By Philip R. W. de Santi, F. R. C. S., Senior Surgeon to Out-patients, Westminster Hospital, etc. Golden Rule Series, No. IX. London: Simpkin, Marshall, Hamilton, Kent & Company, 1901. Pp. 3 to 87.

Handbuch der physikalischen Therapie. Herausgegeben von Dr. A. Goldscheider, a. o. Professor in Berlin, und Dr. Paul Jacob, Privatdocent in Berlin. Theil I. Band I. Mit 69 Abbildungen. Leipsic: Georg Thieme, 1901. Pp. xiv-563.

Twenty-third Annual Report of the State Board of Health of the State of Connecticut for the Year 1900. With the Registration Report for 1899 relating to Births, Marriages, Deaths, and Divorces.

Transactions of the American Pædiatric Society. Twelfth Session, held in Washington, May 1, 2, and 3, 1900. Volume XII.

Miscellany.

The Relation of Appendicular Inflammation to Diseases of the Uterine Appendages.—Dr. Albert L. Beahan (*American Gynæcological and Obstetrical Journal,* February) relates four cases of appendicular inflammation in young unmarried women from seventeen to twenty-three years of age, and says that the gynæcologist may study with profit the relation of appendicular inflammation to his patient's diseases. Often the appendix has been found to be attached to the ovary and one or both disorganized. A limited experience will show that fact.

In the cases most closely observed a mean temperature of from $99\frac{1}{5}°$ to $100\frac{1}{5}°$ F. was found for several days during the menses, with a tender, swollen appendix. This seemed to clinch the diagnosis as being appendicular inflammation. The majority of cases have occurred in the unmarried, or in the married women who have not borne children. Why should appendicitis cause menstrual disturbances?" he asks. Does this inflamed abdominal tonsil produce similar profound systemic disturbances to those of its throat prototype? Is the cause to be attributed to the influence of torpor or paresis of bowel from the usual involvement of the peritoneal coat of the head of the cæcum? In severe chronic appendicular inflammation this seems probable. In milder cases, where adhesion or pus pockets are not found, a reddened splotch will be seen extending from the appendix upward to the head of the cæcum. The proneness of the female to colon and rectal accumulations with less discomfort than when this occurs in the male, is in evidence. Freeing the colon and lower bowel with cathartics especially directed to them, as with aloes, has always been an efficient method of obtaining an emmenagogue action of medicines. Reasoning from effect to cause, it may properly be argued that the full bowel induced by appendicular disease causes the menstrual irregularity. If so, constipation, gas-formation from indigestion, stasis of food changes, self-infection in the bowel, nausea or vomiting, pallor, sallowness of skin, or a muddy complexion, loss of flesh, repeated sharp impressions of these attacks on the nervous system, with slight febrile attacks maintained for several days, make features that should be apprehended and correctly interpreted. In this discrimination as to the diagnosis of appendicular inflammation in the female, it is necessary to exclude right-tube and ovarian disease by familiar methods. The removal of an appendix is never to be regretted when diseased. As its removal in this class of cases may be expected to correct the train of miseries associated with functional menstrual disorders, it should be done earlier than in probably any other form of appendicular disease. It seems to be borne out by the cases observed that the nervous symptoms of appendicitis in the female are out of proportion to the cause as measured by the same class of cases in the male, and to be as much pronounced as, or more so than, nervous manifestations of inflammation and abscess of the Falloppian tubes. This, probably, is because in appendicular inflammation the organ hangs suspended in the abdominal cavity and is affected by muscular and postural acts, while in the inflammation of the tube it is steadied more by its anatomical relations, and adhesions are a more frequent occurrence. And in diseases of the appendages, though menstrual pains are often severe, menstrual irregularities are not especially prominent. In recapitulation, the author says that a febrile disturbance during menstruation, with a swollen, tender appendix, obstinate constipation and gas-formation in bowel; painful, retarded menses, pain in lower segment of abdomen, especially in right side; loss of flesh, pallor, or muddy complexion, peculiar nervous symptoms, as irritability and exhaustion occurring in a more exaggerated form than is peculiar to the individual, make the probability of a diseased appendix very certain and its speedy removal imperative.

Cæsarean Section in Placenta Prævia.—Dr. G. M. Boyd (*Obstetrics,* April) gives the following indications for Cæsarean section, and draws the following general conclusions on the subject:

Indications for the Cæsarean Section: If the mortality of the Cæsarean section is less or even not greater than the mortality of the usual methods of treating placenta prævia, then for the child's interests it is indicated in certain cases.

We believe that it has a lower mortality, that it will not only save the child, but prove a most efficient method of rapidly checking hæmorrhage.

The bleeding from placenta prævia may appear at any time after the formation of that organ. The writer's earliest case was in a gestation of four and one-half months. Here the patient had bled to an alarming degree in spite of a careful tamponing of the cervix and vagina. Under ether a central implantation was diagnosticated. It was necessary in the treatment of the case to first strip off and remove the placenta.

Early hæmorrhage is, however, rare. In at least eighty per cent. of cases it does not appear until after the viability of the child, and in about seventy-five per cent. it appears only a few days before term.

The maternal mortality in placenta prævia is, in part, due to the prolonged use of temporizing treatment. The patient loses a large amount of blood before active interference is instituted.

Conclusions: We would recommend an immediate examination under anæsthesia of all suspected cases for the purpose of (1) confirming the diagnosis; (2) determining (*a*) the variety of the prævia, (*b*) the size and position of the fœtus, (*c*) the condition of the cervix; and, finally (3), to facilitate the introduction of the cervical and vaginal tampon.

If the hæmorrhage appears before the viability of the

child, if the prævia is marginal, the cervix dilatable, the fœtal heart absent, then version or forceps may suffice.

If, however, the child is viable, the prævia complete or partial, the cervix rigid, or the fœtus transversely placed, then, in preference to other interference, the Cæsarean section would seem indicated.

The "Conscientious Objector" to Vaccination.—Dr. E. J. Steegman (*St. Mary's* [London] *Hospital Gazette,* March 31st), in a paper on The Prevention of Smallpox, referring to the recent provisional act suspending compulsory vaccination in Great Britain, says:

"Two important facts have already been brought out —the 'conscientious objector,' who was so fashionable about two years ago, has proved rather an unsubstantial person. For the first few months after the passing of the act he occupied a very prominent position, and took up much of the magistrate's time; now he is so scarce that his appearance forms a pleasant break in the monotony of ordinary police court procedure. Even in his palmy days he frequently applied for a certificate, and forgot to fetch it the next day, his objection not extending so far as paying the shilling demanded for it."

Jam Bricks.—According to the *Greenock Telegraph and Clyde Shipping Gazette* (Scotland) for April 16th, the latest thing in portable provisions consists of jam bricks. These are solidified jams which can be packed in oiled paper, and, when needed for use, the "hard, heavy cube, about two inches in size," is broken into pieces and emulsified with water, forming a valuable addition to portable rations.

Persistent Occipito-posterior Positions of the Vertex.—Brodhead (*American Journal of Obstetrics,* December, 1900; *American Journal of the Medical Sciences,* April, 1901) advises the use of forceps as rotators in persistent posterior rotation of the vertex during labor, and mentions the following conditions as those that should be present before the operation is undertaken:

The head should be as well flexed as possible; the vertex should be well down in the pelvis and preferably at the vulvar outlet; the membranes must be ruptured; the cervix should be fully dilated or dilatable; the bladder and rectum should be empty; last, but not least, the operator should be positive of his diagnosis of position. The patient is placed upon a table and a light chloroform anæsthesia used. The Tucker solid-bladed forceps has proved superior to any other. The blades are introduced laterally at the sides of the pelvis, each blade being rotated so as to occupy a position at the side of the head, after which the forceps is locked. Unless the operator is expert, it is thought safer to apply the forceps in the usual manner, the concavity of the pelvic curve looking forward, than to attempt rotation with the forceps in the inverted position. By carrying the handles of the instrument toward the thigh of the patient, toward which the concavity of the pelvic curve looks, the danger of laceration is much reduced. The operator then places two fingers upon the vertex at the sagittal suture, and when the uterus contracts it rotates the head partially, so that the sagittal suture is transverse. This is accomplished by rotating the handles of the forceps and carrying the handles downward and backward until the concavity of the pelvic curve faces the lateral wall of the pelvis. The head is then held in this transverse position until several uterine contractions and relaxations have occurred. The head is next rotated with the vertex anterior by rotating the handles, carrying them still further backward and downward. In this way the tips of the blades are kept in the middle of the pelvis, and cannot lacerate the vagina. The head is held in the oblique anterior position for several moments to allow the body to rotate anteriorly. The forceps is usually removed at this time and reapplied in the usual manner and the operation completed.

If rotation cannot be accomplished except by the use of force the head must be extracted in the posterior position. If delivery can be accomplished by the natural forces the forceps is removed. The writer reports eight cases, in four of which the vertex was upon the left side and posterior, and in four on the right side and posterior. Seven of these women had normal pelves. One, a primigravida, had a justo-minor pelvis. The operation was uniformly successful in these cases. The author urges that the conditions essential are good flexion of the head, low position of the vertex, and attention to details.

The Relation of Thyreoid Gland to Conception.—Dr. E. C. Rankin (*Western Medical Review,* December 15, 1900; *American Gynæcological and Obstetrical Journal,* February, 1901) reports two cases in which the thyreoid gland seemed to have a decided influence upon the organs of reproduction.

Case I.—A woman, forty years of age, the mother of two children, the younger sixteen years of age. She was placed on 2½-grain capsules of desiccated thyreoids, three times a day, for exophthalmic goître. Marked improvement in her general condition followed, although there was no perceptible diminution of the goître. Three months after beginning treatment her menstruation did not appear, but as she had been irregular nothing was thought of it, and pregnancy was not suspected until she miscarried, four months later. This was due to general lack of vitality on her part.

Case II.—A woman of thirty-two, mother of one child eleven years old. Had suffered from exophthalmic goître for several years before coming under the writer's care. Three grains of thyreoid, three times a day, was ordered, and improvement was soon evident. Three months later she became pregnant and was delivered at full term of a healthy child.

If the seeming connection between the administration of the thyreoid capsules and the subsequent pregnancies is correct, it might be used with advantage in certain cases of sterility.

Parasitophobia.—M. Dubreuilh (*Gazette hebdomadaire de médecine et de chirurgie,* April 11th) recently reported to the Medical and Surgical Society of Bordeaux a case in which a child having contracted the itch transmitted it first to his little brother, then to his grandmother. The latter, who was in every sense the head of the family, suffered intense irritation, though no trace of acari could be discovered. All the other members of the family became affected by the scratching mania, though but few if any bites could be found, and there was absolutely no trace of the parasite to be found. The author considers this as a case of psychic pruritus, the starting point of which was a parasite. In short, most of the members of the family succumbed to the suggestion emanating from the grandmother. M. Régis pointed out contagiousness as a special feature of this kind of phobia, while ordinary phobias were individual in character. He related an analogous case where a woman imposed her pruritus on eight members of her family. Dermatophobias developed always in a neuropathic soil but their prognosis differed in the hysteric and the neu

rasthenic. In the hysteric it was apt to be of short duration and to disappear under the influence of suggestion, while in the neurasthenic it lasted longer and was apt to become chronic. At the same meeting M. Méneau reported the case of a woman who, having been cautioned of the danger of contagion by the *Bacillus tuberculosis*, with which disease her son was affected, developed a phobia first of this micro-organism, and later of acari and various other parasites which, she asserted, fell into her hair.

The Concealed-sex Question again.—Many stories, mostly good, says the *West London Medical Journal* for April, have recently been told of a particular member of the surgical staff of one of the large London hospitals, but perhaps the following one is the best. While seeing his out-patients one day he captured a louse, and passed it round on a piece of paper for the instruction of his class. A facetious student, thinking to "score off" his teacher, gazed for a moment intently at the insect, and then with an assumed puzzled look gravely remarked, "Can you tell me, sir, whether this is a male or a female louse?" "I'm sorry I can't," was the incisive reply; "suppose you take it behind the screen and examine it."

Tuberculosis and Pregnancy.—Dr. Samuel Bernheim (*Journal of Tuberculosis,* October, 1900; *Woman's Medical Journal,* March) draws from his studies the following conclusions:

1. Pregnancy does not provoke tuberculosis fatally in the predisposed. Latent or previous tuberculosis is not invariably awakened by a single and a simple pregnancy. Gestation in those predisposed to tuberculous infection is the more likely to cause an awakening of latent trouble in proportion as the woman is younger. Hence the primary reason for forbidding too early marriages of girls whose debility threatens an ulterior bacillary invasion. Still further, it is necessary to exercise a long surveillance before permitting pregnancy in a tuberculous woman, as well as to be certain of her definite cure. 2. Tuberculosis is, moreover, aggravated by pregnancy in that the lesions become deeper and more extensive. A fatal result is almost certain in advanced cases. 3. Although single pregnancy may occur without grievous effect, in a patient the subject of latent tuberculosis, such is not the case with multiple pregnancies, which are almost always disastrous, even in women with curable phthisis. 4. The consequences of childbirth are particularly formidable to the tuberculous woman to whom nursing has been forbidden. 5. In all cases in which tuberculosis is aggravated in the first weeks of gestation, the practitioner is justified in inducing abortion. This is the rule adopted by many German and English physicians. 6. The influence of paternal tuberculosis on the progress of pregnancy may be considered as practically nothing. 7. Tuberculosis in the woman is frequently a cause of abortion. 8. After the confinement the newborn child should be removed immediately from the centre of infection. In thus placing it under good hygienic conditions, one has a much better chance of raising a robust and healthy subject.

Opacity of the Cornea (?Traumatic Keratitis) in the New-born.—Dr. Robert Jardine (*Glasgow Medical Journal,* April) reports the case of a male child, weighing nine pounds and a quarter, which was delivered with Milne-Murray's axis-traction forceps, "after a pretty stiff pull." The diagonal conjugate measured 4¼ inches, giving a true conjugate of 3½ inches. The cord was prolapsed. Artificial respiration to the child was necessary. The head had been grasped obliquely with one blade of the forceps over the right eye.

A few hours after birth the right cornea was observed to be opaque. The pupil could only be distinguished with difficulty. The surface lustre was somewhat diminished. The pupil reacted to light.

Dr. Ernest Thomson examined the eye on the 23d and 27th of January. On the second occasion the pupil had been dilated with atropia. He could not find any evidence of inflammatory action. On the 27th the opacity had markedly diminished. He was of the opinion that the opacity had been caused by the pressure of the blades of the forceps. At the age of ten days there was still distinct dimness of the cornea, though it had cleared up considerably.

There was no evidence of syphilis about the mother, and the child had not shown any at the time of report. Dr. Jardine has seen a very large number of cases in which there was quite as much pressure on the eye as in this one, yet he has never before noticed any opacity of the cornea. Very early in the embryo the cornea is opaque, and, he asks, may not this be a case in which there has been delay in clearing up?

A later note states that by a curious coincidence he has had a second case, in which there is no doubt that the opacity was caused by pressure. The patient had a scolio-rhachitic pelvis, with a true conjugate of 2¾ inches. The child weighed seven pounds, and was delivered with axis-traction forceps. There was a depressed fracture of the left frontal bone, caused by the promontory. The right eye was found to have an opacity of the cornea exactly similar to that in the first case, which was noticed immediately after delivery. The blade of the forceps had been over it. The left eye bulged somewhat, and there was a large hæmorrhage into the upper part of the orbit. The eyeball could not be examined. Three days later the clot was removed, and the eyeball was found to be intact, but the cornea was also slightly opaque.

In this case, he says, there can be no doubt about the cause. The left orbital plate is evidently fractured. The depression of the frontal bone has somewhat lessened, but it will have to be elevated when the child is a little older.

Alexander's Operation.—Dr. Le Roy Broun (*American Journal of Obstetrics,* April) emphasizes the following points:

1. Make a clean-cut incision down to the aponeurosis of the external oblique muscle—reaching the aponeurosis rather to the inner side of the ring than directly over it, thus affording an easier recognition of your location. 2. Bear in mind the presence of the superficial fascia, and that its density varies from such a thinness as to be hardly recognized to one of such thickness as to be readily mistaken for the aponeurosis not yet reached. The fibres of the aponeurosis are in large bundles, all running in one way. Those of the superficial fascia are finer and more closely woven. 3. Expose to a clear view both pillars of the external abdominal ring when distinctly marked. If indistinct, as in small rings and in instances of dense intercolumnar fascia, expose clearly the anatomical position. With this in view the pillars and ring can be recognized by touch.

Astereognosis.—Astereognosis, or the absence or loss of the faculty of recognizing foreign bodies, has been investigated by Professor F. X. Dercum (*Journal of Nervous and Mental Diseases,* November, 1900) in 114 mis-

cellaneous cases of nervous disease. From these studies the author concludes as follows:

1. It would appear that the loss or impairment of the spacing sense is the most important factor in determining astereognosis. It must be remembered, however, that astereognosis may exist though the spacing sense be preserved. In the single case of hemiplegia in which this was the case there was, however, a loss of location, a loss of the knowledge of the position of the fingers and marked secondary contracture.

2. Next in importance to the spacing sense appears to be the knowledge of the position of the fingers and ataxia of movement.

3. The mere preservation of the ability to perceive tactile impressions and the preservation of the pressure, temperature, and pain senses is insufficient to prevent stereognostic loss.

The author then asks if it is possible to draw any conclusions of clinical value. It is evident, of course, that astereognosis may be due to lesions of the brain, of the medulla (author's case), of the cord, and of the peripheral nerves. Further, astereognosis must be of two kinds, peripheral or central; that is, it must be due either to an interruption of the pathways, the peripheral nerves, or cord, by means of which the various sensory impressions reach the brain; or, these pathways being open, it must be due to some lesion of the cortex. In many cases astereognosis is undoubtedly cortical. This is undeniably the case in dementia; it was also the case in a brain tumor involving the cortex, reported by Dr. Mills and Dr. Keen. Now, if astereognosis is at times cortical and at times peripheral, are there any means by which the symptoms can be made of differential value?

Our present knowledge forbids a positive answer. It is not, however, impossible that it may be so employed. The various impressions received by the cortex from all of the various sources concerned in stereognostic perception must be combined in the cortex to give rise to the mental picture of the object felt. Given a case in which the various factors known to be important to stereognostic perception are all preserved and astereognosis nevertheless exists, it would be justifiable to infer that the origin of the symptom was cortical. Again, if with astereognosis there are specific or isolated losses, such, for instance, as a loss of the sense of weight, or of the position of the fingers, or ataxia of movement without the signs of peripheral nerve or cord disease, it would, other things equal, justify the inference of brain or cortical involvement. Indeed, such a loss would not merely indicate cortical movement; it would point directly to a special area of the cortex, namely, the posterior portion of the superior parietal lobule.

As to how much loss of the spacing sense depends upon nerve, cord, or brain involvement, it is impossible to say. It appears to be present in astereognosis dependent upon lesions in any of these situations, and yet the function implied by the spacing sense is probably purely cortical. If we analyze the cases of locomotor ataxia and multiple neuritis in which the spacing sense is lost, we find that the tactile sense is generally either impaired or retarded, so that in them the loss of the spacing sense may be merely the expression of a tactile hyperæsthesia.

Complete Transverse Sæptum of the Vagina Impeding Delivery; Urethral Coitus.—E. Rumley-Dawson (*Lancet*, December 8, 1900; *American Gynæcological and Obstetrical Journal*, February) was called to see a primipara in labor at full term. In spite of strong pains, no progress was made. The patient gave a history of regular normal menstruation up to the time of pregnancy. On examining the patient in the left lateral position, the index finger unwittingly and without causing pain passed directly into the bladder. Ocular examination showed that the urethral orifice was much dilated and the vaginal orifice small. One inch within the vagina was a thick, transverse sæptum, bulging with each pain. The cervix could not be felt. There was no opening in the sæptum, which did not occupy the site of the hymen. The sæptum was incised and the opening enlarged with the fingers. The cervix was found completely dilated, and a child was soon naturally delivered. The patient said that, when first married, intercourse had been difficult, and after a few months became impossible; then, later, it was found possible, but painful. The pain gradually subsided. There had been no incontinence of urine.

Dr. Dawson thinks that there is no doubt that the sæptum was congenital, and that up to and for a brief period after marriage there had been an opening sufficient to allow menstruation and impregnation. Coitus was probably at first in the vagina, when probably the opening in the sæptum became torn, and the freshened edges, in healing, united completely, shutting off the upper part of the vagina and the impregnated uterus. Urethral coitus had followed quite unknown to the woman, who was not aware of any abnormality in her genitals.

Malarial Disease in the Adult and the Infant Compared.—Dr. William A. Northridge (*Brooklyn Medical Journal*, April) makes the following comparison between the adult and infantile types of malarial disease:

Adult Type.	*Infantile Type.*
The tertian is the common type.	The quotidian is the common type.
Three distinct stages: cold, hot, sweating.	One distinct stage; the hot stage of fever.
The cold stage is well marked. Generally a chill is observed.	Often this stage is so slight as not to be remarked. The chill is generally absent, sometimes occurs. Convulsions and involuntary muscular contractions are seen at times. Most commonly, a pale, blue-lipped, pinched face is seen, with shrunken eyes. Or the child is drowsy, tired, listless, and yawns. Nausea and vomiting are common, occurring in about two thirds of all cases.
Nausea and vomiting not uncommon.	
Hot stage. Fever is always present.	Fever is always present, and is often the only distinct symptom observed, and on its periodical recurrence, often depends the diagnosis. The temperature ranges very high, 104° F. to 108° F.
Stage of sweating marked.	Sweating stage often absent, or very slight and not noticed.
Periodicity marked.	Periodicity marked.
Anæmia.	Anæmia marked.
Spleen enlarged.	Spleen enlarged.
Nervous system not greatly affected.	Nervous system often profoundly affected.
Jaundice occasionally.	Jaundice occasionally.
The disease does not often present variations from its usual form.	The disease often presents peculiar manifestations.

Types.—The quotidian is by far the most common type of this disease as found in the young child. Next to the quotidian, the tertian is the most common type, and all have noticed that sometimes, under treatment, the quotidian becomes a tertian as the disease becomes less severe. The author believes that the feeble resisting power of the infant accounts for the frequency of the quotidian type, rather than the double-infection theory of Thayer.

Original Communications.

ON THEORIES OF INHERITANCE, WITH SPECIAL REFERENCE TO THE INHERITANCE OF ACQUIRED CONDITIONS IN MAN.*

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QUESTIONS of inheritance at the present moment occupy a curious position in the minds of medical men and in medical literature. To judge from the medical press, we medical men are very Gallios—we care for none of these things. And yet, in family as in consulting practice, questions concerning heredity must and do continually present themselves. In attempting to arrive at a conclusion about a given case, we are bound to ask ourselves how far the frailties or follies of progenitors are responsible for the conditions found—how far the accidents or the sins of the individual. Each succeeding day you must have this question of possible inherited defect brought before you; constantly must you be forced not merely to inquire whether certain phenomena are matters of inheritance, but assuredly to recognize that this or other condition runs through all the members of a family and is an inherited weakness. And yet, although the lay reviews discuss the matter familiarly, and although perchance the charming partner you take in to dinner does the same, we scarce write about these things, save in connection with one or two branches of medicine, and when we do, I have no hesitation in stating, though it is a bold statement, that much of what is written is misleading.

Even in my own subject of pathology, treating as it does of the causes, the processes and the results of disease, in the discussion of which the laws of inheritance should obviously be carefully studied, if inheritance plays even a debatable part; turn to any of the text-books in our language and what do we find? A single page, or it may be but a single paragraph, is thought sufficient to introduce and to take leave of the subject. In short, from a concatenation of circumstances the medical study of inheritance is largely "taboo." Why is this?

It depends upon more than one factor. In the first place, while, as I shall point out later, the study of man is singularly well adapted for determining certain points in connection with inheritance, the fact that the generations of man follow each other at such relatively long intervals is against man being for most purposes a good subject for investigation. In the course of a long life the investigator can but study the characters of three, or it may be four, generations in one family, while influences acting upon the susceptible *fœtus in utero* in man, as in all mammalia, introduce complications. The basal facts of heredity have to be made out in the lower animals, in which generations succeed each other with fair rapidity and in which the eggs are fertilized and from the first developed outside the body.

Unfortunately, too few of us are trained biologists; the curriculum of the past, as of the present, lays too little stress upon the value of a broad biological training as an aid in preparing us to discuss those special biological problems which constitute medical study. As a consequence the medical world in general has to depend upon the biologists proper—upon the zoologists and botanists—for its views upon heredity, and the pure and simple biologists have run riot in their lucubrations upon this subject. Do not think that I mean to belittle them or to indicate that we do not owe much to all the investigations and all the writings of the biologists of the last twenty or thirty years. The facts which they have elicited have been of the highest value. Without these facts we would be nowhere, but the contending theories elaborated by them (perhaps I should be the last to make any such criticism) have been fearful and wonderful, have started from morphological rather than physiological conceptions, and as a result have assumed shapes which would not disgrace the schoolmen of the Middle Ages. While they have appeared to collate and harmonize the facts known at a given moment, new facts have caused them to need modification, and the successive attempts to utilize the old bottles for the new wine, where they have not burst the bottles, have led them to assume most grotesque shapes. In fact there has been developed such a muddle that no amount of midnight oil and wet cloths bound around the temples permit the ordinary mortal to disentangle and follow the course of one theory.

This being the state of affairs, it is little wonder that we have passed by on the other side and have been unwilling to apply the theories of the biologists to the problems of medicine—and this all the more because the trend of these theories has been in apparently strong opposition to medical experience. Of all the workers of late years Weissmann has had the most influence upon biological thought, and his theory, if not accepted by all in its entirety—and if, indeed, now found unacceptable—has, nevertheless, profoundly affected the general consideration of this subject of heredity. That theory is very complicated, and with Weissmann's successive publications has not by any means become easier to follow or to epitomize in language devoid of technicalities. Still, if not every schoolboy, at least every educated man is supposed to comprehend the general tenor thereof and its main thesis or conclusion, that acquired characters—characters acquired by the individual—are not and cannot be transmitted to the offspring. To use Weissmann's own expression, "We maintain that somatogenic characters (characters originating in the cells and tissues of the body) are not transmitted, or rather, that those who assert that they can be transmitted must furnish the requisite proof. The somatogenic characters not only

*The first of a series of annual addresses under the auspices of the Brooklyn Medical Club, delivered May 17, 1901.

include the effects of mutilation, but the changes which follow from increased or diminished performance of function and those which are directly due to nutrition and any of the external influences which act upon the body. Among the blastogenic characters (characters originating in connection with the germ cells), we include not only all the changes produced by natural selection operating upon variations in the germ, but all other characters which result from this latter cause" (1). In natural selection is to be found the key of the phenomena of inheritance.

Now, up to a certain point, we as medical men are prepared to accept this teaching. We know from experience that acquired mutilations are not transmitted, we acknowledge that no clear and satisfactory examples of the transmission of mutilations have been brought forward. We can realize that the loss of an arm, for example, has no direct influence upon the germ cells of the individual, and that so these germ cells if fertilized will develop into the complete individual. But there is another class of phenomena specially interesting our profession which appears to give a direct lie to Weissmann's thesis. And it is, I think, this failure of the ruling theory to explain satisfactorily the phenomena in question which has been the main factor in making us as a profession not enthusiastic of late years to debate the subject.

For, accepting the theory, we must be prepared to deny wholesale the transmission of acquired defects of every order and give ourselves over to a most serious form of fatalism.

If an individual is from the first feeble-minded, that is not his parents' fault; it is due either to an unfortunate commingling of the ids, or ancestral plasms, composing the promiscuous ovum and spermatozoon from which he is derived or to characters which have come down to him from previous generations. If he, being diseased, begets feeble-minded children, he is in nowise to blame—acquired characters are not transmitted. Either those feeble-minded children are an accident—a spontaneous variation—or more probably they represent the summation of characters inherited from long generations. If a man or a woman becomes an alcoholic, it is not his or her fault, it is the result of inherited tendencies; and if the children of the same are of weak constitution or idiotic, again the parents are blameless—characters acquired by the parents are not transmitted, the characters of the parents must have descended to them. If a man is a criminal, again he is not to blame; criminality is atavism, is a reversion to an earlier state, is an inheritance of characters or features peculiar to primæval man. We are, so the popular translation of Weissmann's theory goes, the descendants of criminals, or at least at a certain stage our ancestors were of an imperfect and criminal type. And if criminality appears in the family, with imperfect formation of head and brain and low mental state, that is due to the fact that by the fortuitous extrusion of certain ids from ovum or spermatozoon, the ids of the criminal ancestors have preponderated in the fertilized cell and the result has been that the individual has developed possessing criminal features. However much a man abuses his soma, or body, is of little moment; the effect upon the offspring is minimal.

I put this in strong language and baldly, and it may be urged that I exaggerate the state of affairs. I do not think that I do. I believe that in making this statement I but give expression to the general, if confused, ideas of the majority; nay, more, that I state the received conception of what Weissmann's theory means when applied to man and to abnormal inheritance in man.

Now, if there is one conclusion to which we think experience surely leads us as medical men, it is that the sins of the father do tend to be visited upon the children even unto the third and fourth generation. We think we see this demonstrated day after day. But Weissmann does not support the view. It is true that if we study Weissmann we find that he does not state this in so many words; he admits (2) that the germ plasm is not absolutely unchangeable, that the nutrition and growth of the individual must exercise some influence upon its germ cells, "but in the first place this influence must be extremely slight, and in the second place it cannot act in the manner in which it is usually assumed to take place." Certainly he does not make it clear that he believes in the distinct transmission of any order of acquired characters.

WEISSMANN'S THEORY.—Weissmann, I need scarce say, explains inheritance along the following lines: The germ plasm, the essential matter of the fertilized cell from which the individual develops, must in the process of fertilization come to contain portions of the germ plasm of both father and mother, brought to it by the nuclear material of the ovum and spermatozoon respectively, and the germ plasm of the father and mother must contain portions of the germ plasms of paternal and maternal grandfathers and grandmothers. And so, going back through a long series of generations, it follows, according to him, that representatives of the germ plasms of a long series of ascendants, or progenitors, are contained in the nuclear material of each ovum and spermatozoon. The constitution of a germ cell therefore may be represented, for purposes of inheritance, as made up of a vast number of ancestral plasms, or "ids," derived from the long line of progenitors.

I need not here explain his most ingenious demonstration of the means whereby at each successive act of fertilization a certain number of these ancestral ids are discharged, so that the ovum and spermatozoon each contain half the number originally present, and so that the number of ids in the fertilized ovum is kept constant. I need but point out, in passing, that by this process of reduction the set of ids discharged from one germ cell is by this theory held to be different from that discharged

from another germ cell of the same individual. And as the ids in two fertilized ova are not identical, as the same series of ancestors do not contribute to the germ plasm of the two, so it is that individual variation originates; the ids varying, the individuals controlled or developed by these ids tend to vary. So it is by this fortuitous commingling that spontaneous variation is apt to show itself.

Further, it has to be noted that when the ovum undergoes segmentation, and half of the nuclear material passes into one cell, half into the other, according to Weismann a certain definite series of these hypothetical ids passes into each cell and, according to the series entering each of them, so are determined the eventual characters of the tissues to which those daughter cells eventually give rise. The germ cells of the new individual become differentiated at a very early period, receive the full complement of the ids, and so carry on the whole series of properties inherited from the ancestors.

Difficulties in Accepting this Theory.—This is a crude recapitulation of the main points of Weissmann's theory. I have but mentioned those portions which especially bear upon my argument. To explain atavism, or the reproduction of characters in one generation which had not been recognizable in the previous generation but had been present in some earlier generations, you will see that the theory demands that some at least of these ancestral ids should have remained unchanged through a long period—it may be for centuries. For Darwin's case (3) of the return of features peculiar to the ancestral rock pigeon, brought about by crossing barbs, spots, and fantails, is clearly a case of atavism occurring after centuries of domestic breeding and loss of the features in question. So in such a case of atavism we must, in the terms of this theory, suppose that in the act of fertilization there is a summation and preponderance of just that series of unchanged ids which now in development lead to the bringing into evidence of the atavistic ancestral features. In other words, the theory demands that the ids must be singularly stable in constitution—that they grow and multiply, but retain the same structure.

But now Weissmann has to admit that, under certain conditions, the ids are modified in their structure. This admission indeed is contained in the idea that the individual hypothetical ids vary in their properties; and as, if we trace back these ancestral ids to their common source, they must all originally have been identical in structure, we conclude that at the same time they are both stable and capable of change in constitution. Here indeed is the crux of the theory. How are we to define and realize for ourselves the limits of alteration? Natural selection cannot explain the alteration, unless we fall back upon the far-away hypothesis of multitudinous separate acts of creation in the beginning of things—affording a large number of distinct idioplasms—and even this hypothesis does not work out satisfactorily.

In the example already given of crossing of the old-established breeds of barbs, fantails, and spots, we must imagine that all the ids of each breed have been, in the germ cells of successive generations, exposed to almost identical conditions, and, as a consequence, modified along the same lines. Exposed to the same influences in the course of many generations, it is almost inevitable that all must become modified, for if there were any large number of unaltered ancestral ids contained in the germ cells it would inevitably occur that spots and atavistic forms would frequently present themselves. But this does not happen. Each of these varieties of the pigeon breeds singularly true. How, in short, are we to picture some of them passing from germ cell to germ cell through all the long years in an ancestral condition? Put to this test, the theory breaks down; we cannot picture the necessary conditions. It is, in short, an absurdity to regard the nucleus of the germ cell as containing a colony of what are, to all intents and purposes, separate and independent individuals, some of which have for centuries retained properties of one order, some properties of another, to conceive the germ cell as a colony of individual living beings, for this is what the theory demands (4).

Driesch's Demonstration of the Incompetency of the Theory.—But it may be urged, What is the use of all this argument to kill a theory already dead? For dead it is, so far as regards the ids, and Weissmann's theory without the ids is like Shagpat without the identical. The brilliant observations of Driesch (5), abundantly confirmed as they have been by others, foremost among whom must be mentioned Professor E. B. Wilson (6), of Columbia, and T. H. Morgan (7), of Bryn Mawr, show that the conception is untenable. If in a segmenting ovum we find that normally each of the blastomeres, or primitive segmentation cells, gives rise to one special series of organs or tissues, but if nevertheless the ovum of sundry animals can have its cells shaken apart at the two-, four-, eight-, and even sixteen-cell stage, and each separated cell can be found capable of developing into an entire, if dwarfed, individual, then, obviously, each time the nucleus segments there is no passage into the daughter nuclei of particular series of ids destined to lead to the development of one particular region of the body. Rather, the variation in structure of the different tissues must be, to employ Driesch's words, "a function of their relative position" ("ihre prospective Bedeutung ist eine Function des Ortes"). The existence of these hypothetical ids is absolutely disproved. I dwell upon this theory because to-night I want more especially to discuss, on account of its importance from a medical point of view, this matter of the inheritance or non-inheritance of acquired characters. I hope that I have proved to you that the groundwork upon which the negative view is based is of proved unsoundness. The fact that a theory by which a position is supported falls through does not, it is true, afford proof that the position

is wrong, but when we find that the dictum of non-transmission of acquired characters does not wholly accord with medical experience, we may well ask: Can we gain a conception of the intimate nature of inheritance which is in accord with that experience?

INHERITANCE, TRUE AND FALSE.—My only regret is, that in striving to gain that conception, I shall have to inflict upon you yet another theory; my only apology, that that theory does appear to satisfy the conditions met with in man. First, however, it is necessary to lay down clearly what is not inheritance, for in medical writings and in ordinary medical parlance a terrible confusion prevails upon this point, and much that is certainly not inherited is commonly spoken of as being hereditary. There is, for example, no such thing as hereditary syphilis. There is congenital syphilis and there are, to employ Fournier's term, inherited "para-syphilitic" lesions, but "hereditary" and "congenital" are not and must not be regarded as interchangeable terms.

The confusion is due to the common error of regarding the individual as beginning his existence at the moment of birth and not until then, so that everything occurring before that moment is grouped in one category, everything after, in another. The chick, so to speak, is not a chick until it breaks open the shell; its status from the moment it ceases to be a new-laid egg—or, more strictly, the egg of commerce—until it emerges from the shell is not recognized in law, and fresh egg and chick are commodities of wholly different orders. But the individual existence of the chicken has already begun even before the egg is laid, and what is true of the chick is equally true of the human being. The individual begins the moment that fecundation is accomplished, the moment the nuclear material of the spermatozoon fuses with the nuclear material of the ovum and these twain become one. Compared with the event, birth is seen to be of secondary importance, for the intra-uterine association of the embryo with the maternal tissues is but one means employed by a restricted number of species to insure the satisfactory nourishment of the individual during the earlier stages of development. The recognition of these facts is essential for any serious study of the problems of human inheritance. Any disturbance due to influences affecting the individual from without while *in utero* is *acquired*. It certainly must not be spoken of as inherited; it is an ante-natal acquirement or is of *congenital* origin. That alone is inherited which is the property of the individual at the moment he becomes an individual, which is a property of the germ plasms from which he originates, or is produced by the interaction of those germ plasms. The biologist has no alternative but to define inheritance according to the principle here laid down, nor have we, dealing with a limited field of biology, the right to modify terms in general scientific use for our own convenience.

Now, when we find that syphilis or tuberculosis acquired *in utero* during the later months is peculiarly severe and widespread in its manifestation, it is wholly unjustifiable to premise that the microbic germs of one or other disease could be present in either the conjugating ovum or spermatozoon, could pass into one or other of the blastomeres, in a latent condition, doing no harm to the developing ovum. The ovum would surely be destroyed or at the least be monstrous. Could it conceivably be present, it is more than debatable whether we could regard such a fortuitous inclusion as a part and portion of the germ plasm, and so a strict inheritance. However, I have already, at the Academy of Medicine in this city of New York, dwelt upon this subject (8). Suffice it to say that tuberculosis or syphilis of the new-born must, from every valid consideration, be an acquired congenital condition, not an inheritance. And, let me repeat, only that which is derived from the parental germ plasms is truly inherited.

It is to the germ plasm, the active matter in the germinal cells, and to the properties of that germ plasm that we must turn in order to gain our basis for any sound theory of inheritance. Weismann has done yeoman's service in emphasizing this fact. This germ plasm it is which conveys living matter from generation to generation.

GROWTH AND ITS ESSENTIAL NATURE.—Now, whatever life is, the fundamental phenomena or possession of living matter is the performance of work coupled with growth—the capacity manifested by that living matter to assimilate non-living matter of certain orders, to absorb it, to endow it with like properties, to convert it into matter like unto itself, into additional living matter, in doing which, work is performed. In other words, difficult as it is to conceive or picture to one's self the details of the process, growth is essentially a process of conversion, *a chemical process,* and any adequate theory bearing on the phenomena of growth must primarily be along chemical lines. We are ignorant of what it is in the structure of living matter which gives it those properties; we are, if possible, more ignorant of the physics of the process of growth, of the nature of the force which, acting upon or inherent in the constitution of living matter, leads to this continuous process of assimilation and conversion, and in our ignorance we are unable to separate the chemistry and the physics of the process; we must, that is, regard growth as a *property* of living matter. We must also for present purposes speak of the matter which is essential to and directly concerned in the activity of any one species or individual as a single substance which, following Nägeli, we can refer to as "idioplasm," and our conception of the individual or of the separate cell-units forming that individual must be that in each we have to deal with two constituents, the *idioplasm,* or essential and directive living matter, and the *cytoplasm,* which is in the strictest sense non-living, or certainly unable to exhibit the whole series of vital properties apart from the idioplasm, and which consists

of various formed elements developed and influenced by the controlling idioplasm, intimately connected therewith, it is true, but at the same time not an essential part of the same—the cytoplasm varying in its composition and nature under varying conditions which affect the idioplasm, the idioplasm under all conditions retaining certain cardinal properties.

That the constitution of the idioplasm is not absolutely but only relatively constant has also to be assumed. We are bound to recognize that it is capable of undergoing modifications within certain limits without loss of its cardinal properties, and this from the following reasons: Admitting, as we must, that the highest forms of animal and vegetable life have been evolved from the very simplest, that there has been an unbroken line of development of living forms from the simplest unicellular to the most complex multicellular; admitting also that in every act of reproduction, however simple or however complicated, the direct conveyance of the living matter of the parent into the offspring is to be demonstrated, that, in other words, the idioplasm of the primal living being has been continued on to successive and progressive generations, then we must admit that the idioplasm of the highest forms, judging from its powers of controlling and directing the development of the highly complicated organism, is something very much more complex than the idioplasm of the unicellular organisms; that in the course of evolution this has undergone successive accretions of properties, and this accretion of properties is the manifestation and accompaniment of increasing complexity of constitution of that idioplasm.

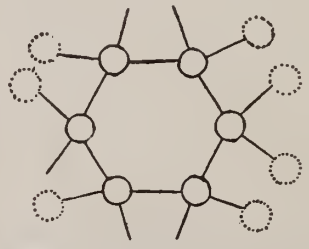
This idioplasm must be capable of modification, either by its environment or under the action of some law of progressive modification. The fact that there exist to-day forms of life practically identical in the main details of structure with those of remote geological ages is against the latter view; we must hold that environment determines changes in the constitution of the idioplasm.

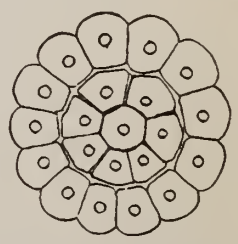
Chemical Theories of Inheritance.—The Isomeric Theory: It must now be asked, Can we imagine a chemical substance so constituted as to be capable of modification in its molecular constitution, and so in sundry of its properties, without undergoing complete change, without other properties being lost?

We can. If, as Professor Walker, of McGill, points out to me, such relatively simple bodies as lactic and malic acids are capable of existing in more than one form—as lævogyrous and dextrogyrous and optically inactive modifications—and this with no obvious alterations in their chemical properties (though physically they show different actions upon polarized light, and physiologically we find that certain bacteria can act upon one and not the other form), then, certainly, the much more complex proteid material which would seem surely to be the basis of the idioplasm may present a very great number of molecular arrangements, and each of these may be accompanied by slight differences in certain physical and physiological properties.

Certain recent observations have rendered this additionally probable. By our present method of conceiving and visualizing the structure of chemical substances we regard the carbon atom in the molecule as being situated at the centre of the tetraedron and as capable of linking four other atoms or groups one to each of the corners or apices of the tetraedron. A substance like malic acid having a single central carbon atom may, therefore, be built up in three ways, with the linked groups arranged in one relationship to each other, or in the reversed relationship, or the substance may be a combination of the two atomic forms. These are all the forms we can picture as existing according to this system. But now a fourth form of malic acid has been found which is more dextrogyrous in the polariscope than is ordinary dextrogyrous malic acid. And the salts of this new form of malic acid show slight but distinct variations, in solubility, etc., from the ordinary malates. If this is so, there may yet further be molecular modifications of such a relatively simple substance as malic acid, and *a fortiori* idioplasm may be capable of an enormous number of modifications.

The Side-chain Theory of Inheritance.—The mode of the atomic arrangement in the idioplasmic molecule may, therefore, in part, explain the variation in the properties of that idioplasm seen throughout the animal and vegetable kingdoms. I say in part, for if we assume that the structure of the individual is primarily the outcome of the structure and properties of the idioplasm, then for each different form of living being, nay, for each individual being, we have to assume a different atomic structure of the idioplasm. Or, otherwise, we have to assume that the modifications of this idioplasm are infinite in number. This, it seems to me, asks too much. The matter cannot be quite so simple. Each





molecular modification may play some part, it is true, but our conception of the structure and modifications undergone by the idioplasm must be more elaborate. We must, I think, formulate a theory of structure somewhat akin to that laid down by Ehrlich (9) in his now well-known theory of the nature of immunity. We can picture to ourselves the primitive idioplasm as composed of a mass of material each molecule of which is formed of a central ring, to which there can be attached side chains from which sundry side chains can be detached without the central ring being destroyed.

This conception, which upon first encounter appears revolutionary and opposed to our ordinary chemical ideas, is, after a little deliberation, recognized as being but a statement, in chemical terminology, of what has been for long years the accepted physiological conception of the nature of protoplasm. It is, if I may so express it, the fundamental—the essential—conception of the constitution of living matter; it follows logically and inevitably the postulate of assimilation and growth. Whether we agree, with the majority, to distinguish between the idioplasm and the cytoplasm of the cell, or prefer to speak simply of protoplasm, it must, I think, be recognized by all that we are bound to assume—for the process of assimilation and, again, in order to explain the variation in structure and properties of the various cells of the organism—that there is a central basal substance to which become linked, more or less permanently, or more or less temporarily, those other secondary substances which, not in themselves protoplasm, modify the constitution of the protoplasm as a whole. And these secondary substances, we see, are necessary for the full manifestation of the properties of that protoplasm. This conception is, I acknowledge, difficult to harmonize with the prevalent elementary conceptions of chemical action and chemical constitution, but it is, nevertheless, essential for the physiologist and unavoidable. What is more (for I do not pretend to be a chemist), I learn that it is not opposed to the more recent deductions of the chemists concerning the nature and properties of the more complex carbon derivatives. In other words, it is by no means heterodox from an advanced chemical standpoint.

Accepting this view, it is not necessary to regard the molecules of idioplasm as at all times presenting their completed structure, with every side chain attached. On the contrary, we are free to conceive the molecules being laid down and being transmitted in a relatively simple form, some of the side chains only becoming attached when the molecules are brought into certain particular relationships with their surroundings. It is not necessary, for example, to hold that already in the ovum there is idioplasm identical in structure with that eventually present in the muscle fibres or nerve cells developed from that ovum. Rather, we must hold that in the ovum there is one common idioplasm of simple type, to which, when distributed in the various cells derived from that ovum, different side chains become attached, according to the relationships assumed by those cells, so that the cells of different orders are controlled and formed around protoplasmic or idioplasmic molecules composed of those central rings plus varying series of side chains. Indeed, I am prepared to go further and to state that the idioplasm possessing its full complement of side chains must be regarded as *ipso facto* incapable of initiating cell multiplication.

I base this statement upon the fact, to which I have more than once called attention during the last few months (10), that it is only cells which are undifferentiated, or which have reverted to a simpler less differentiated form, that are found to undergo division. Highly differentiated cells never multiply as such.

INHERITANCE IN UNICELLULAR FORMS.—If the primitive unicellular individual formed by this controlling idioplasm divides into two to form two individuals, each half will contain a portion of the idioplasm, and if the circumstances affecting the molecules of the new generation are the same as those affecting the parent forms, then this idioplasm will continue to assimilate to itself non-living matter and to endow it with its constitution and properties, and the individuals controlled by this idioplasm will correspond to the parent form and to each other.

But if the circumstances affecting the filial idioplasm vary from those affecting the parental, then these more unstable and loosely connected side chains will be the first to be influenced. The very act of assimilation (the surrounding medium varying in its composition) may lead to the substitution of other side chains, to slight variation in the composition of the idioplasm. And the cell or individual developed or controlled by the idioplasm will therefore vary from the parent form, while the products of division of this second generation, containing as they do this modified idioplasm, will exhibit like structural modifications. Here we have the simplest example of the inheritance of acquired characters.

There is, however, yet another property which we have to assume. It may be laid down as one of the great laws of biology that characters which are of the most recent acquirement are those which are most unstable, and are first lost; those which are oldest are the last to disappear. In man, for example, the first signs of generalized systemic weakness and imperfect development show themselves in connection with those properties which differentiate man from the animals most nearly allied, namely, in weakness and arrest of the higher functions of the nervous system, or, again, in susceptibility to certain specific diseases which are peculiarly apt to affect man, relative immunity toward which on the part of the healthy individual must be regarded as a comparatively recent acquirement. As my old teacher, James Ross, of Manchester, was the first, I believe, to point out, when there is progressive atrophy of the cells in the cortex of the brain, the first motor cells to show signs of that atrophy are those governing the muscles which differentiate man from other animals, namely, the opponentes muscles of the hand.

Hence it has to be laid down that the attachment of these side chains, which are recently acquired, is relatively unstable, that such recent side chains are most easily detached, so that the idioplasm and the organism developed around that idioplasm are prone to return to their former condition or lose characters gained by recent progenitors. The more side chains become attached, the more complicated the structure, the more unstable

the equilibrium; hence the greater the liability to revert. As Professor Walker points out to me, parallel conditions are to be recognized in organic chemistry. The old-established view of the existence of "radicles" to a large extent admits this principle; certain central atomic groups in a compound are seen to be more fixed and not to undergo change when the attached groups are removed and replaced. Still more closely allied is what has been observed in connection, for example, with aniline. The composition of this is $C_6H_5NH_2$. Here the H atoms of the NH_2 group can be replaced by other groups, by methyl (CH_3) and ethyl (C_2H_5) groups, etc., and it is found under certain conditions that, in carrying out a series of these replacements, the last group attached is the first to be split off and replaced.

We see this principle in action in the lowest forms of life. Contrary to what Weissmann has laid down regarding parthenogenesis and asexual reproduction, it is comparatively easy to impress new characters upon the bacteria. By subjecting a growth of pigment-producing bacteria to the action of a temperature just below that which will cause their death, we can bring about a loss of pigment production, so that the rapidly succeeding generations are perfectly colorless, but gradually in the course of time the cultures made from the original (heated) tube regain the power of pigment production. This may be in two or three days, or, again, only after several transplantations at the end of two or three weeks, and when we remember that a bacillus divides and so forms a new generation in, on the average, something considerably less than an hour, it is seen that the acquired character may be impressed upon the race for some hundreds of generations (11). The more intense the alteration to which the bacillus is subjected, the longer and the more frequently the race is subjected to the altered temperature conditions, the longer it is before there is a sign of return to the normal. Translated into the terms of this theory, heat leads the idioplasm to have certain side chains, either modified or lost, and this modification or loss is inherited; but return to the normal environment leads the modified idioplasm in the process of growth and metabolism eventually to assume side chains of the same composition, the conditions of growth being similar to those under which the species originally acquired the side chain. Yet another solution, though it is one which I do not favor, is that not all of the molecules of the idioplasm undergo modification, a minority retain their original constitution, and, under favorable conditions, gradually come to preponderate.

Sexual Conjugation and Inheritance.—How, next, does this theory bear upon sexual conjugation and its effects, for this also is met with in many unicellular organisms? I shall not take up the explanation of the development of male and female characteristics; this is too large a subject, but I would discuss how fusion of the idioplasm of two individuals affects inheritance. In that fusion we have a mixture of the two idioplasms, and, as already pointed out, these idioplasms, as a result of the varying influences which have acted upon them, tend to vary in certain particulars in their constitution. This fusion must be either a mere admixture, so many molecules of one idioplasm becoming admixed with so many molecules of the other, or a true chemical combination. If we presuppose a mere mixture, we are led along the lines of Weissmann's theory and have to regard the idioplasm of the individuals of one generation as being composed of idioplasmic molecules or ids which have been passed down from the long line of previous generations. I have already pointed out the difficulties in which we find ourselves if we accept this view. The other view largely, if not entirely, removes these difficulties, nor does it introduce any fresh crop of serious difficulties.

We may regard, then, the idioplasms from the two parent forms as undergoing a true chemical combination,* the resultant idioplasm of the new generation being in truth a new idioplasm not possessing the identical properties of that of either parent, but being intermediate, tending in its characters and constitution toward the constitution of either one or the other according, it may be, to the number or chemical activity of the molecules of one or other parent entering into combination. Weissmann supports his view by pointing out that for a certain period the maternal and paternal materials in the chromosomes of the daughter nuclei remain distinct, and reaches the bold and utterly unsupported conclusion that when the chromosomes fuse to form the irregular network pervading the nucleus, their constituents nevertheless remain distinct and sharply separable from those of the other chromosomes. But we have no evidence, in the first place, that the chromosomes alone contain the idioplasm, that chromatin and idioplasm are identical. Everything points to the fact that the idioplasm is contained in the nucleus, but we cannot with certainty advance further. It may be that the chromatin is but the cystoplasmic framework, the mechanism, as it were, by which the idioplasm is distributed.

If the germ cells of both parents possess certain loosely attached or unstable side chains of more recent acquirement, which are of like nature, there is no sufficient reason why the protoplasm of the offspring should not also possess them. We can thus realize how it is that abnormal features present in both parents may be equally or more prominent in the offspring. But in general we must recognize that, the parents varying in different directions, the tendency of conjugation is to preserve the mean, to bring about an approach to uniformity in the constitution of the idioplasm of successive generations of one species exposed to like influences.

I need scarce say that in these higher unicellular organisms which present conjugation the cell already presents a nucleus, and that everything indicates that this

*It may be asked, How can identical or almost identical substances undergo true chemical combination? Physicists nowadays freely recognize this possibility. Thus, everything points to the molecule of water being, not H_2O, but $3H_2O$: numerous other examples might be brought forward.

nucleus is the controlling and directive body in the cell —that it is the nuclei which undergo conjugation—and that, in short, we have to recognize that the idioplasm of the individual is contained in the nucleus. It is by no means necessary to conceive that the whole of the nuclear material is idioplasm, or that the whole of the idioplasm enters into chemical combination with the molecules derived from the conjugating germ cell, molecule for molecule. I mention this in passing to indicate that it is not necessary to assume that when polar bodies are extruded the material forming them is identical with the idioplasm of the remaining nuclear material. The difficulties in explaining polar bodies and the reduction of the nuclear substance are no greater by this than by Weissmann's theory. The exigencies of time demand that I should not enter in detail into the consideration of these subjects. Rather, I must give the broad outlines of the theory and pass on to consider inheritance in multicellular organisms.

INHERITANCE IN MULTICELLULAR FORMS.—Every multicellular organism arises from a single cell, the fertilized ovum, itself in all sexually produced forms the result of fusion of a male and female cell, of the ovum and spermatozoon. Studying the method whereby this one cell gives rise to the adult multicellular organism, we see that by successive acts of division this one cell gives rise to all the cells of the body. In the course of this process its nucleus divides and redivides, and that in such a way that at each division like portions of the nuclear material pass into each daughter-cell. This regular distribution of nuclear material affords a sound ground for believing that there is an equally regular and uniform distribution of idioplasm into each cell. Now, I have already pointed out the value of Driesch's observations in overthrowing Weissmann's contention that there must be a qualitative difference in the idioplasm distributed to the daughter-cells. We have absolutely no ground for believing in any such qualitative difference; on the other hand, it is a legitimate inference that the idioplasm is modified by its environment. To take the simplest example—a multicellular organism composed of a spherical mass of cells. Those cells which come to form the peripheral layer of the individual are subjected to a series of reactions quite different from the series telling upon the centrally situated cells, and it requires no stretch of the imagination to predict that in the process of assimilation and growth on the part of the idioplasm of these outer cells, that idioplasm tends to be altered in its constitution as compared with the idioplasm of the centrally situated cells. So that the results of division of the peripheral cells, if retained in the same environment, will tend to produce the characters impressed upon the parent cells, and so that, if this subjection to the special set of conditions is continued and impressed upon this order of cells for a sufficiently long period or with sufficient intensity, even when pressed or passing into other environment, the cell generations will retain these modified conditions, so that, for example, cells of mesoblastic origin will tend to maintain characters different from those derived from epiblast, and this whatever the ultimate position of the cells in question.

In fact, as a first law, we may lay down with Driesch that the structure of the cells in a multicellular organism is a function of their position, and this because the position of the cell determines the modification undergone by its idioplasm. As a second law we may lay down that the greater the change impressed upon the idioplasm of these cells and the longer that idioplasm is subjected to the conditions inducing this change, the more permanently will the daughter-cells exhibit the peculiar alteration in the idioplasm, with consequent modified structure wherever they find themselves in the economy. We have, in short, to recognize that two orders of forces determine the structure of every cell in the body: (1) The previous influences acting upon its idioplasm and causing it to be of a particular chemical constitution; and (2), the position in which the cell finds itself and the forces acting momentarily and immediately upon its idioplasm. Or, briefly, these two series of forces are inheritance and environment, and inheritance and environment determine the constitution of the idioplasm and the structure of the cells.*

Following this line of thought, we can understand how it comes to pass that the body cells and the germ cells in the higher and more complex organisms become so sharply divided, how it is that the body cells are no longer able to reproduce the whole organism. Their idioplasm has become altered in certain directions to such an extent that it is able, under favorable conditions, to divide and reproduce cells like Nature, but the very extent of the modification it has undergone has taken from it that constitution or structure which is necessary to allow it to reproduce each and every order of cells which together form the individual. The germ cells, on the contrary, undergo no such extensive changes in constitution—as a function of their position in the organ-

*To the worker in bacteriology the hesitancy on the part of biologists in general to accept environment as a most important factor in originating variation is almost incomprehensible. Nothing is more remarkable in the study of the lowest unicellular forms of life than this effect of environment in bringing about changes in character, changes which not only tell upon a limited series of generations (as I have already pointed out), but are permanent in their nature. By no means, save altered environment, could Hansen (12), taking isolated yeast cells or "spores" (100 per cent. of which, when cultivated under ordinary conditions, gave rise to spore-bearing forms) and subjecting these to the highest temperature at which growth could still occur, obtain a race or variety of yeast which now, after twelve years, has continued to grow under ordinary conditions without once developing spores. By no means save altered environment is it possible to explain Vincent's conversion of the absolutely harmless potato bacillus or, again, the *Bacillus megatherium* (by long-continued sojurn within closed collodion capsules in the peritoneal cavity of animals) into forms profoundly pathogenic, and fatal to rabbits, mice, and guinea-pigs in the course of a few hours (13).

The argument that phenomena observed in unicellular organisms cannot be applied to multicellular organisms is, to say the least, a severely strained argument. The extent to which environment acts as a factor may, it is true, be diminished in these, but surely it cannot be regarded as being eliminated and rendered negligible.

ism, their idioplasm as it grows and is distributed into the successive germ cells retains its fundamental constitution with but little alteration, and when these germ cells are discharged they and their idioplasm, brought into like relationships to those affecting the parent germ cells, undergo the like series of developmental changes, and reproduce the whole series of cells, tissues, and organs characteristic of the species to which they belong.

In the terms of this theory, therefore, inheritance essentially depends upon the chemical constitution of the idioplasm or the life-bearing or biophoric protoplasm of the germ cells, not upon the number of the separate ids or biophores or ancestral plasms or pangenes contained in the idioplasm; and variation, whether slight and individual or extensive and leading to the production of species, is ultimately the expression of modification in the constitution of that idioplasm brought about by environment. Whereas Weissmann's theory lays stress upon relative fixity in the constitution of the idioplasm, this theory admits freely the capacity for change in structure of the same. So long as the surrounding conditions are unaltered the idioplasm is unchanged; alter these conditions and the idioplasm is liable to variation in constitution.

Atavism.—Lastly, in regard to atavism and reversionary degeneration of the cells of the individual, this conception of the idioplasm with attached side chains, which are more firmly or more loosely attached, affords a perfectly adequate explanation. The more advanced the organism the greater the number of these attached side chains, the more recent the attachment of a side chain the more unstable that attachment. As a consequence, any profound disturbance will, according to its intensity, tend to cause the loosening and removal of the more unstable side chains in general in the order of their stability of attachment. And as the structure of the individual and of the individual cells is the expression of the constitution of the idioplasm, of the germinal idioplasm, and of the idioplasm of the individual cells, so according to the intensity of the disturbance will there be greater or less reversion to an earlier stage in the developmental history.

Let us now apply this theory to those special problems which I have referred to as being of peculiar interest to us as medical men. Can acquired defects be transmitted? In seeking to answer this question, at least three orders of phenomena have to be recognized and distinguished. These are:

1. The Non-inheritance of Acquired Mutilations.—To these I have already referred. We cannot conceive of the direct transmission of identical lesions of this order from parent to offspring. At most we can conceive of the possibility of indirect effect where the mutilation is extensive or affects organs playing an important part in general nutrition. If there is impoverished general nutrition we can understand that this can affect the germ cells along with the other cells of the organism, that the lack of due assimilation or the excess of sundry internal secretions which, in consequence of lowered general metabolism, have been imperfectly neutralized, by telling upon the blood and lymph, may lead to modification of the idioplasm of those germ cells, with the possible resultant imperfections in the growth of the fertilized germ, everything depending here upon the combination of the modified germ plasm of the mutilated individual with that of the other parent. If the number of molecules of this other idioplasm or the constitution of the same is adequate to counteract the loss of side chains in the idioplasm of the mutilated individual, there may be no recognizable effect. Or, on the other hand, the effect upon this latter idioplasm may be so serious as to lead to inherited defects in the offspring. But clearly these defects will be of a different order and a more generalized type; they will not be identical with the mutilation. There will be no direct transmission of acquired defects of this nature.

2. The Indirect Transmission of Acquired Diathesis.—With reference to diathesis, this also may be laid down, that acquired disease and the effects caused by disease cannot *in general* be transmitted in such a way that the offspring presents lesions identical with those produced in the parent, though it has to be recognized that there is the possibility of modification in that offspring due to the parental disease. There is the possibility of a certain amount of transmission, not of the identical local lesion caused by the disease in the parent, but of a modified or impaired condition of the germ plasm. We must recognize that constitutional disease, by leading to disturbance in the activity of important organs, tells not only directly upon these organs, but secondarily upon other organs. It leads, for example, to an altered condition of the blood and so to altered nutrition of all the cells of the body. Among other cells, the germ cells may be directly affected, their idioplasm modified and the offspring directly influenced. Conditions affecting the parents are capable of influencing and modifying the descendants. It is this which is forcibly brought home to us in our medical work. It is changes of this order which are almost inevitably neglected by the biologists, for they are not within their ken. The changes brought about in the tissues by what is essentially chronic intoxication may be so slight as to be inappreciable. Microscopical examination may reveal nothing; only by their physiological effects can their existence be recognized. It is in the study of these conditions and their effects that medicine can afford the most valuable aid in the matter of inheritance.

All infectious diseases are intoxications. If a parent is the victim of syphilis, it is obvious from febrile and other phenomena not merely that there are local toxic phenomena at the foci of growth and multiplication of the germs of the disease, but that the toxines pass into the general circulation. They may produce no imme-

diate structural changes in the cells and tissues, but we have evidence that the protoplasm of various tissues is affected, although the results of the disturbance may only show themselves after long years. Indeed, the only explanation we can give of many remote effects of syphilis is this, that during the active period of the disease there has been a change wrought in the constitution of the cells of sundry tissues, slight and subtle, it may be, but sufficient to lead to premature exhaustion of the idioplasm of those cells. It would be absurd to argue that the immature germ cells lie absolutely dormant in the organism. They need nourishment, they assimilate; they are thus also apt to absorb circulating toxines, and their idioplasm must be affected in this act. Hence, while syphilis as such is not inherited, the toxines of the disease must be regarded as prone to set up molecular disturbances in the germinal idioplasm, and the offspring may show, not syphilitic lesions, but parasyphilitic lesions—various forms of arrested and imperfect development of different tissues due to the intoxication and therefore modification of the germ plasm while still a portion of the parental organism.

Parental intoxication, therefore, is seen to be capable of directly affecting the germ cells, and if there is no direct transmission of the effects of such intoxication, certainly there are indirect effects. In demonstrating the truth of this statement, it must be freely admitted that conjugation and intra-uterine existence introduce grave complications. In fertilization it is obvious that the idioplasm of the sound parent may largely neutralize the defective constitution of that of the diseased parent, while we have constantly to guard against ascribing to defects in the germ plasm conditions acquired during intra-uterine life. If the mother is the subject of any toxic state (to use the broadest possible phrase), not merely may the ovum be directly affected prior to fertilization, but in the course of fœtal existence the organism of the offspring, deriving its nutrition as it does from the maternal blood, is liable to be affected and disturbed by circulating toxic substances and the development of the different tissues to be correspondingly influenced. The only conditions we can safely study are those in which the father is the subject of disease or intoxication, the mother exempt. Nor is it easy in cases of infectious disease, or even in frank intoxications such as the alcoholic, to be perfectly sure regarding maternal exemption.

Paul's observations, however, upon the effects of lead poisoning afford a most convincing demonstration along the required lines (14). Plumbism is peculiarly a trade disease. It particularly affects those following certain occupations; thus often the male wage-earning member of the family is alone exposed. Studying the history of thirty-two pregnancies in which the father was the victim of saturnine poisoning, the mother free from the condition, Paul obtained the following remarkable statistics:

Twelve resulted in death of the fœtus before term (eleven abortions, one child born dead).

Twenty children were born alive, of which eight died during the first year; four died during the second year; five died during the third year; one died later; two alone were found to be living, one aged twenty years, the other only twenty-one months.*

Eighty-two resulted in abortion.

Four resulted in birth before term.

Five resulted in children born dead at term.

Twenty resulted in viable infants which died before the completion of the first year.

Fifteen resulted in children dying between the first and third years.

In connection with the effects of paternal syphilis, Fournier (15) has contributed strong evidence along the same lines, pointing to the great frequency of arrested development of various orders, from intra-uterine death to infantilism. To his statistics objection may be made that certain of the infants recorded by him probably suffered from the actual disease acquired *in utero,* secondary to local infection either of the placenta or of the membranes. Discounting this possibility in a certain proportion of cases, his figures still remain very remarkable. But what is needed is a more searching study of these cases of defective children, the offspring of a healthy mother and an infected father, to make sure that we are dealing with parazymotic as distinct from zymotic lesions. In connection with the subject, Gheorghiu, studying malformations, has pointed out the remarkable frequency with which there is, on inquiry, obtained a history not merely of the mother, but of *either* father or mother, having been a sufferer from acute or chronic infectious disease at the time of conception (16).

3. THE DIRECT TRANSMISSION OF ACQUIRED CONSTITUTIONAL STATES.—In the above-mentioned series of phenomena we have dealt, as I say, not with the direct transmission of acquired conditions, but with the deleterious influence leading to general defects of development and due to the action of toxic agents upon the germ cells prior to conception. Can we advance further and see evidences of direct transmission of acquired constitutional states? I think we can.

If, for example, an animal acquires immunity to a disease, we are convinced that the process of acquirement is a chemical process; that the action of the toxine of the disease has been to set up certain molecular changes, certain alterations in the composition of the cell substance, so that that cell substance now responds in a different manner when brought into contact with the toxine; and once this modification in the cell substance is produced, the descendants of this cell retain the same

*Legendre, in his essay in Bouchard's *Traité de pathologie,* Vol. I (which in the first place directed me to Constantin Paul's admirable article), gives a table of 141 pregnancies which I cannot find in the paper referred to. Possibly this is from a later article by the same author, but the proportion of abortions as given by him is so much larger that I doubt if this can be the case.

properties, that immunity to one special disease is not merely a momentary, but is a more or less lasting, state of the system. It is true that it tends not to be permanent; we see that, where it is attainable, the more prolonged and the more severe the changes set up in the process of immunization, the longer it lasts; we recognize, further, the action of the law that properties of most recent acquirement are soonest lost, and that there is a distinct tendency for the condition, or acquired state, of the cells to pass away. Nevertheless, we admit that inheritance of the acquired condition has to be granted in the case of the body cells in this connection. Here, again, if these processes obtain in connection with the body cells we must logically admit their action in the case of the germ cells. The idioplasm of body and germ cell is of like origin and must be susceptible to like influences.

The toxines circulating in the blood of the individual undergoing immunization must also affect the germ cells; they must acquire immunity, and the individuals developed from them must, subject to the law of loss already noted, have the same properties. Now, as a matter of fact, this transmission of acquired immunity has been occasionally noted, where, for example, both parents (rabbits) have been rendered immune to the *Bacillus pyocyaneus,* the offspring have been found more refractory to pyocyaneus infection, but in general the observations have been negative. This, as I have hinted, is only to be expected on account of the easy detachment of, if I may so express it, newly acquired side chains. It is, however, legitimate to suppose that successive immunization through several generations will cause the new side chains to become more and more fixed, and that racial immunity is brought about by these means, a view more probable than the alternative of *mere* "survival of the fittest."*

Conversely, in those cases where immunity is not developed, in the case of chronic conditions like tuberculosis, we can, along these lines, comprehend how the toxines weaken the germ cells along the same lines as they weaken the general tissues of the body, and as the resistance of the body in general to a special microbe and its products becomes less and less, so also the idioplasm of the germ cells becomes less and less resistant, and so from parental disease the offspring gains a peculiar susceptibility to one special disease. So that, in short, from disease acquired by the parents a particular diathesis is developed, a special susceptibility to the particular form of disease.

Here Weissmann would make the somewhat subtle distinction that we are not dealing with the direct transmission of acquired parental defects—that the toxines produce these results not by acting on the body cells, but by direct action on the germ cells—that the inheritance is blastogenic, not somatogenic (17). This is a sorry and almost Jesuitic play upon words. Let us grant that they are of blastogenic origin; they are nevertheless of individual acquirement. The individual consists of body plasm and germ plasm, and whether the defect tell primarily or secondarily upon the germ plasm of the individual, we have here examples of conditions acquired by the individual being transmitted to the offspring.

But we can go further. Exogenous and bacterial intoxications are not the only intoxications; we recognize yearly more and more the existence of states of truly endogenous intoxication, auto-intoxications—of disturbed states of the constitution due to disturbances in glandular activity or to excess of certain internal secretions or of the substances ordinarily neutralized by the same. Such disturbances, acting on the germ cells, would be truly somatogenic.

If gout and the gouty diathesis are, as many hold them to be, of the nature of true auto-intoxications, if in a given percentage of cases (in France twelve per cent., according to Bouchard) the gouty state shows itself in those giving an absolutely negative history of gout in their progenitors, then we are at liberty, I think, to regard the gouty diathesis as an example of truly somatogenic acquirement of an inherited and inheritable constitutional state.

Defect in bodily metabolism has led to intoxication of the germ cells, and the offspring show a peculiar liability to be the subjects of intoxications of the same order. Here what is transmitted is a constitutional state, and that constitutional state may manifest itself in more than one way, but no one will deny that this is truly inheritance of an acquired condition.

We must, therefore, I hold, be prepared to admit the possibility of the transmission in inheritance of certain orders of acquired constitutional conditions—we must see that it is not necessary, with Weissmann, to deny strenuously the inheritance of each and every order of acquired defect, and that along the lines of some such theory as that outlined this evening we gain a fuller harmony between theoretical considerations regarding the nature of inheritance and the facts as they present themselves to us day after day.

Conclusion.—Within the time at my disposal it has been impossible to touch upon many aspects of inheritance which interest us as medical men—upon spontaneous variations and their transmission, upon inbreeding and marriage of consanguines, upon degeneration as distinct from atavism, upon the particular problems of inheritance of nervous conditions, to mention but a few. It seems to me, however, that this conception of the properties of idioplasm is adequate to bring together and harmonize the facts we possess concerning all of the above-mentioned conditions.

Let me conclude with Weissmann's apology: "Hypotheses, even when not absolutely right, may be of value

*It goes without saying that where both father and mother are immunized through successive generations and the fœtus —and its germ cells—acted upon by the maternal blood and milk, the development of acquired inherited immunity should become yet more assured.

in advancing our knowledge, if only they are relatively right, *i. e.*, when they correspond with the state of existing knowledge. They are like the feelers which the short-sighted snail stretches forth on its darkened path, testing this way and that, and withdrawing them and altering the route so soon as they come across any obstacle." (18).

I must, gentlemen, ask your forgiveness for bringing before you a subject so far outside the line of general medical thought, and for having inflicted on you so much that is theoretical. That was not my intention when I sat down to prepare the paper. I had intended to indulge in the main in a destructive criticism, to point out how Weissmann's and allied theories fail to satisfy certain orders of conditions presenting themselves to medical men; but as I proceeded with the task it became obvious that mere destructive criticism was valueless, that it became imperative to present an alternative theory which for many months—I may truly say years—had been simmering within me, unexpressed.

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APPENDICITIS PERFORATIVA IN IRREDUCIBLE RIGHT SCROTAL HERNIA, WITH A REPORT OF A CASE.

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It is almost a proverb in medical science nowadays that we learn more from one case in which we have faced disaster than from many others in which the patients made a so-called uneventful recovery. This old truth, together with the paper of Tacke, Epityphilitis im Bruchsacke (1), in which he has collected twenty-eight cases and adds one observation of his own, has induced me to contribute here briefly, out of 514 operations up to date, with four deaths (one is cited in the *American Journal of Obstetrics and Diseases of Women and Children,* Vol. xlii, 1900, No. 4), the above-named case, which, though it has many analogues, especially since the development of the pathology of the processus vermiformis in this country, with its enormous up-to-date literature, still seems of sufficient importance to warrant publication.

F. H., a laborer, sixty-seven years of age, was stricken suddenly with an attack of fever, vomiting, and sharp pain in his right inguinal hernia, which had made its first appearance seventeen years before. At the beginning irreducible, it became strongly fixed to the hernial sac eight years subsequently, steadily gaining in size. Four years previous, a somewhat similar hernia had appeared on the left side. Examining the patient, I found the radial artery in a state of sclerosis. There was slight emphysema of the right lung, with sibilant rhonchi over both lungs. The abdomen was somewhat retracted in the region of the stomach. There was an irreducible hard scrotal hernia on the right side, of twice the size of a man's fist, over which the skin was somewhat reddened and felt hot to the touch. In the depths of the hernial tumor, just in the neighborhood of the testicle, but distinctly separated from it, a hard mass as thick as a man's thumb and about five centimetres in length could be distinctly outlined. I demonstrated this condition to my assistant, at that time, Dr. Nitzelnadel, and made the suggestion that this mass was the appendix lying with the distended cæcum in the hernial sac. On the left side a reducible scrotal hernia as large as a man's fist was encountered. During the operation (assistant, Dr. Nitzelnadel) I found, after opening the hernial sac, the gray-colored cæcum adherent to the sac on all sides, imbedded in pus and fæcal matter. Just below and attached to it in its whole length was lying the appendix, perforated in its anterior portion. In the opening of the perforation a black foreign body, of the form of a prism and about two and a half centimetres long and one centimetre thick, was encountered, which, upon minute examination, could be classified as a siliceous schist stone. I removed the appendix and opened the cæcum to obtain free drainage. The next day the patient became comatose, and death followed from sepsis the same evening.

An appendix, as well alone as together with omentum and small and large intestine, situated in a hernia, chiefly an oblique inguinal hernia, is not so uncommon

a phenomenon in literature. Yaia (2), for instance, stated at the Thirteenth Congress of the Italian Surgical Society in Turin, 1898, that Colzi, of Florence, among 1,586 cases of operation for hernia by himself, had found twenty-seven hernias of the appendix, six of which were incarcerated hernias. In all the twenty-seven cases the appendix showed symptoms of, and was in a chronic state of, folliculitis. Ritter von Hoffman (3), of Albert's clinic in Vienna, says that in recent years, among 250 Bassini operations for radical cure, the appendix has been found nine times in the hernial sac. Catellani (4) operated in Tricomi's clinic on 420 hernias, and found the appendix in four, either alone or with the cæcum. Most important statistics of appendicular hernias are, furthermore, given by Klein (5), 22 cases; Brieger (6), 24 cases; Baiardi (7), 51 cases; Briançon (8), 14 cases; Eccles (9), 29 cases; and Tacke (1), as cited, 28 cases.

It has been pointed out by many authors concerning the frequency of appendicular hernias that males are noticeably in preponderance, and that the majority of cases are congenital oblique right inguinal hernias in children and juveniles. This finds its natural explanation if we take into consideration the development of the descent of the testicle on this side and its abnormities. Lockwood (10) has demonstrated that occasionally muscle fibres and peritoneal bands are formed extending from the appendix or the cæcum to the gubernaculum Hunteri. Jonathan Hutchinson, in his remarkable and very readable paper before the sixty-seventh annual meeting of the British Medical Association, On the Vermiform Appendix in Relation to External Hernia (11), illustrates a case of the latter type from an original dissection in the London Hospital Museum.

As another cause of appendicular hernia, there have been considered preceding attacks of appendicitis (*vide* Battle (12)), and the theory has been brought out that an appendix transformed by repeated attacks into a stiffened and erectile organ, which state of affairs we encounter sometimes in interval operations, may protrude into a peritoneal pouch in the neighborhood of the internal hernial ring, for example, the diverticulum Nuckii.

To render justice to a discussion of this hypothesis would extend this paper beyond its outlined limits. I should, however, like to state here briefly that a very long appendix or a swollen and erectile organ, together with perhaps a natural great mobility of the cæcum (long mesocæcum or mesenteriolum ileocæcale commune (13)), may explain many phenomena to which I shall refer later.

When an appendix has once descended into a hernial sac, there is abundance of opportunity for it to be subject to inflammation produced as well by *external* causes, such as traumatism, manipulation on the part of the patient, a truss, etc., as by *internal* reasons, such as kinking and bending of the organ with stagnation of fæcal matter and bacteria. In regard to the truss, Gross (14) cites a case in which double perforation of the appendix was due to ulcers caused by the pressure of the truss.

It is easily understood that many cases of appendicitis in the hernial sac have been mistaken for incarcerated and strangulated hernias and have been treated accordingly; and that under such conditions experiments in taxis, when the error was not detected early enough, have oftentimes been promptly followed by the death of the patient, is not at all surprising. Even during an operation on a hernia it has sometimes been found very difficult to recognize an appendix, especially when the surrounding circumstances of the dislocated organ have produced changes in its appearance and shape which may make it almost unrecognizable. When the appendix has no mesentery (Hutchinson believes that this is the case in from forty to fifty per cent.), and cystic dilatation has taken place, as described by Weir (15), Wolff (16), Gutmann (17), Mayland (18), Wood (19), and others, it may be mistaken for a diverticulum Meckelii in the hernial sac. If covered with nodules of fat, it may become annoying to make a differential diagnosis between a part of the omentum or a lump of prevesical fat, which oftentimes calls our attention to the bladder as an inmate of the hernia and the appendix. In other instances the swollen organ may render the decision between an appendix and a tube without the ovary, lying in the hernial sac, difficult. This latter condition, doubted for some time because of the anatomical relations of the ovary to the Falloppian tube, is nowadays by many specimens established as a fact, and Morf (20), describing a case of his own, has, in a careful selection, collected a total of twenty-four observations (thirteen inguinal, ten crural, one obturator) of undoubted cases of hernia of the tube alone without the ovary. In one instance, cited by Jordan (21), tubal pregnancy was found in the hernia. Sometimes the appendix may be attenuated in such a manner that it looks like a whip, and has been mistaken for a band or a spermatic cord. Treves has put a specimen of whip-like appendix, found in the sac of a left inguinal hernia and covered with nodules of fat, in the museum of the Royal College of Surgeons in London (*vide* illustration in Hutchinson's article). In other cases we find what was supposed to be the hernial sac filled with pus, the origin of which was at first appearance difficult to detect. The later appearance, however, of a perityphilitic exudate or abscess has shown the appendix as *vera causa et sedes morbi.*

Not long ago I operated in a case in which the untying of the differential diagnostic knot as to whether I had to deal with a retrocæcal abscess following infection after an operation for incarcerated hernia or an abscess caused by appendicitis with or without any relation to the operation, was almost impossible. The woman was confined to her bed with great distention and pain in the abdomen for three months after an operation for what was supposed to be an incarcerated right femoral hernia. The house physician of the hospital in which the first

operation was performed informed me that during the operation nothing but a lump of fat could be encountered in the hernia, which was removed, and a radical operation performed by the use of silk ligatures. About ten days afterward an abscess opened over the external femoral ring, the abdomen became distended with gas, and sharp pains set in, chiefly in the right iliac region. When I first saw her, three months after the first operation, two tumors, each of the size of a child's fist, could be outlined in the depths of the meteoristic abdomen, in the region of McBurney's point. On the external femoral ring two fistulæ secreting pus were found. Diagnosis: Two exudate tumors in the retrocæcal region. The questions which immediately arose were, first, whether or not these exudate masses were caused by an ascending process, produced by infection after the operation for hernia, which would have indicated that the fistulæ were in communication with the exudate tumor; second, whether the abscess was caused by an appendicitis following the operation for incarcerated hernia; or, third, whether or not the appendicular abscess was caused by injury of the appendix during the operation. Nature, however, helped to disentangle the knot and made an operation for the perityphilitic abscesses unnecessary. Eight hours after the woman's transportation to a hospital for operation the two exudate tumors disappeared by perforation into the cæcum, and for two days stinking pus-like fæcal matter was discharged by way of the rectum, after which the abdominal distention subsided. On operating for the fistulæ, which, however, did not yield, four days afterward, three silk sutures were removed as *causa peccans* of the pus secretion. No communication with the abscesses above was found. The relation to the appendix, however, could not be decided upon, and I must leave that *sub judice*. Perfect recovery occurred after a feverish convalescence. That buried silk sutures, when infected, are oftentimes the cause of a good deal of trouble and after-work, is so well recognized that it is almost an old story out of a new book.

At the close of my paper I should like to ask the indulgence of the reader for a few moments' therapeutical consideration of appendicular hernia, which I should like to briefly review as follows: First, as it is almost a law nowadays that in all gynæcological abdominal operations, especially in cases of inflammation of only the right annexa, the appendix demands strict observation and removal, if necessary in a manner illustrated by Howard Kelly (22), so the same rule must be followed in operations for hernia, and when we take into consideration that, as already cited, Colzi found in all cases of appendicular hernia the appendix in a state of chronic folliculitis, I probably do not go too far when I say that in every case of hernia in which we find the appendix as an inmate it must be removed according to the old rule *in prophylaxi est salus ægroti*. Second, where appendicular inflammation is present in a hernial sac, operative procedure has to be advised immediately, and in case of incarcerations under such conditions every palliative method, such as ether refrigeration, though known for a long time but recently recommended at a meeting of the Paris Academy of Medicine (23), or attempts at taxis, are entirely objectionable procedures. Third, in cases of appendicular abscess in a hernial sac or gangrene of the appendix, resection and free drainage without reduction is the appropriate treatment, and if incarceration exists, this has to be relieved and the peritoneal cavity walled off carefully by iodoform gauze. The radical cure of the hernia, of course, has to be delayed, under these conditions, till the signs of inflammation have subsided.

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ELEVENTH AND WELLS STREETS.

MUSCULAR ACTION OF THE ARTERIES.*

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I WAS glad to see the announcement of Dr. Daland's paper on Arterial Spasm, because I think that in considering changes in the vessels we often limit our view too much to what takes place in the other coats of the arteries and fail to consider fully the crippling that comes to the

*A contribution to the discussion of Dr. Judson Daland's paper on Arterial Spasm, read before the Section in General Medicine of the New York Academy of Medicine, April 16, 1901.

muscular structure when the intima and the fibrous tunic are diseased.

Recent studies seem to show that physiologically the whole arterial tree, to its minutest branches, is only a continuation of the left heart and, therefore, is essentially a muscular organ. Each pulsation is produced by a wave of muscular contraction beginning in the left auricle and passing through the ventricle into the aorta and along each subdivision until the capillaries are reached.

This is a positive muscular action which follows behind each separate volume of blood that leaves the ventricle and urges it forward, the fibres on the distal side of the blood wave relaxing at the same time to permit its passage.

The action is analogous to that of the circular muscular fibres of the œsophagus, which contract above the descending bolus of food and relax below it. The stimulus to this vascular peristalsis is found in the distention of the vessel by the passing wave of blood. This stimulus is reflex in its character, and is derived from the sympathetic nerve fibres distributed to the vessels.

The importance to the circulation of this muscular action in the vessels can scarcely be over-estimated. Its efficacy as an aid to the heart in the propulsion of the blood is evident at once. At the same time the mechanism is a delicate one, and liable to be impaired whenever the physical properties of the vascular walls undergo a change.

The effect of calcification in destroying the elasticity of the vessel and making its walls rigid is what we think of first in this connection. The mechanical obstacle which this condition necessarily presents to the forward movement of the blood is of the first importance, and this is enhanced when fibrosis of the outer coat is added. But in the latter case the effect goes beyond the mere impairment of elasticity. The delicate fibres of the vasomotor system distributed to the muscular coat are stretched and compressed by the greatly thickened and condensed outer coat through which they pass. In this way the innervation is impaired or, it may be, cut off at certain points. The resulting impairment of muscular action throws just so much more labor upon the heart, which in pronounced cases is compelled to force the blood unaided through the entire round of the circulation.

That hypertrophy of the ventricle should follow is only an illustration of a general law proportioning muscular growth to muscular activity.

The case presented by Dr. Daland is unique as illustrating the effect of a known definite irritant in the blood to cause an intense and protracted arterial spasm. It throws a powerful side-light upon the action of certain poisonous, or at least irritant, substances which are retained in the blood under conditions of renal insufficiency. Just what capsicum did in a high degree and for a brief period in Dr. Daland's case is done in a minor degree by excrementitious substances constantly remaining in the circulation.

This condition of chronic arterial spasm not only increases the labor of the heart directly, but also cripples the heart by depriving it of the aid it should have from the rhythmic muscular action of the arteries.

18 East Forty-sixth Street.

HYPERACIDITY (SUPERACIDITY, HYPERCHLORHYDRIA, SUPERACIDITAS CHLORHYDRICA); A CLINICAL STUDY.

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(Continued from page 885.)

In so far as my personal experience is concerned with the twenty-three cases of hyperacidity forming the basis of this paper, I did not in twenty-one cases* observe that the stomach contents, extracted under the conditions already named, differed in any way as to either quantity, amount of solid matter, or appearance from the stomach contents of the cases tabulated as normal, extracted under like conditions. The variations noted in the normal cases were also found here. In some, more of the solid matter ($=\frac{1}{4}$ the height of the contents of the glass, an ordinary tumbler, in which they were received from the tube), in others, less ($=\frac{1}{6}$th the height of the contents of the glass); in some presenting the appearance of an emulsion (the bread particles all well suspended in the whole volume of the fluid), in others, the solid matter not so well suspended, and the fluid looking more its original appearance; in some, the quantity discharged through the stomach-tube smaller, in others larger (ranging from 60 to 120 cubic centimetres).

In the twenty-third case the stomach contents answered fully as to quantity, and very nearly as regarded character, to the descriptions of Strauss and Schuler.

John K., a German, aged forty-four, married, the father of one child, height 5 feet 3 inches, weight 145 pounds (formerly 157 pounds), a square-built, large-boned man, worked in a wine cellar. Formerly he had been quite a beer-drinker. He had worked for years in a beer-bottling establishment and consumed, while at work, ten or twelve bottles a day in the summer and six or eight in the winter. More or less frequently he would drink more beer in the evening when out or in the company of friends. Occasionally, when he did not feel well or was much troubled with phlegm (and this occurred mostly in the morning on arising), he would take a drink of whiskey. Some time before he had changed his situation and was now working in a wine cellar. With this change had come also a change in his habit of drinking; he had quit beer and drank wine through the day, though, as before, taking beer when he went out in the evening. Lately, however, he had cut down his drink

*As to one other case, see note, page 882.

very much—no beer, no whiskey, only a little stout and wine. He smoked one cigar a day, in the evening; Sundays, three cigars. Up to three years before he had always been well and able to eat or drink anything and at any time. Since then his stomach had troubled him more or less, though he had had periods of absolute freedom when he did not know that he had a stomach. Latterly the intervals of freedom had been less frequent and of shorter duration, and the periods of gastric disturbance longer continued. For the last few weeks he had lost appetite and had been dieting himself on soups. For a week he had hardly been able to eat anything, and had taken only a little soup or a soft-boiled egg (for the different meals). He felt nauseated all the time, but did not vomit; occasionally a little mucus was thrown up. He had cramps in his stomach, setting in about two or three hours after meals, about 10 A. M. and around 3 P. M. The cramps were at times so severe as to cause him to vomit. Formerly he had had much pressure in his stomach—a sense of weight—and this would pass up into his throat and go into his back; since the cramps had come on, he had not felt this. His bowels were regular, and he slept well. The face was very pale, but with rather a yellowish tint to the pallor; the cheeks were inclined to be flabby; the lips were of a light-bluish color and the palpebral mucous membrane was decidedly blanched. The expression of the countenance was rather dull.

The distance from the xiphoid cartilage to the umbilicus was 9 centimetres. From the upper border of the left sixth rib the gastric resonance extended down to the ninth rib; there was the same condition over the left epigastrium, and there was resonance along the left border of the thoracic arch down to the ninth rib, where there was flatness. In the median line there was resonance from the xiphoid cartilage down to within two centimetres and a half of the umbilicus, where the tone changed and became duller. There was no splashing. After he had drank seven ounces of water there was still no splashing. The liver was normally located, with no enlargement perceptible, no change in shape, no tenderness over it. The spleen was normal.

On the following day the test breakfast of Ewald and Boas was taken in the office. After an hour the tube was introduced, and I secured 265 cubic centimetres of stomach contents. On standing, it settled in three layers: 1. A slight layer of froth. 2. Fluid (light tea-color). 3. At the bottom, a layer of bread divisible again into two layers—the upper finely worked up, soft, pap-like; the lower, coarser, more like grits. The layer of bread, altogether, was very small. Reaction to blue litmus + Reaction to Congo + (characteristic) Reaction to phoro. gluc. van. + Reaction to resor. + (strong). Total acidity, 69. Free hydrochloric acid (after Mintz), 35.

As is seen from the foregoing history, this person has been addicted for years to the consumption of large quantities of alcoholic liquors, differing therein from the subjects of all my other cases. Though it is true that no organic changes were discovered, still it has had its influence, as is made evident by the anæmia. From this and from the absence of the particular phenomenon under discussion in all the other cases, it appears to me not unreasonable to conclude that the great amount of stomach contents—the hydrorrhœa gastrica, to speak with Strauss and Roth—stands in closer relationship to this alcoholic habit than it does to hyperacidity.

The Specific Gravity.—According to Schuler, the specific gravity of filtered stomach contents extracted from normal stomachs, under the conditions already named, ranges from 1.016 to 1.020. A specific gravity above 1.020 is considered a certain indication of subacidity. Examinations made by me in ten instances of filtered stomach contents extracted from fairly normal stomachs, as shown by the total acidities and the proportions of free hydrochloric acid, have given the following results:

TABLE C.

Case.	*Total Acidity.*	*Free HCL.*	*Sp. Gr.*
1	58	26	1.020
2	46	10	1.022
3	55	27	1.020
4	69	43	1.022
5	57	26	1.022
6	51	22	1.022
7	58	32	1.018
8	42	12	1.030
9	62	26	1.026
10	46	04	1.026

It would thus appear from the foregoing table that the normal range does not run down so low as 1.016, and that it may be higher than 1.020. A specific gravity of even 1.030 is no proof positive of subacidity, as shown by the proportion of free acid found in this case.

In hyperacidity, according to Schuler, the specific gravity ranges from 1.006 to 1.010. The results obtained by me in five cases were as follows:

TABLE D.

Case.	*Total Acidity.*	*Free HCL.*	*Sp. Gr.*
1*	69	35	1.009
2	74	40	1.010
3	56	33	1.012
4†	52	13	1.030
5	61	35	1.015

Here, again, our table shows a higher range. However, taking it as a whole and comparing it with Table C, the conclusion appears justified that, as a rule, the specific gravity of the filtered stomach contents is lower here than is ordinarily found, though exceptionally a high degree of specific gravity may be met with. This corroborates the findings of Strauss, and confirms the statement of Schuler.

As to the causes of the variations in the specific gravity, as noted both in Table C and Table D, that is a matter that requires further investigation. They cannot be dependent upon the acidity alone, as Strauss and his collaborators would seem to imply. This is readily demonstrated: In Case 4, of Table C, with free acid 43, we have a specific gravity of 1.022, and in Case 2, of the same table, with free acid only 10, we have the same

*The case recorded in detail above.

†These filtered stomach contents, contained in an Erlenmeyer flask, tightly closed with cotton wool, stood for two days in a cool place before the specific gravity was taken. I noticed no change therein, and the reaction to Lugol's solution was strong. I have deemed it proper to note this here.

degree of specific gravity, 1.022. In Case 5, with free hydrochloric acid 26, the specific gravity is 1.022, while in Case 9, with the same proportion of free acid, it is 1.026. Again, in Case 9, with free acid 26, the specific gravity is 1.026, and in Case 10, with free hydrochloric acid only 04, it is also 1.026. The more striking demonstration is this: In Case 9, with free acid 26, the specific gravity is 1.026, and in one case of hypo-acidity recorded in my case book, absolutely no reaction to Congo being obtained, it is also 1.026—not a whit higher.

Furthermore, and more particularly in view of what has been said above as to the quantity of stomach contents, the other question naturally presents itself: Why is the specific gravity lower in cases of hyperacidity than in others? This also cannot be answered now and must be left for future study.

Greater Amount of Amydulin Present.—My observations on this point confirm the statements of Schuler. However, it is not by the reaction to Lugol's solution alone, as Schuler would have us do, that this can be judged. There is really no difference in the color reaction between the stomach contents derived from a hyperacid and those from a normal stomach. Where a difference can be noted is in the period of time required for the colors to disappear; thus, while in the filtered stomach contents from a normal stomach the colors disappear *in toto* in from ten to fifteen hours, it takes from twenty-four to thirty hours for their complete disappearance from stomach contents from a hyperacid stomach.

It would, then, appear from the foregoing, that the two factors last considered—the lower specific gravity and the greater quantity of amydulin present—are characteristics that apparently pertain to hyperacidity alone, and are, therefore, undoubtedly of much value, in a confirmatory sense, in establishing, in conjunction with other phenomena to be considered, the diagnosis of this morbid condition. But until they have been further studied and demonstrated beyond question in a very great number of cases, they cannot be considered sufficiently pathognomonic to base a diagnosis upon them alone.

Subjective Symptoms.—These are mainly manifestations of irritation of the terminal points of the sensory nerve fibres in the stomach, and are of varied character.

Occupying the first place among these is *pain,* pain in the stomach. This may range from merely a sensation of great pressure in the epigastrium to an acute gastralgic attack. In the majority of cases it is a pain that is midway between these two extremes that is complained of. It has certain peculiarities that are characteristic:

1. It is not a continuous pain. It comes on at certain periods of the day, and in the intervals there is complete freedom therefrom.

2. It is altogether dependent upon the ingestion of food, is called forth thereby, but not at once: that is, it does not supervene in the course of the meal or at the conclusion thereof, but some two or four hours later (according to the character of the meal), at a time when the digestive act has been nearly completed and much of the chyme has already passed out.

This is readily understood when we bear in mind that it is the free hydrochloric acid that is the cause of the pain. At the periods referred to, the food masses ingested, having become thoroughly saturated with the gastric juice, can take up no more, and the acid of the excess secreted thus remains free and irritates the gastric mucous membrane, and through it the terminals of the sensory nerve filaments. The fact that much of the chyme has already been ejected into the duodenum I hold to be a not unimportant factor in the production of this irritation. The free hydrochloric acid remains thereby to a great extent undiluted, and the coating to the mucous membrane which the chyme would otherwise in a measure afford is removed.

3. The character of the food and the quantity thereof are of no little influence. It is much more readily provoked and then felt more severely by the amylacea, by warm decoctions (teas, coffees), by thin soups than by solid nitrogenous matter, and more readily by a light meal than by a full one. It is a fact that at times these very patients will eat inordinately large meals—rich in nitrogenous substances—without the least disturbance being felt thereafter. I have heard such patients, who had suffered much and dieted long, express their surprise that so abundant a meal, which they had taken by my direction (as a test) and on my responsibility, should have agreed with them. The explanation already given applies here also.

Of the twenty-three cases observed by me, *pain* was complained of in thirteen. It was in all nearly of the same character, "a dead, dull pain with a gnawing sensation," as one of the most intelligent of my patients described it. In twelve of these cases the pain came on about the hours of 10 and 11 in the morning—in the working people who breakfasted earlier, at about 10, in the merchant who breakfasted later, at about 11—and at about 4 to 5 in the afternoon. All these patients ate very light breakfasts—coffee (or tea) and bread and butter, or coffee (or tea) and bread and butter and a little oatmeal; only one ate a small chop. All except one partook of a light luncheon at noon, ranging from a cup of coffee or milk and bread and butter, or cup of coffee and a sandwich, to a slice of roast beef and a glass of ale; the exception ate his dinner at noon, but as he had but twenty minutes in which to eat, he did not get away with a heavy meal. All ate a more abundant meal in the evening, and even the noon diner ate a better meal in the evening.

In only one case (13) did the pain set in shortly after eating. This was that of the boy whom I have referred to, who caused himself to vomit. He formed thus an exception to the rule, as stated under No. 2. At the end of the meal the pain would be felt, and, besides, a fulness, a distention in the epigastrium. Expressing a

portion of the ingested matter would at once afford relief. However, the case was rather exceptional in other ways, as will be seen from the history to be related further on.

All were free from pain in the night; slept well, so far as this was concerned, and remained free from suffering till the usual hour the next morning.

4. The means by which relief is obtained: It may be obtained either by neutralizing the acid remaining free in the stomach or by causing it to be taken up by some food matter. Thus, many patients obtain relief by taking a glass of Vichy or a little bicarbonate of sodium in half a glass of water, while others obtain the greatest benefit from a glass of milk or a meat sandwich.

How long the pain would continue if not thus arrested, that is difficult to say, as all patients relieve themselves of their suffering as quickly as possible by one or the other means, and no data are, therefore, at hand to determine this point. It can be assumed with all reason that it would continue until the stomach was altogether emptied. This is the view of the authorities. I, however, believe that the irritation set up in the mucous membrane by the free acid does not subside at once with its discharge from the stomach, but continues on for some time even after that. The tenderness found in the epigastrium would thus be readily accounted for.

Gastralgia.—Paroxysms of gastralgia, more or less severe, are described as part of the symptomatology of this disease. According to Bouveret, they are of frequent occurrence, recurring in most cases after each meal, at about the hours named above for the recurrence of the pain and at about midnight. Riegel says that it is rare for the paroxysms to recur after each meal for any length of time.

The paroxysm does not come on in full force at once; it is of gradual development. At first there is a feeling of uneasiness that is for most persons rather difficult to describe; a light pressure, a feeling of heat, a sense of formication in the stomach; after a while a pain manifests itself which will not yield to the usual remedies, grows more severe, and progresses onward to the gastric spasm in all its severity. The painfulness of this can be at once noted in the appearance of the patient. As Riegel has well said, one need but look at the ghastly countenance to know the intensity of the suffering. Even mild seizures are attended with much pain. At times patients will complain that the greatest suffering is in the back, and will ask somebody to make strong pressure there with their hands or even their feet. After the pain has continued in all its severity for a longer or shorter time, marked eructations—loud and frequently repeated—set in; vomiting of acrid, sour matters, which numb the teeth as they pass over them, follows and the spasm passes. Sometimes the ructus alone is followed by a cessation of the spasm. Pyrosis, with a feeling of heat or burning in the back, may follow in the train of the seizure. The feeling of heat in the back is due to the passing up into the œsophagus, in the wake of the ructus, of some of the acrid stomach contents, irritating the œsophageal mucous membrane, and with it the terminals of the sensitive nerve filaments distributed there.

Of the twenty-three cases here noted, there was a history of gastralgic seizures in seven. In four of these they had ushered in the gastric disturbance. In one of these cases (1), there was but one attack of most severe type following upon a heavy meal of rather indigestible articles, eaten on a summer afternoon's outing. In the other cases they recurred more frequently. In Case 2 they soon ceased and a "dry pain," as the patient expressed it, took its place; in Case 3 they recurred at longer intervals, while the pain recurred daily.

In the four further cases the seizures were of milder type. In two cases they did not recur with any regularity, the patients going at times a number of days (two to five) entirely free therefrom. In the intervals no pain was felt. In Case 6 they were of irregular recurrence, but in the intervals there would be felt daily a heat, a burning in the stomach that was absolutely painful. In Case 7 the seizures recurred daily, with occasional exacerbations in severity, so that even in the back (from the ninth dorsal to the second or third lumbar vertebra) great pain was felt. In none of the cases was there any complaint made of distress at night.

The data here given bear out fully the statement of Riegel above recorded, that it is rare for the paroxysms to recur after each meal. Furthermore, judging from personal experience, I should say that the earliest, or initiating, paroxysms were usually the severest; that the seizures were apt to be more frequent at the outset of this disturbance of gastric secretion, when the stomach had not, as yet, become accustomed in any way to the irritation and responded thereto with all its force. In a considerable measure, the provoking factor also is responsible for the degree of severity of the paroxysm; thus, it is most severe when provoked by a certain class of foods heavy of digestion and likely to contain irritating matters (such as old cheese and old sausage—particularly blood sausage, etc.) or by excessive indulgence in alcoholic liquors (particularly tart white wines). I have no doubt that it is in cases of such provocation, especially the latter, that the very high percentages of free hydrochloric acid referred to by Bouveret may be found.

II. *Burning in the Stomach.*—In some cases it is not pain that is felt, but a heat, a burning in the stomach which may at times be painful. This may be confined to the epigastrium or may extend to the back in the corresponding region, between the tenth and eleventh dorsal vertebræ. This sensation sets in somewhat earlier in time than does the pain. In most cases it comes on with greater frequency than the pain, occurring also at night and rousing the patient out of his sleep. With this there may occur at longer or shorter intervals gastralgic seizures. Relief therefrom is usually obtained by the same

means that are resorted to to relieve the pain, to wit: a glass of Vichy, some bicarbonate of sodium dissolved in water, a glass of milk, or a glass of milk and lime water. None of the patients so affected who came under my observation ever resorted to more solid matters to allay this distressing feeling.

III. *Sour Stomach.*—In a very few cases the sensation in the stomach does not rise even to the feeling of heat; all that is complained of is a sour stomach, a feeling of acidity in the stomach which is also perceived in the mouth. It seems most readily excited by warm decoctions (such as tea, coffee, or soup) and by tobacco smoking. It is not felt, or but very little, after milk, meat, or eggs.

Of the twenty-three cases recorded, in five the patients complained of the feeling of burning in the stomach. In one of these cases gastralgic paroxysms occurred at longer or shorter intervals, and were usually of a fairly mild character. In two cases out of the twenty-three there was neither pain nor burning; the only complaint was of the sourness of the stomach.

It appeared soon after breakfast when this was a light meal (coffee, tea, oatmeal, bread), and a longer or shorter time after luncheon. It was less manifest (according to the statement made in both cases) after dinner (evening), sometimes being wanting altogether, at other times setting in late in the evening.

It has been said that the thirst is greatly augmented in hyperacidity. Riegel states that he has not found it to be so, except at the time when the irritative manifestations in the stomach supervened. Of my twenty-three cases, no thirst was complained of, or undue quantity of drink taken, in twenty-two. It was just the reverse in many of the cases; it was with difficulty that I could persuade the patients (the constipated ones) to drink sufficiently of cold water.* Only one patient (the twenty-third), a young girl aged seventeen, working in a sewing establishment, drank a large amount of water through the day, and here it was done to assuage the irritation, the pain in the stomach (she knew of no other means and had no other means at hand), and as that was soon relieved by a proper diet, the inordinate drinking ceased with it.

Ructus (Eructation).—In all forms of functional stomach troubles eructations are a prominent and, to the patient, very annoying symptom. They are often loud and frequently repeated, recurring for from two to three hours after the meal. In hyperchlorhydria, except upon the termination of a gastralgic paroxysm, as already described, eructations either are altogether wanting or in no way differ from those occurring in the normal state. I have questioned my patients very particularly and very fully as to this, and all affirmed that they were not troubled in this way. Why this should be so can be readily understood. I lay some stress upon this point as of considerable diagnostic value.

The Bowels.—Constipation is of frequent coincidence with hyperacidity. Of my twenty-three patients, seven were regular and sixteen were constipated. Excluding one patient, an old lady in whom the constipation was undoubtedly due to a markedly hæmorrhoidal condition of the lower segment of the rectum, there remain fifteen, or nearly two thirds, in whom some connection between the two conditions may be presumed. The constipation is not necessarily, however, as has been maintained by some authors, of a particularly obstinate character. In fact, there is nothing peculiar or characteristic about it; it is of all degrees, just as it is found otherwise. Excluding from the fifteen patients four, who were seen but a very few times and at irregular intervals, there remain eleven who were under continuous observation and treatment. Of these, four had constipation of a very mild type, which yielded readily and quickly to appropriate treatment (massage, diet, etc.); six required a more prolonged treatment, but not any more so than is frequently found necessary in cases not connected with hyperchlorhydria; one only, the boy of twelve already referred to, proved refractory, and it took a very long time and very assiduous work before a proper activity of his intestinal canal was secured. But there is nothing extraordinary even about this case; I have had some few other cases of constipation, without hyperchlorhydria, that were as refractory and were under treatment for even a longer period.

As to the relationship between constipation and hyperacidity, it is said by some that the former is but a symptom of the latter. I do not so hold; as I shall endeavor to show further on, their relationship is in the greater number of cases of a different nature, while in the few they are both the effect of one and the same cause.

Riegel says that not infrequently the constipation alternates with diarrhœa. I have seen something similar in but two of my cases, including that of the young girl who drank so much water, and who had a cycle like this: Constipation for a few days, then diarrhœa for some days, then regularity for some days. In the other case the patient had diarrhœa most of the time through the hot months, and was always constipated during the cooler season.

(To be continued.)

*For the reason therefor, see Illoway. *Constipation in Adults and Children, with Special Reference to Habitual Constipation*, etc.

The Suffolk County Medical Society held its annual meeting at Riverhead, L. I., on April 25th. Dr. J. H. Benjamin, of Riverhead, presided, and Dr. F. A. Overton, of Patchogue, recorded. The following officers were elected: President, Dr. John H. Benjamin, Riverhead; vice-president, Dr. A. C. Loper; secretary, Dr. P. V. B. Fowler; treasurer, Dr. B. D. Skinner; librarian, Dr. J. H. Benjamin; censors, Dr. Terry, Dr. Wells, and Dr. Raynor. As delegates to the State Medical Society's meeting, Dr. P. V. B. Fowler, Dr. W. B. Savage, Dr. A. M. Payne, Dr. W. H. Ross, and Dr. B. F. Manny were elected.

A CASE OF SARCOMA IN THE MUSCLES OF THE RIGHT SHOULDER, WITH PERFORATION INTO THE SPINAL CANAL AND PARAPLEGIA.*

By LEONARD WEBER, M. D.,
NEW YORK.

FRANK B. presented himself first at my office in June, 1893. He was a comely-looking, intelligent man, twenty-two years old, of medium height, well built, who had learned the trade of printing and worked at it steadily during the last three years; both his parents died of acute diseases. A sister, two years older than himself, had chronic Bright's disease, probably of scarlatinal origin, which was manageable for a number of years, but she finally died rather suddenly during convulsions, in 1895; another sister, five years older than Frank, is living and in good health. At the time of his calling the patient had the usual symptoms of syphilis, which had constitutionally manifested itself three months before and so far been indifferently treated; for the following three months he received careful and energetic treatment by mercurial inunctions, combined with small doses of iodide of potassium. He progressed favorably, and, when examined again, on October 1st, appeared to be entirely free of all lesions of the skin and mucous membranes. Though looking somewhat pale at that time, he was able to be about and attend to his work; but in November a slight relapse occurred in the form of mucous patches and various characteristic erythematous spots upon the integuments, which, however, yielded rapidly to mercurial vapor baths and small doses of the iodides. By December 12th he was again free of all symptoms and ordered to take of the elixir of calisaya bark and iron the usual doses three times a day, for tonic purposes.

In 1894, on January 25th, he presented himself again and showed a circumscribed tender swelling of the cartilaginous part of the nasal sæptum—specific perichondritis—and a small, roundish, somewhat tender, movable tumor of about the size of a cherry, seated well beneath the superficial fascia in the fleshy part of the right shoulder, between the scapula and the spine and at about the level of the crista scapulæ. To consider both lesions as rather early tertiary manifestations of syphilis seemed reasonable, and he was put on "mixed treatment" in the form of:

℞ Mercury biniodide..... 2 grains;
Potassium iodide..... 2 drachms;
Wine of pepsin..... 8 ounces.

M. S. Two teaspoonfuls three times a day.

This was continued until February 22d, when the nasal ulcer was entirely healed and all tenderness had gone from the supposed gummatous growth in his shoulder, though the small, hard nodule remained and probably never entirely disappeared. He continued the abovementioned medicine *refracta dosi* until March 27th, when he came again with a supraorbital tophus on the left side, which made an increase of the usual doses of medicine desirable; this was done and he continued to take it until April 17th, when all the manifestations had healed again.

During the month of November of that year he was troubled with seborrhœa capitis and falling out of the hair and considerable rather diffused headache, all of which again yielded to the "mixed treatment."

In 1895, in February, he appeared to be in good health and spirits, but the previously noted small nodule in the shoulder region could still be felt, though it was not tender. In October of the same year the patient had his first attack of gonorrhœa, of which he recovered completely within two months and without sequelæ.

In 1896, on September 10th and again on December 6th, I had occasion to prescribe for him in the office for trifling ailments not connected with any relapse of the old disease; the small tumefaction in the shoulder, however, could always be felt, although it did not trouble the man in any way—in fact, he would never mention it. During the next three years I saw nothing of him, but was informed by his sister early in 1900 that her brother had become demoralized, had thrown up his job, and for the last three years had led a dissolute life and been frequently grossly intoxicated.

On June 15, 1900, he appeared again at my office to obtain relief from a pain in the right shoulder caused by a swelling which had started, he said, after a blow he had received from a man with whom he had had words while he was taking a drink about a year before. In the shoulder region previously spoken of a hard, solid, immovable tumor of the size of a goose's egg could be made out. The integuments were not attached to this growth or changed in color, and it was not very tender. It interfered somewhat with forward and backward movements of the arm, but there were no enlarged lymphatics in the armpit or in the neck. Thinking and hoping that it might be a gumma, I put the patient on the use of rapidly increasing doses of the iodide of potassium combined with mild tonics on account of his generally run-down condition. Though some general improvement followed, the tumor became rather larger and more painful at the end of July, so that I thought best to change the prescription for one of iodide and mercury. This was ordered and continued from August 10th to September 10th, when deep-seated, elastic fluctuation could be distinctly made out in the tumor. I drew out about a drachm of gummy, thick, bloody liquid, which, in conjunction with small pieces of the tumor later cut out, were submitted to the pathologist, who pronounced it round-celled sarcoma. Upon this report, all specific treatment was stopped and the patient prepared for an operation, which was attempted at the hospital on September 24, 1900, but the surgeon found it impossible to do more than remove the débris of the tumor mass and various necrotic pieces of bone, and he then packed the copiously bleeding cavity with iodoform gauze. In the progress of the operation we could readily make out that both spine and scapula were already invaded by the malignant growth. There was no particular reaction after this procedure; the patient was soon out of the hospital and came to my office to receive hypodermic injections of:

℞ Arsenate of sodium..... 1 part;
Carbolic acid..... 2 parts;
Distilled water.....100 "
M.

From fifteen gradually up to thirty minims every third day were given, with the slight hope of preventing the case from going from bad to worse. By the end of November the tumor, not much larger than before, became quite tender and bled pretty profusely from the operation wound as often as the dressings were changed.

*Read before the New York Neurological Society, April 2, 1901.

On December 11th his sister called and reported that her brother was beginning to lose the use of his limbs. I had him at once admitted into St. Mark's Hospital, and on the 14th paraplegia was complete, with vesical and rectal paralysis and intestinal meteorism. For some days thereafter pain on pressure could be felt in the lower extremities, but the sensory perceptions became weaker as time went on. Though the patient's hands and arms were also weak, paralysis did not develop in them; in spite of all possible care, bed-sores occurred in the course of time and the patient became emaciated and septic. That the tumor had invaded the spinal canal seemed probable, though it was more reasonable to suppose that hæmorrhage had taken place into the spinal canal, compressing the cord, on account of the rather sudden development of the paraplegic symptoms.

On February 11, 1901, in the morning, the patient died from exhaustion. I was permitted to make a local autopsy only, which was done late in the afternoon of that day, and the tumor, with a portion of the spinal cord, was removed. The large central and sloughing crater of the tumor, which I pass around, led to a small opening between the vertebral processes into and through the dura mater to the spinal canal; between the two upper dorsal and the two lower cervical vertebræ the cord was covered by an old extravasation about two inches in length, which at the time of the post-mortem was about two millimetres in thickness in the central parts and reddish in color and thinned off above and below.

Though it is possible that this sarcoma started from the periosteum and bone of vertebræ or scapula, I am not of the opinion that it did so start, provided the original nodule, which, as you remember, was still present in 1897, commenced growing after his receiving a blow in 1899. That small growth was in the flesh midway between scapula and spine, and, I am quite sure, was not attached to either of them. But we must also take into consideration that the supposed gumma may have disappeared entirely during the three years that I had lost sight of the patient; then, indeed, it may be that this tumor is a malignant new growth not at all connected with the previously noted lesion. At the time of the operation it was altogether too late for a radical procedure, but it might have been better perhaps to make use of the cautery for the purpose of enucleating the tumor mass and removing all that could be removed.

In asking your indulgence for a few epicritical remarks on this case, I should like to say that we have here a case of malignant growth developing in a comparatively young subject about a year after a probably not severe trauma in the region of the body where it was believed that there had been, a few years previously to that trauma, a specific lesion—a gumma—which had grown in the fleshy parts. To be sure, a gumma cannot change into sarcoma, but we do know that after chronic as well as acute injuries of apparently healthy or already somewhat diseased parts cellular proliferation and new growths may be started. This has been observed not only in the various orifices of the human body, but also in bony and muscular tissues and in the viscera. We further see here that, though there were sufficient time and room for the sarcomatous growth to invade the spinal cord or leptomeninges, such invasion did not take place, and the cord symptoms in this case were due to hæmorrhage and degenerative myelitis, as a microscopical examination of the cord has shown. As to the question of whether the little tumor first felt in the shoulder of the patient five years ago was malignant, we do not infrequently see sarcoma and epithelioma remain in the early stage for a comparatively long while; it would no doubt have been an easy task to remove the small growth at any time prior to 1897, and this peculiar case should teach the lesson that it is wise to excise a supposed gummatous tumor located in accessible regions when it does not yield to proper specific treatment in due time.

25 West Forty-sixth Street.

Therapeutical Notes.

A Mixture for Neurasthenia. — Flesch (*Wiener klinische Rundschau,* 1900, No. 43; *Deutsche Aerzte-Zeitung,* May 1st) recommends the following formula:

℞ Iron and quinine citrate.....38 grains;
Strychnine nitrate.....1⅛ grain;
Fluid extract of kola, } each, 6 drachms;
Sodium glycerophosphate, }
Syrup of orange..... 6 ounces.

Dissolve the other ingredients in the syrup of orange with the aid of a gentle heat.

S. A coffeespoonful three times a day, after meals.

For Syphilis.—*Progrès médical* for May 4th ascribes the following to Debove and Gourin:

℞ Mercury sozoiodolate..... 12 grains;
Potassium iodide..... 24 "
Distilled water.....150 minims.

M.

One hypodermic injection daily (one cubic centimetre, about 15 drops, equals 1⅕ grains of the mercury salt).

Galezowski's Ointment for Neuralgia, according to Bocquillon-Limousin (*Formulaire des médicaments nouveaux*), is made as follows:

℞ Menthol.....23 grains;
Cocaine.....7½ "
Chloral hydrate.....5 "
Vaseline.....2½ drachms.

M.

Huchard's Diuretic and Cardiac Tonic.—Bocquillon-Limousin (*Formulaire des médicaments nouveaux*) gives the following formula of a mixture employed by Huchard in cases of nephritis with cardiac weakness:

℞ Tincture of grindelia.....30 parts;
Tincture of convallaria.....10 "
Tincture of squill..... 5 "

M.

Dose, fifteen drops, three times a day.

Caffeine in the Treatment of Whooping-cough.—The *Agenda-médical* for 1901 gives the following formula:

℞ Caffeine valerianate..... 3 parts;
Brandy..... 40 "
Syrup of coffee.....500 "

M.

From a coffeespoonful to a tablespoonful, according to the patient's age, is to be given morning and evening.

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VENEREAL DISEASE IN NEW YORK.

TOWARD the close of February the Medical Society of the County of New York passed a resolution empowering its president to appoint a committee "for the study of the most practical kind of municipal or State legislation to repress or control prostitution, with a view of reducing the morbidity and mortality from venereal diseases." The committee appointed under this resolution consists of Dr. Prince A. Morrow (chairman), Dr. Ludwig Weiss (secretary), Dr. George B. Fowler (*ex-officio* member as president of the society), Dr. Charles W. Allen, Dr. L. Duncan Bulkley, Dr. Henry Dwight Chapin, Dr. Edward D. Fisher, and Dr. S. Adolph Knopf. A committee composed of such men as these is eminently fitted to collate exact information regarding the degree to which venereal diseases are at present rife in New York, the channels through which they are chiefly spread, their effects in more or less permanently crippling such of their victims as they do not in the end really kill, and in short everything capable of enabling legislative bodies to grasp the subject in all its hideous portent to the community. Such information, coming authoritatively from the practising physicians and the hospitals, dispensaries, and clinics of the town, stated so intelligibly as the committee may be trusted to state it, with analyses and deductions, is the essential primary step in the task of giving the legislator a clear comprehension of the magnitude and gravity of the problem which the committee has set itself to work to study. For the purpose of collecting as great a mass of facts as possible, the committee has sent a circular of inquiry to every physician in the city and is making a personal canvass of the various institutions in which venereal diseases are treated.

In the committee's circular the physician is asked to state the number of cases of venereal disease that occurred in his private practice during the past year, specifying the number of cases of gonorrhœa and the number of cases of syphilis. In regard to gonorrhœa, the committee is striving to obtain as full returns as practicable concerning the following points: The number of cases occurring respectively in men, in women, and in children, the number of cases leading to pelvic sequelæ in women, and the number of cases of gonorrhœal ophthalmia and of vulvovaginal inflammation in children. Concerning syphilis, it asks for the number of cases occurring in men, in women, and in children respectively, and, in the matter of syphilitic children, the ratio of the acquired to the hereditary cases. The circular also calls for reports as to the origin of the infection, whether from public prostitutes, from clandestine prostitutes, in marital relations, by heredity, by extragenital access, or from an unknown source. The fullest possible information is asked for as to the prevalence of syphilis insontium, gonorrhœal infection in married life, and venereal diseases occurring in children. Finally, these general questions are asked: "Judging from the results of your observation, are venereal diseases on the increase in this city?" and "What measures, in your opinion, are best adapted to limit or prevent the dissemination of venereal diseases in this city?"

Though it would be easy to mention some other points concerning which the committee might legitimately ask for data, it will be seen that those which they have chosen are of great practical significance and probably in themselves sufficient to procure an array of facts quite adequate as a foundation for a picture that will prove startling to the community. We are glad to know that the committee's inquiries are eliciting prompt responses in great numbers; we learn that within the ten days following the issue of the circular 800 replies were received. There ought to be no exceptions; every physician to whom the inquiry is addressed ought to send his answer at once, and make it full and explicit, and he ought also, and above all, to respond to the two final questions only after careful thought.

TROPICAL DISEASES AS OBSERVED IN THE PHILIPPINES.

IT was not to be supposed that the Army Medical Corps could long include the Philippine Islands within its field of work without giving to the world some valuable data concerning the diseases observed in those islands. We are not surprised, therefore, to receive the first number of *Circulars on Tropical Diseases.* The

series is issued under the authority of Surgeon-General Sternberg by Colonel Charles R. Greenleaf, assistant surgeon-general and chief surgeon of the Division of the Philippines. The first number, dated February 4th, presents the results of investigations by First Lieutenant Richard P. Strong, assistant surgeon, in charge of the Army Pathological Laboratory, Manila, and president of the Board for the Investigation of Tropical Diseases in the Philippines. Before commenting upon the substance of the circular, which consists of forty-five octavo pages, we wish to say that, in view of the necessarily limited present facilities for printing in the English language in the Philippines, its typographical appearance is exceedingly creditable. The italic *u* does duty for the Greek μ, but, when we call to mind the frequency with which, in communities far longer accustomed to our language, the inverted numeral 5 is made to take the place of the French ç, we may well look upon the substitution as the best that could have been resorted to in the absence of Greek type. There are but few errors of proof-reading, and the general appearance of the pamphlet will compare favorably with that of medical publications in general.

In this first issue Dr. Strong deals entirely with the animal parasites and the diseases caused by them, giving rudimentary zoological data, brief notes of the prevalence of the parasites in the Philippines, and, in a few instances, hints on the diagnosis and treatment of the diseases to which they give rise. Of the *Protozoa,* he treats of the *Amœba dysenteriæ,* of very common occurrence in the islands, and of the *Amœba coli,* which apparently is not pathogenic and is not often encountered. But one *Infusorium,* the *Balantidium (Paramecium) coli,* has been met with. When present in large numbers, this parasite may give rise to severe chronic diarrhœa, although it has generally been regarded as almost harmless. Three *Mastigophora (Flagellata)* have been observed. The first resembles the *Trichomonas vaginalis* of Donné, the second is apparently the *Cercomonas hominis* of Davaine, and the third appears to be identical with the *Megastoma entericum* of Grassi, except that on the posterior lip of the excavation only two flagella have been observed instead of four. It is thought to be not unlikely that these flagellates may, when present in large numbers, "cause some intestinal irritation, perhaps by their mechanical movements." Of the cestodes, only two adult forms have been encountered, *Tænia mediocanellata* and *Tænia solium.* The *Cysticercus cellulosæ* has not been observed in man, but is frequently found in pigs. Two cases of echinococcus cyst have been met with, both discovered post mortem. The *Ascaris lumbricoides* is the commonest of the nematodes in the Philippines; the *Oxyuris vermicularis* has been observed in several instances; the *Trichocephalus dispar* is very common; the *Trichina spiralis* has not been found in man, though it has been in Manila hogs; infection with the *Filaria nocturna* has occurred in one instance; ankylostomiasis has been recorded a number of times, including eight fatal cases, but the author thinks that it was not the sole cause of death in any of them; and thirteen examples of infection with the *Strongyloides intestinalis* have come under his observation. Seven cases of myiasis interna have been observed. The larvæ were generally those of *Calliphora vomitoria,* more rarely those of *Anthomyia canicularis.* The symptoms were moderate diarrhœa and occasionally gastric or intestinal pains. Little leeches, not more than two thirds of an inch long, have at times troubled the soldiers considerably on the march, particularly along the bases of mountains in wooded districts. They seem to cling to the branches of trees or to lurk in the grass, and to fasten on persons as they pass. They commonly attack the ankles, seeming to have gained access at the shoe-laces. "In several cases they have entered the eye and fastened themselves beneath the lid, causing considerable pain and anxiety." It is not known that the *Paragonimus Westermanii* has yet been found in the Philippines.

Dr. Strong must be credited with having produced a report which, while adding not a little to our general stock of knowledge, will prove of special aid to the inexperienced medical officer during his novitiate in the Philippines. We do not doubt that the succeeding circulars of the series will be equally helpful.

THE GOOD WORK OF THE BROOKLYN MEDICAL CLUB.

In this issue we present an important contribution toward the elucidation of one of the fundamental problems of medicine, that of inherited physical peculiarities and morbid states. We are alluding to Dr. Adami's address, which was delivered under the auspices of the Brooklyn Medical Club. It is the first of a series of annual addresses provided for by the club. Its quality, such as is always to be expected from the distinguished pathologist of Montreal, shows the lofty ideal of the club in arranging for these addresses. There are problems in medicine that are hardly to be solved by laboratory

research or clinical observation alone, although those sources of knowledge are in almost every instance contributory to the final solution. The finishing touch has to be given, not by the laboratory man or by the clinician, but by him who, being perhaps neither an original investigator nor a physician in active practice, although, as in this instance, he may be both, brings to the ultimate summing up the qualities of the analyst and those of the logician, those of a well-ordered thinker. It is the voice of such a man that is apt to be heard on occasions long and carefully prepared for rather than in casual debate or in experimental contributions. Such occasions are those of the formal lectures provided for by endowment funds, of which there are several examples in this country and in Great Britain. By adding one more to these opportunities for advanced instruction the Brooklyn Medical Club has done a distinct benefit to medicine.

The subjects to be dealt with by the Brooklyn lecturers, we understand, are of such a nature that, while they may not have a direct, everyday bearing upon the bedside medicine of the present time, they bear an intimate relationship to the principles that are yet to be evolved as the bases of the medicine which is to be developed in the future. The men who prepare such lectures are apt to be something even more than shrewd analysts and clever interpreters; they are often to a considerable extent pioneers in certain lines of thought, and the more suggestive they prove, within the limits of reasonable speculation, the more likely are they to rouse others to focus their mental vision on the points that chiefly lack precise recognition. No one man often wields alone the implement that hammers out a great principle in science; repeated blows from various quarters are generally required to beat the mass of facts into coordination and manifest unity of purport. To bring forward the men to strike these blows is to render an essential service to progress, and upon that beneficent undertaking the Brooklyn Medical Club has entered. Its efforts should and doubtless will be appreciated by the entire medical profession, and unstinted encouragement be given to it.

WOMEN PHYSICIANS IN ANCIENT GREECE.

It may not be generally known that there is evidence of the existence of lady doctors in ancient Greece. Marcel Baudouin publishes in the *Gazette médicale de Paris* for February 23d a note on this subject in which he reproduces and comments on three monumental inscriptions. The first states that "Gaius Julius Vettianus in his lifetime has raised this monument to himself and to his wife Empiria, the physician (*εἰατρείνῃ*), who lived to the age of forty-nine years." This inscription would seem, from internal evidence, to be before the Christian Era. The two others read respectively, "The Sarcophagus of Basilla, the (female) physician (*ἰατρίνης*)"; and "the coffin of Thekla, the (female) physician (*εἰατρίνης*)." These apparently refer to Christians, for both, after the early Christian fashion, are preceded and followed by a cross, and the first, moreover, is said to have been found in the Christian cemetery at Corycos, in Cilicia.

AN EXTRAORDINARY LEGAL DECISION.

In the Southwark County Court, London, the judge has recently given a decision, according to the *Medical Press and Circular* for May 8th, which strikes us as being extraordinary, to say the least of it. It would appear that a practitioner who was attending a child, finding that the mother would not carry out his instructions, retired from the case. He sent in a claim for fees due on account of "work done," which claim was contested in court, and the judge decided against the plaintiff on the ground that, "having thrown up the case, which he was entitled to do, he could not charge for his services." The logical outcome of this decision is that a physician is at the mercy of any obstreperous patient who chooses to confront him with the alternative of either foregoing his fees or submitting to the indignity of having his instructions set at naught, thus not only wounding the physician's sense of responsibility, but probably seriously affecting his professional reputation.

FRAME HOUSES.

An editorial comment in the *Polyclinic* for April, in A Plea for Wooden Houses, makes what appears to us to be a somewhat curious statement. Referring to the prohibition in England of wooden houses, even in country districts, the writer, while acknowledging the unsuitableness of wood, on account of its inflammability, as a material for the construction of "houses that stand in streets or near to those in the possession of other owners," says: "A cottage of wood is far drier, is warmer in winter and cooler in summer than one of stone or brick"! And, again: "It is the rarest possible event to see anything of the nature of either mould or rust, and no trace of damp on the wallpapers is ever observed"! Whatever other merits frame houses may have—and, according to our author, they are "not much cheaper to build than brick" in England—we think that few in this country would assent to the two propositions first stated, except as regards log-houses. But possibly they build even wooden houses more substantially across the water than in this part of the world.

News Items.

Society Meetings for the Coming Week:

MONDAY, *June 3d:* New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association; Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, *June 4th:* New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Maine, County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, *June 5th:* New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y., (New Brighton); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY, *June 6th:* New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canadaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, *June 7th:* Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, *June 8th:* Obstetrical Society of Boston (private).

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending May 24, 1901:

Small-pox—United States and Insular.

Hoonah, Alaska	May 11		15 deaths.
Killisnoo, Alaska	May 11	4 cases.	
Los Angeles, California	Apr. 27-May 11	12 cases.	
San Francisco, California	May 4-11	6 cases.	
Chicago, Illinois	May 11-18	6 cases.	
Coalgate, Indian Territory	May 11	65 cases.	
Wichita, Kansas	May 4-18	37 cases.	
Lexington, Kentucky	May 11-18	4 cases.	
Baton Rouge, Louisiana	May 5-12	2 cases.	1 death.
New Orleans, Louisiana	May 11-18	9 cases.	2 deaths.
Boston, Massachusetts	May 11-18	10 cases.	
New Bedford, Massachusetts	May 16-18	5 cases.	
Detroit, Michigan	May 11-18	58 cases.	
Minneapolis, Minnesota	May 4-11	23 cases.	
Nebraska City, Nebraska	Mar. 30	5 cases.	
South Omaha, Nebraska	Apr. 23-May 21	36 cases.	
Manchester, New Hampshire	May 11-18	4 cases.	
Jersey City, New Jersey	May 5-19	15 cases.	
Newark, New Jersey	May 11-18	4 cases.	1 death.
New York, New York	May 11-18	105 cases.	13 deaths.
Cincinnati, Ohio	May 10-17	9 cases.	1 death.
Cleveland, Ohio	May 11-18	54 cases.	
Youngstown, Ohio	May 4-18	2 cases.	
Lebanon, Pennsylvania	May 11-18	4 cases.	
Philadelphia, Pennsylvania	May 11-18	3 cases.	1 death.
Pittsburgh, Pennsylvania	May 11-18	2 cases.	
Steelton, Pennsylvania	May 11-18	2 cases.	
Williamsport, Pennsylvania	May 11-18	1 case.	
Memphis, Tennessee	May 11-18	12 cases.	
Nashville, Tennessee	May 11-18	3 cases.	
Salt Lake City, Utah	May 4-11	7 cases.	
Tacoma, Washington	May 1	1 case from Vashon Island.	
Wheeling, West Virginia	May 11-18	8 cases.	
Fond Du Lac, Wisconsin	May 11-18	1 case.	
Lihue, Kauai, Hawaii	April 23	1 case.	
Waimea, Hawaii	May 6	1 case.	
Ponce, Porto Rico	May 6-13	3 cases.	
San Juan, Porto Rico	May 4	2 cases.	

Small-pox—Foreign.

Prague, Austria	April 20-27	4 cases.	
Antwerp, Belgium	April 20-27	5 cases.	
Rheims, France	April 8-15	2 cases.	
Bombay, India	April 16-23		6 deaths.
Calcutta, India	April 13-20		93 deaths.
Karachi, India	April 14-21	4 cases.	3 deaths.
Madras, India	April 13-19		11 deaths.
Malta	April 14-20	1 case.	
Moscow, Russia	April 14-21	6 cases.	2 deaths.
Odessa, Russia	April 20-27	5 cases.	3 deaths.
Warsaw, Russia	April 13-20		4 deaths.
Malaga, Spain	April 16-30		1 death.

Yellow Fever.

Havana, Cuba	May 6-11	2 cases.	

Cholera.

Bombay, India	April 16-23		4 deaths.
Calcutta, India	April 13-20		96 deaths.
Madras, India	April 13-19		1 death.

Plague.

Cape Town, Africa	To April 14	291 cases.	118 deaths.
Hong Kong, China	Mar. 23-Apr. 6	31 cases.	28 deaths.
Bombay, India	April 16-23		459 deaths.
Calcutta, India	April 13-20		389 deaths.
Karachi, India	April 14-21	270 cases.	238 deaths.
Nagasaki, Japan	April 17		1 death.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending May 25, 1901:

DISEASES.	Week end'g May 18		Week end'g May 25	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	42	4	27	5
Scarlet Fever	702	59	610	32
Cerebro-spinal meningitis	0	0	0	4
Measles	368	7	302	10
Diphtheria and croup	299	39	296	40
Small-pox	105	13	134	13
Tuberculosis	310	135	259	163

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for Two Weeks ending May 25, 1901:

DE LANCY, C. H., Assistant Surgeon. Detached from the *Bancroft* and ordered to the *Buffalo.*

FURLONG, F. M., Assistant Surgeon. Detached from the *Brutus* and ordered to proceed to Guam, L. I.

GROW, E. J., Assistant Surgeon. Detached from the *Isla de Luzon* and ordered to the *Castine.*

PLUMMER, R. W., Assistant Surgeon. Detached from the *Petrel* and ordered to the *Nashville.*

STEPP, J., Assistant Surgeon. Detached from the *Castine* and ordered to the *Isla de Luzon.*

STONE, M. V., Assistant Surgeon. Detached from the *Buffalo* and ordered home to await orders.

THOMPSON, E., Assistant Surgeon. Detached from the *Solace* and ordered to the *Petrel.*

The following assistant surgeons are ordered home via public conveyance: BEEBE, D. G.; FURLONG, F. M.; GROW, E. J.; GRUNWELL, A. G.; KERR, D. B.; LANGHORNE, C. D.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from May 18 to 25, 1901:

BACHE, DALLAS, Colonel and Assistant Surgeon-General. The sick leave granted him is extended three months.

BRECHEMIN, LOUIS, Major and Surgeon. So much of Par. 23, S. O., 118, May 21, 1901, as directs him to proceed to Fort Bayard, New Mexico, for temporary duty in charge of the United States General Hospital at that place, is revoked.

GANDY, CHARLES M., Captain and Assistant Surgeon. So much of Par. 14, S. O., 40, February 16, 1901, as relates to him is so amended as to direct him upon his relief from duty at Fort Slocum, N. Y., to proceed on the transport *Ingalls* via the Suez Canal to Manila, and report in person to the commanding general, Division of the Philippines, for duty.

METZGER, JOHN A., Major and Surgeon. The leave of absence granted him is extended one month.

SINKS, EDWARD D., Captain and Assistant Surgeon, will proceed to San Francisco for transportation to Manila.

SWIFT, EUGENE L., Captain and Assistant Surgeon, will report in person to Lieutenant-Colonel CALVIN DE WITT, president of the examining board convened at the Army Medical Museum Building, for examination as to his fitness for promotion.

Washburn, Frederick A., Jr., Major and Surgeon, will proceed to San Francisco for transportation to Manila.
Winter, Francis A., Captain and Assistant Surgeon, will proceed to Fort Sheridan, Illinois, for duty.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending May 23, 1901:

Clark, Taliaferro, Assistant Surgeon. Granted leave of absence for thirty days from May 22d.
Corput, G. M., Assistant Surgeon. To proceed to the South Atlantic Quarantine Station. Granted leave of absence for one month.
Decker, C. E., Assistant Surgeon. Granted leave of absence for ten days from May 11th, on account of sickness.
Glennan, A. H., Surgeon. To rejoin station at Habana.
Greene, J. B., Passed Assistant Surgeon. Granted five days' extension of leave of absence.
Peckham, C. T., Surgeon. Granted leave of absence for thirty days from April 19th, on account of sickness. Granted thirty days' extension of leave of absence, on account of sickness from May 20th.
Rodman, J. C., Acting Assistant Surgeon. Granted leave of absence for four days.
Slaughter, A. W., Acting Assistant Surgeon. Granted leave of absence for four days from June 4th.
Wertenbaker, C. P., Passed Assistant Surgeon. To proceed to Meridian, Mississippi, for special temporary duty.

BOARD CONVENED.

Board convened to meet at Washington May 20, 1901, for the purpose of making physical examinations of applicants for cadetship in the Revenue Cutter Service. Detail for the Board: Surgeon L. L. Williams, Chairman; Assistant Surgeon B. S. Warren, Recorder.

Scarlet Fever.—The prevalence of this disease at Whitestone Landing, L. I., is occasioning some alarm.

Dr. L. Emmet Holt has been appointed clinical professor of diseases of children at the College of Physicians and Surgeons.

Dr. A. L. Gray has been elected to succeed Dr. MacLean as professor of physiology in the University College of Medicine, Richmond, Va.

The New Buildings of the Mount Sinai Hospital were formally begun by the ceremonial laying of the cornerstone on May 22d.

In Memory of Dr. Thomas F. Rumbold.—A special meeting of the St. Louis Medical Society was held recently for the purpose of adopting resolutions of regret at the death of the late Dr. Thomas F. Rumbold.

In Memory of Dr. F. J. Brockway.—A formal minute of sorrow for the death of Dr. F. J. Brockway, former president of the West End Medical Society of this city, and of esteem for his many excellent qualities, was recently adopted by the association of which he was formerly the president.

The Northwestern University Medical School, Chicago, has again enlarged the requirements by the addition of another year. The object of the fifth year is to furnish to students not receiving hospital interneships a more practical course than is compatible with the diverse routine work of the third and fourth years. The service will be made as nearly equivalent to a hospital interneship as possible.

A World's Congress of Tuberculosis is to be held in London in August. Dr. George Brown, of Atlanta, Ga., has been elected by the American Congress of Tuberculosis, at its recent meeting in New York, to represent it at the London congress.

Anthrax at Batavia, N. Y.—A special dispatch to the *Rochester Herald* states that a valuable herd of Jersey cattle has been found by a veterinary surgeon to be afflicted with anthrax, seven animals out of thirty having died within a week. An investigation is being made by the health officer.

The American Academy of Medicine, which will hold its twenty-sixth annual meeting in St. Paul, beginning June 1st, was organized in Philadelphia during the centennial of 1876. It was formed to be a distinctively American society of physicians whose college and university training should be fairly equivalent to that required in Europe. The officers of the academy are: President, Dr. S. D. Risley, of Philadelphia; vice-presidents, Dr. C. M. Culver, of Albany; Dr. Rosa Englemann, of Chicago; Dr. G. G. Groff, of Lewisburg, Pa., and Dr. C. T. McClintock, of Detroit; secretary and treasurer, Dr. Charles McIntire, of Easton, Pa.; assistant secretary, Dr. A. R. Craig, of Columbia, Pa.

New York City Hospitals Inadequately Supported.—According to a writer in the *New York Evening Post,* recent inquiry at the offices of four of the largest hospitals in New York—namely, St. Luke's Episcopal, on Cathedral Heights; the Presbyterian, in Madison Avenue; the German, at Park and Lexington Avenues, and the Roosevelt, at Ninth Avenue and Fifty-eighth Street—brought out the fact that every one of them was struggling under a deficit, representing the difference between the institution's income and its expenditures for the year. In this respect the Presbyterian is perhaps the worst off, the treasurer reporting that, during last year, current expenses exceeded receipts by $77,364.32. Next comes St. Luke's, with a balance of $62,043 on the wrong side, while the German and the Roosevelt are comrades in poverty to the extent of about $11,000 during the last year.

Small-pox.—Health Officer Doty is being kept busy inspecting the steamships from Southern Europe, especially Italy, almost every one of which brings with it steerage passengers suffering from small-pox. The disease is still cropping up in New York and Brooklyn, and the list on May 21st was fifty-six new cases within two days.——Sporadic cases are being reported in Dutchess county, N. Y.; at Gloucester City, N. J.; Chester, Pa., and at Fitchburg and Leominster, Mass.——Some interesting figures have recently been given out by Assistant Sanitary Superintendent Dillingham, of the New York City Health Department. They show that small-pox is prevalent all over the United States. The period of his figures extends from December 28, 1900, to May 3, 1901. New York has had in that period 723 cases out of a total in all the States and Territories of 22,344. Some of the States which lead are Kansas, 3,915; Colorado, 1,763; Minnesota, 2753; North Carolina, 723; Ohio, 1,685; Tennessee, 4,228, and Utah, 724. The other States and Territories showed the following numbers of cases in the same period: Alabama, 45; California, 64; Connecticut, 9; Delaware, 57; Iowa, 26; District of Columbia, 51; Florida, 113; Georgia, 22; Idaho,

10; Illinois, 354; Indiana, 557; Indian Territory, 216; Kentucky, 59; Louisiana, 206; Maine, 1; Maryland, 26; Massachusetts, 15; Michigan, 55; Minnesota, 2,753; Mississippi, 4; Missouri, 215; Montana, 218; Nebraska, 654; Nevada, 1; New Jersey, 46; New Hampshire, 334; New Mexico, 4; North Dakota, 66; Oklahoma, 690; Oregon, 10; Pennsylvania, 221; Rhode Island, 10; South Carolina, 10; Texas, 486; Virginia, 328; Washington, 38; West Virginia, 66; Wisconsin, 575, and Wyoming, 4.

The Academy of Medicine of Chicago has elected the following directors for the coming year: Dr. W. L. Baum, Dr. J. G. Kiernan, Dr. C. S. Hallberg, Dr. H. N. Moyer, Dr. E. S. Talbot.

The Rhode Island Medical Society will hold its ninetieth annual meeting in the Masonic Building at the corner of Dorrance and Pine Streets, Providence, at 10 A. M., on Thursday, June 6th, the annual dinner taking place at 1 o'clock in the Trocadero.

The American Medico-psychological Association, formerly known as the Association of Medical Superintendents of American Institutions for the Insane, will hold a four days' session at Milwaukee, Wis., beginning on June 11th, at the Hotel Pfister. Dr. Peter M. Wise, of New York, is the president, and Dr. C. B. Burr, of Flint, Mich., is the secretary and treasurer. An interesting programme of papers to be read has been issued.

The New York Academy of Medicine will hold a stated meeting on Thursday evening, June 6th, at 8.15 P. M. The order of business includes the presentation of the portrait of Dr. William H. Thomson, formerly president of the New York Academy of Medicine, by Dr. W. H. Polk; a paper on The Freezing-point of Urine, its Determination and the Inferences which may be Drawn from it, by Dr. J. H. Huddleston; and one on The Early Recognition and Management of Arterial Degeneration, by Dr. Louis F. Bishop.

The German Medical Society of the City of New York will hold its next meeting in the Academy of Medicine on Monday evening, June 3d. Among the specimens shown will be blood preparations from a case of splenomyelogenous leucæmia complicated with tuberculous disease of the larynx and lungs. Papers will be read as follows: Chronic Fluorine Poisoning, by Dr. Fritz Schwyzer; The Limitations of Orthopædics, with a Demonstration of Orthopædic Apparatus, by Dr. Charles H. Jaeger; and Nasal Affections in Typhoid Fever, by Dr. M. Toeplitz.

The Massachusetts Medical Society.—The one hundred and twentieth annual meeting will be held in Boston on Tuesday and Wednesday, June 11th and 12th, under the presidency of Dr. Frank W. Draper, of Boston. The section meetings will be held in the Medical Library on Tuesday. The programme for the Section in Medicine, under the chairmanship of Dr. William W. Eaton, of Danvers, includes the following papers: General Considerations of the Nutrition of Infants, by Dr. T. M. Rotch, of Boston; Infantile Atrophy, by Dr. J. L. Morse, of Boston; Infantile Scurvy, by Dr. E. L. Peirson, of Salem; Rhachitis, by Dr. A. R. Crandell, of Taunton; The Association of Anæmia with Chronic Enlargement of the Spleen, by Dr. A. H. Wentworth, of Boston; Cretinism, by Dr. Charles S. Millet, of Brockton; and The Pupil as an Index of Disease, by Dr. E. E. Jack, of Boston.

The order for the Section in Surgery, under the chairmanship of Dr. John C. Irish, of Lowell, is as follows: Stricture of the Œsophagus, by Dr. Theodore Dunham, of New York; Gastric Ulcer, by Dr. A. T. Cabot, of Boston; Gastric Cancer, by Dr. W. M. Conant, of Boston; Gall-stones, by Dr. M. H. Richardson, of Boston; Intestinal Cancer, by Dr. F. B. Lund, of Boston; and Obstructive Disease of the Lower Bowel, by Dr. H. O. Marcy, of Boston. The Shattuck Lecture will be given on Tuesday by Dr. William F. Whitney, of Boston, on the subject of the Alleged Increase of Cancer in Massachusetts.

The general meeting will be held in Chickering Hall on Wednesday, at which the following papers will be read: A Report of Cases of Cancer Treated by the X Rays, by Dr. F. H. Williams, of Boston; A Critical Note upon Clinical Methods of Measuring Blood Pressure, by Dr. W. H. Howell, of Baltimore, and Mr. C. E. Brush; Practical Blood Examination, by Dr. H. F. Hewes, of Boston; Problems of Bacteriological Laboratories which have to do with Public Health, by Dr. H. W. Hill, of Boston; The Origin of Oxalic Acid from Protein and Protein Derivatives, by Dr. A. E. Austin, of Boston; Intercranial Pressure after Head Injuries, by Dr. W. B. Cannon, of Boston; and A Statement of Original Work done in the Department of Anatomy of the Harvard Medical School, and a Description of a Model of the Abdominal Viscera, by Dr. Thomas Dwight, of Boston. The annual discourse will be delivered at noon by Dr. George E. Francis, of Worcester.

The North Carolina Medical Society has elected Dr. R. H. Young, of Concord, president; Dr. A. G. Carr, first vice-president, and Mrs. E. Dixon Carroll, M. D., third vice-president.

The Iowa State Medical Society has elected the following officers: President, Dr. J. R. Guthrie, Dubuque; vice-president, Dr. S. Bailey, Mount Ayr; secretary, Dr. V. L. Treynor, Council Bluffs; treasurer, Dr. G. L. Skinner, Cedar Rapids.

A Joint Session of Regular, Eclectic, and Homœopathic Physicians.—The Homœopathic Medical Society of Wisconsin, the Wisconsin Medical Society, and the Wisconsin State Eclectic Medical Society will meet at Waukesha, Wis., on June 27th, in joint session.

The Illinois State Medical Society has chosen Quincy as the next place of meeting, and the following officers have been elected: President, Dr. J. T. McAnally, Carbondale; vice-president, Dr. M. L. Harris, Chicago; second vice-president, Dr. J. W. Hensley, Peoria; secretary, Dr. E. W. Weis, Ottawa; assistant secretary, Dr. C. D. Center, Quincy; treasurer, Dr. E. J. Brown, Decatur.

The Arkansas Medical Society, at its recent session at Hot Springs, elected the following officers: President, Dr. F. Vinsonhaler, of Little Rock; first vice-president, Dr. C. R. Chenault, of Helena; second vice-president, Dr. W. N. Yates, of Batesville; secretary, Dr. J. B. Runyon, of Little Rock; treasurer, Dr. R. C. Thompson, of Pine Bluffs. The society will meet next year in Little Rock on May 13th, 14th, and 15th.

The Michigan State Medical Society, at its recent meeting, elected the following officers: President, Dr. Leartus Connor, of Detroit; first vice-president, Dr. B. D. Harison, of Sault Ste. Marie; second vice-president, Dr. Charles Douglas, of Detroit; third vice-president, Dr. H. W. Sawyer, of Hillsdale; fourth vice-president, Dr. L. P. Parkhurst, of Middleville; secretary, Dr. A. P. Biddle, of Detroit; treasurer, Dr. Charles E. Hooker, of Grand Rapids.

The Missouri Medical Association has elected these officers for the ensuing year: President, Dr. J. D. Griffith, Kansas City; first vice-president, Dr. R. E. Young, Jefferson City; second vice-president, Dr. J. C. Whaley, Osceola; third vice-president, Dr. R. M. Funkhauser, St. Louis; fourth vice-president, Dr. J. F. Campbell, Callao; fifth vice-president, Dr. G. W. Vineyard; recording secretary, Dr. B. C. Hyde, Kansas City; assistant recording secretary, Dr. F. W. Burke, Sedalia; corresponding secretary, Dr. Charles W. Fassett, St. Joseph; treasurer, Dr. J. Franklin Welsh, Salisbury. St. Joseph was chosen as the next place of meeting.

The Kentucky State Medical Society has selected Paducah as the place of the next meeting. The nominating committee presented the following names for officers, all of whom were unanimously elected: President, Dr. T. B. Greenley, Meadow Lawn; first vice-president, Dr. George M. Reddish, Somerset; second vice-president, Dr. B. L. Coleman, Lexington; secretary and treasurer, Dr. Steel Bailey, Stanford; librarian, Dr. Frank L. Lapsley, Paris. The same board of censors, consisting of Dr. J. B. Marvin, of Louisville; Dr. A. D. Price, of Harrodsburg, and Dr. B. N. Taylor, of Greensburg, were reelected without opposition. Dr. Frank Boyd, Dr. Henry E. Tuley, and Dr. Steel Bailey were appointed a committee to revise the constitution, in line with the plans mapped out at the last meeting of the American Medical Association.

The National Association for the Study, Care, and Treatment of Epilepsy, at Washington, D. C., in its closing sessions elected the following officers: President, Frederick Peterson, M. D., of Craig Colony for Epileptics, at Sonyea, N. Y.; first vice-president, William P. Letchworth, of Portage, N. Y.; second vice-president, William Osler, M. D., of Baltimore; treasurer, H. C. Rutter, M. D., of Gallipolis, Ohio; secretary, William P. Spratling, M. D., of Craig Colony, Sonyea, N. Y. The members appointed to the executive committee were: Dr. W. N. Bullard, of Boston; Dr. Wharton Sinkler, of Philadelphia; Dr. W. F. Drury, of Virginia; Dr. William A. Polglase, of Michigan, and Dr. W. B. Warshan, of Texas. W. P. Letchworth was added to the executive committee as an honorary member.

The American Therapeutic Society.—The annual meeting of the American Therapeutic Society closed at Washington, D. C., on May 9th, to convene in New York in May, 1902. The officers chosen were: President, Dr. Reynold Webb Wilcox, of New York; first vice-president, Dr. Howard H. Barker, of Washington; second vice-president, Dr. Thomas E. Satterthwaite, of New York; third vice-president, Dr. Leon L. Solomon, of Louisville, Ky.; secretary, Dr. Noble P. Barnes, of Washington; recorder, Dr. William M. Sprigg, of Washington; treasurer, Dr. John F. McLean, of Washington; curator, Dr. George C. Ober, of Washington. The four last named were reelected.

The Æsculapian Medical Society of the Wabash Valley, at its recent meeting at Mattoon, Ill., elected the following officers: President, Dr. J. A. Baughman, of Neoga; vice-president, Dr. F. D. Lydick, of Paris; secretary and treasurer, Dr. H. McKennan, of Paris.

The Albany (N. Y.) County Medical Society held its annual meeting recently. These officers were elected: President, Dr. W. H. Murray; vice-president, Dr. Andrew MacFarlane; secretary, Dr. Harry S. Pearse; treasurer, Dr. W. H. George; board of censors, Dr. Henry Hun, Dr. J. L. Archambault, Dr. J. F. Featherstonhaugh, Dr. G. E. Lochner, Dr. T. L. Carroll; delegates to the New York State Medical Society, Dr. Pearse, Dr. Theisen, Dr. Case, Dr. Bartlett, Dr. Babcock, Dr. Murray, Dr. Archambault, Dr. Sautter, Dr. Sabin, Dr. C. H. Moore, Dr. Elting, Dr. Carroll, Dr. Ryan, Dr. E. Vander Veer, and Dr. Shaw.

The Steuben County (N. Y.) Medical Society held its eighty-fourth annual meeting recently and elected the following officers for the ensuing year: President, Dr. J. G. Kelley, of Hornellsville; vice-president, Dr. W. W. Smith, of Avoca. The following were elected delegates to the State Medical Society Convention at Albany, in January, 1902: Dr. F. H. Cobb, of Corning; Dr. J. G. Kelley, of Hornellsville; Dr. T. H. Pawling, of Bath; Dr. C. B. Stevens, of Wallace; Dr. W. W. Smith, of Avoca; Dr. W. E. Walker, of Hornellsville; Dr. J. L. Miller, of Corning; Dr. A. J. Switzer, of Bradford. The next meeting of the society will be held at Corning on the second Tuesday in October, 1901.

The Chicago Society of Internal Medicine gave its annual banquet in that city on May 16th. Dr. William Osler, professor of medicine in Johns Hopkins University, was the guest of honor. Dr. John A. Robison, president of the society, presided. Dr. James B. Herrick responded to the toast, "Our Guest." Dr. Lewellys F. Barker read a paper on The Foundation Stones of Medicine; Dr. Walter S. Christopher discussed The Tendencies of Modern Medicine; The Surgery of Medicine was the subject of a paper by Dr. John B. Murphy. Other papers were: Music in Medicine, by Dr. Norval H. Pierce; Chicago Medicine, by Dr. Frank Billings; and The Finalities of Medicine, by Dr. William A. Evans.

Camden County (N. J.) Medical Society.—The annual meeting of the Camden County (N. J.) Medical Society was held on May 14th at Camden, N. J., and the following officers elected: President, Dr. William R. Powell; vice-president, Dr. J. Doron; secretary, Dr. Paul M. Mecray; treasurer, Dr. E. R. Ramsdell; historian, Dr. H. H. Sherd; reporter, Dr. J. Doron; delegates to the American Medical Association, Dr. W. S. Jones, Dr. Joseph L. Nicholson, Dr. M. K. Mines, Dr. W. B. Jennings, Dr. Joseph S. Wills, Dr. G. S. Kirk; delegates to the New Jersey State Medical Society, Dr. William H. Ireland, Dr. Joseph S. Baer, Dr. John F. Leavitt, Dr. J. W. Martindale, Dr. Clarence Donges, Dr. William A. Wescott, and Dr. J. W. Fithian.

The Trustees of a Hospital in Asia Minor Meet in New York.—The first meeting of the board of trustees of the American Christian Hospital, at Cesarea, Asia

Minor, which was incorporated by a certificate filed at Albany, N. Y., on May 14th, was held in New York on May 17th. The officers elected were: President, Allison Dodd; vice-president, Samuel T. Carter, Jr.; secretary, Charles E. Manierre, 31 Nassau Street, and treasurer, James M. Speers, 14 West Twenty-third Street. The board was incorporated to hold the property and give perpetuity to the work of the Rev. Dr. William S. Dodd. The small dispensary over a stable, with which he began in 1886, has now grown to a fine stone hospital building of three stories, capable of accommodating seventy beds. Since the work began over two thousand operations have been performed, and the whole number of patients exceeds sixty-one thousand. Up to the present time the personal friends of Dr. Dodd have supplied most of the money necessary for carrying on the work, but it has now grown to such proportions that the board will seek for it a somewhat wider support.

The Army Sanitarium at Fort Bayard, N. M.—There are now 149 patients undergoing treatment at Fort Bayard Hospital for Consumptives, instituted about a year ago by Surgeon-General Sternberg. This establishment is the only one of its kind in the country devoted to military and ex-military patients. While at first looked upon rather as an experiment, such promising results have been obtained that it is now regarded as an institution. Fresh air, and plenty of it, is deemed the first essential in the treatment, with brisk walks in the invigorating atmosphere, plenty of sunshine, and nutritious food. For patients not able to walk about there is a solarium or "sun parlor."

A number of patients have so closely approached complete recovery that they have been discharged to duty, and a majority have shown marked improvement. While the hospital is for the use of the army, discharged soldiers are kept on the rolls of the institution. Of the 149 patients mentioned, sixty-four are ex-soldiers.

A British Congress on Tuberculosis will be held in the Queen's Hall, London, from Monday, July 22d, to Friday, July 26th, next. The work will be divided into four sections, as follows: (1) State and municipal, under the presidency of Sir Herbert Maxwell, M. P.; (2) medical, including climatology and sanatoria, Sir Douglas Powell presiding; (3) pathological, including bacteriology, president, Professor Sims Woodhead; (4) veterinary (tuberculosis in animals), president, Sir George Brown. In addition to the work of the sections, public addresses will be given to the whole congress on Tuesday, July 23d, by Professor Koch, of Berlin; on Wednesday by Professor Brouardel, of Paris; on Thursday by Professor McFadyean, of the Royal Veterinary College; and on Friday there will be a final meeting to pass resolutions. In connection with the congress it has been decided to form a temporary museum illustrating the pathology, treatment, or prevention of tuberculosis, consisting of: Section I, pathological and bacteriological preparations and specimens illustrating tuberculosis in man and animals; and Section II, plans and models of hospitals and sanatoria, charts and documents bearing upon the historical, geographical, and statistical aspects of the subject. It is hoped that any preparations or specimens in connection with work contributed to the congress will be exhibited in the museum. Among the questions to be discussed are the age and sex distribution of phthisis, the influence of housing and aggregation, the milk supply, sanatoria, climatology, the therapeutic and diagnostic value of tuberculin, etc.

Commencement Exercises.—The thirty-third annual commencement exercises of the Bennett Medical School, Chicago, took place on May 7th. There were thirty-eight graduates.——The commencement of the Medical College of Virginia took place at Richmond on May 9th. There were forty-five graduates.——The annual commencement of the Detroit College of Medicine took place in that city on May 9th.——Twelve students graduated at the commencement of the Eclectic Medical College of the City of New York on May 7th.——The exercises attending the thirty-eighth annual commencement of the New York Medical College and Hospital for Women were held on May 13th at the Assembly Hall, No. 156 Fifth Avenue.——The eighty-second annual commencement of the Medical College of Ohio was held on May 7th at Cincinnati. There were sixty graduates.——The commencement exercises of the medical department of Howard University, Washington, D. C., were held on May 7th. There were nineteen graduates.——The class day exercises of the Women's Medical College, Philadelphia, Pa., were held on May 15th.——A class of five graduated at the annual commencement of the Pulte Medical College at Cincinnati, Ohio, on May 7th.——The commencement exercises of the Long Island College Hospital were held in Brooklyn on May 14th. The class numbered forty-one.——The commencement exercises of the Laura Memorial Women's Medical College at Cincinnati, Ohio, were held on May 1st. There were five graduates.——The commencement exercises of the Medical Department of the University of Buffalo, N. Y., were held in that city on April 26th.——Nine students graduated from the College of Medicine and Surgery at Chicago on April 27th, when the annual commencement was held.——The University College of Medicine of Richmond, Va., held its annual commencement on May 2d. There were seventy-two graduates.——The Marion-Sims Medical College, of St. Louis, held its commencement exercises on May 2d. There were thirty-two graduates.——The twenty-ninth annual commencement of the College of Physicians and Surgeons was held at Baltimore, Md., on April 29th, the graduating class numbering fifty-nine.——The commencement exercises of the Wisconsin College of Physicians and Surgeons were held at Milwaukee on May 11th. There were eighteen graduates.——The Hahnemann Medical College, Philadelphia, commencement was held on May 15th. There were fifty-two graduates.——The seventy-sixth annual commencement of the Jefferson Medical College, Philadelphia, was held on May 15th. Degrees were conferred on 142 graduates.——The annual commencement of the Woman's Medical College, of Philadelphia, was held on May 16th. There were thirty-seven graduates.——The commencement of the class of 1901 of the Georgetown (D. C.) University School of Medicine was held on May 21st. There were twenty-one graduates.

Hospital Buildings and Endowments.—Improvements, to cost about $45,000, are to be made in the Homœopathic Hospital, Brooklyn, during the summer.——It is expected that the new New York College and Hospital for Women, ground for which was broken recently in West One Hundred and First Street, will be ready for use next summer.——The Michigan Legislature has passed a measure appropriating $50,000 for the establishment of a psychopathic ward at Ann Arbor State University.——Plans for the new Charlotte Williams Hospital, at Richmond, Va., which is to cost $150,000, have been approved. It is expected that it will be completed by June, 1902.——The work of making interior

improvements in the Homœopathic Hospital, Brooklyn, will, it is expected, begin early in June. The improvements should be completed in time to permit the opening of the hospital as a city institution about October 1st. The estimated cost is $45,000.——It is reported that the National Society of Locomotor Ataxia Sufferers, of New York city (Sidney McIntosh, 43 West Thirty-fourth Street, chairman of executive committee), is contemplating the erection of a hospital and sanitarium near Buffalo, N. Y.——The new building erected for the free sanitarium for consumptives by the Montefiore Home for Chronic Invalids at Bedford, Westchester county, N. Y., will be formally opened on Memorial Day.——The New York Homœopathic Medical College and Hospital has taken title to the five-story building at No. 429 East Sixty-third Street, paying for it $23,500. It has been used as a hospital for some time.——A new hospital, to be devoted to the cure of consumptives, is to be erected in Chicago. It will be known as St. Anne's and will cost $150,000.——Adrian Iselin is erecting a $50,000 sanitarium on the Scarsdale Road, near Yonkers Park, N. Y. It is now nearly completed and will be formally dedicated to Bellevue Hospital as a home for its convalescing patients. The building is four stories high.——Anson R. Flower, of New York, has contributed $25,000 to the Flower Hospital for the purchase of the building now occupied by it as a dispensary and dormitory.——The Misses Wright, of Boston, have given $10,000 for an annex to the Dickinson Hospital, of that city, while for another annex $5,000 has been given by Thomas M. Shepard.——Governor Odell, of New York, has signed Senator Davis's bill appropriating $100,000 for the proposed hospital for consumptives in the Adirondacks.——A site has been secured for the Coney Island Emergency Hospital. It is a two-story frame structure and it is expected that it will be altered in time to receive patients early in June.——The Stony Wold Sanitarium, a semi-charitable hospital and infirmary for women and children consumptives, of New York, has been incorporated.——The sum of $15,000 has been given by a New York woman, who prefers to remain unknown, to St. Peter's Hospital, at Roswell, New Mexico.——Plans have been prepared for the new Pay Hospital for Contagious Diseases at Philadelphia, and it is expected that it will be in operation next fall.——Improvements, to cost $6,000, will shortly be made to Mercy Hospital, Chicago.——M. M. Alphonsa Lathrop, O. S. D., of St. Rose's Home, New York, has sent out an appeal for aid to erect or lease a permanent home for destitute cases of cancer among men. The sum of $3,000 has already been secured.——The formal opening of the Hospital of the Chicago Eye, Ear, Nose, and Throat College took place on May 11th.——Officials of the Brooklyn Rapid Transit Company are discussing the advisability of establishing a hospital for the reception of persons who meet with accidents incidental to the running of the great transit system. The idea was suggested by Mr. Chamberlain, superintendent of shops and repairs, who organized a hospital on similar lines for the New York Central Railroad in Buffalo. The company owns property near its shops, at Fifty-second Street and First Avenue, Brooklyn. It is proposed that these buildings be remodeled and a part of the space be devoted to the requirements of a first-class emergency hospital.——Property has been leased in Atlanta, Ga., for a new Presbyterian hospital.——The laying of the cornerstone of the new Mount Sinai Hospital, Fifth Avenue and One Hundredth Street, New York city, took place with appropriate ceremonies on May 22d.——The citizens of Pontiac, Mich., are planning to locate a hospital there.——The Ashtabula (Ohio) Medical Society is sponsor for a movement that is likely to result in a commodious modern hospital being established there.——The plans for the improvements at the Government Hospital for the Insane, at Washington, D. C., provide for sixteen buildings, the total cost of which will be between $900,000 and $1,000,000.——A fund has been started for the new Hebrew Hospital at South Brooklyn, N. Y. It will be called the Tilly Wendoehl Hospital.——The site for the new Harlem Hospital has been chosen. It will be on Lenox Avenue, between One Hundred and Thirty-sixth and One Hundred and Thirty-seventh Streets, New York city.——By the admission to probate, on May 20th, by Surrogate Abbott, in Kings county, of the will of Maria Sprague Meeker, the Brooklyn Home for Consumptives will receive her residuary estate, amounting to about $12,000.——The medical profession of Church Hill, Va., has organized the Chimborazo Hospital Company. The company is to have a capital stock of from $5,000 to $25,000, divided into $25 shares. A charter will be applied for shortly.——The directors of the Jordan Hospital, at Plymouth, Mass., have decided on a site for the new hospital donated by Eben D. Jordan, of Boston.——John D. Rockefeller, of New York, has subscribed $5,000 toward a hospital at Duluth, Minn.——A new building, to replace the main structure of the Long Island College Hospital in Brooklyn, which was put up fifty years ago, is soon to be erected at a cost of over $175,000, of which about $120,000 has already been contributed. Henry W. Maxwell, it is said, has subscribed $50,000. George Foster Peabody and Edward M. Shepard are also large contributors to the building fund. Plans are now being drawn for the new structure, which will be four stories in height and will be equipped in a modern manner. The new building will be flush with the street.

Births, Marriages, and Deaths.

Married.

Chase—Morse.—In Montclair, N. J., on Tuesday, May 21st, Dr. Carroll Chase, of Brooklyn, and Miss Charlotte C. Morse.

Lee—Bond.—In Chicago, on Wednesday, May 22d, Dr. John A. Lee, of Brooklyn, and Miss Penelope S. Bond.

Shepard—Norris.—In Manasquan, N. J., on Wednesday, May 22d, Dr. Charles Carter Shepard, of Colorado Springs, and Miss Louie Mae Norris.

Stivers—Hommel.—In Port Jervis, N. Y., on Thursday, May 23d, Dr. Moses A. Stivers, of Middletown, N. Y., and Miss Lilian Chapman Hommel.

Died.

Brittin.—In Athens, Illinois, on Friday, May 17th, Mrs. Nancy D. Brittin, mother of Dr. William A. Brittin, of Auburn, Illinois, and of Dr. A. L. Brittin, of Athens.

Culver.—In Boston, on Thursday, May 23d, Dr. Jane Kendrick Culver.

Hough.—In Toronto, Ontario, on Thursday, May 16th, Dr. Herbert J. Hough, of Midland, Ontario, in the twenty-seventh year of his age.

Hoy.—In Albion, N. Y., on Tuesday, May 21st, Dr. Susan U. Hoy.

Rumbold.—In St. Louis, on Thursday, May 23d, Dr. Thomas F. Rumbold, in the seventy-first year of his age.

Thomas.—In Baltimore, on Tuesday, May 21st, Dr. William D. Thomas, of Richmond, Virginia.

Weinges.—In Jersey City, on Thursday, May 23d, Dr. Conrad Weinges, in the fifty-third year of his age.

Wells.—In Englewood, N. J., on Tuesday, May 21st, Dr. John A. Wells, in the forty-sixth year of his age.

Williams.—In Cincinnati, on Saturday, May 18th, Dr. Thomas Williams, in the ninety-third year of his age.

Pith of Current Literature.

Boston Medical and Surgical Journal, May 23, 1901.

Municipal Care of the Consumptive Poor. By Dr. S. A. Knopf.—The author views the care of the consumptive poor as counseled not only by ideas of humanity, but as forced upon us by purely economic considerations. The truth is already demonstrated that the hygienic and dietetic treatment of pulmonary tuberculosis is feasible everywhere, where the extremes of temperature are not too pronounced, and where the air, soil, and general environments are sanitary. The fact that consumption is far more often associated with poverty than with affluence is demonstrated, and the frightful mortality of consumption is shown by the fact that, in the city of Boston, eleven per cent. of the mortality is due to it. However, an early recognized case of tuberculosis has from sixty to seventy per cent. of chances of cure. Post-mortem statistics show that twenty-five per cent. of people who die of accidents or diseases other than tuberculosis reveal on autopsy positive evidences of absolutely healed pulmonary lesions. Not only are State sanatoria a necessity, but municipal sanatoria are equally so, and for the benefit of those who cannot be convinced by indirect proofs, the author proves that by treating a consumptive patient in a sanatorium or special hospital, where he has from fifty to seventy-five per cent. of chances of cure, instead of treating him in a general hospital, where his chances of cure, in spite of the best of care, must be considerably less, the Commonwealth saves on each patient $4 for every week when treated in a sanatorium.

Echinococcus of Liver, with Perforation into the Lungs and Bronchi. By Dr. William F. Gay.—In this case, intercurrent disease fully met all the prominent symptoms and prevented a positive diagnosis until rupture occurred and the cysts were microscopically demonstrated. The temperature never reached above 101° F., except during the pneumonia, when it reached 102° F. Other points of interest were the high pulse rate uninfluenced by the temperature, the peculiar orange-colored masses in the sputum, the absence of pleuritic involvement at the time of perforation, and the presence of the cysts.

Massachusetts General Hospital. Clinical Meeting of the Medical Board (*concluded*). **Case Operated on for Exaggerated Roman Nose. Plastic of Hand. Plastic of Arm. Enteroptosis. A Case of Myxœdema and Arrested Development.**

Medical Record, May 25, 1901.

Orchitis and Epididymitis in Typhoid Fever. By Dr. Francis P. Kinnicutt.—The points emphasized are: 1. Epididymitis or orchitis occurring in the course of or during the convalescence from typhoid fever is a rare lesion and is of typhoidal origin. 2. Only very exceptionally is it due to secondary microbic infection. 3. It develops at a late period in the disease or during convalescence. 4. The lesion, although, as a rule, unilateral, may be bilateral, and involves either the epididymis or testicle or both, and not infrequently the cord. 5. Effusion into the tunica vaginalis is rare. 6. Termination is most often by resolution. 7. Suppuration occurs in twenty-five per cent. of all cases. 8. Localized necrosis and extrusion of testicular tissue are not uncommon. 9. Exceptionally there is destruction of the entire testicular structures. 10. Atrophy of the testicle occurs, but is a rare sequence. 11. The lesion gives rise to little constitutional disturbance. 12. Death, as a direct result of the lesion, has not been noted.

The Operative Treatment of Umbilical Hernia in Adults. By Dr. Joseph A. Blake.—In cases in which there is stretching of the linea alba, with separation of the recti, the author believes the method of lapping the abdominal wall to be particularly applicable. The more apparent advantages are: 1. The doubling of the abdominal wall at the hernial site. 2. The breaking of the lines of suture. 3. The broad surfaces for union. 4. The obliteration of the separation of the recti and the reduction in the size of the abdomen. Its field is really not limited to herniæ proper, but also includes the treatment of pendulous abdomens and of enteroptosis due to laxity of the abdominal wall.

The Borderland of Insanity: Where and What is it? By Dr. Henry Waldo Coe.—The author refers particularly to those cases which, allowed to continue unchecked, tend to drift off into those mental disorders named by Krafft-Ebing the psychoneuroses, a class of mental disorders, even when fully developed, subject often to relief under the application of rational therapeutic, hygienic, and environal measures. Much space is taken up with the sexual phase of the subject, because the author regards it as the most important causative factor touching the borderland of insanity.

Recurrent Oculomotor Paralysis: Report of Case, with Remarks. By Dr. William M. Leszynsky.

Medical News, May 25, 1901.

Some Notes on Medical Diagnosis. By Dr. William N. Berkeley.—The author quotes Montaigne to the effect that the physician "hath need of many parts, divers considerations, and severall circumstances to proportion his desseigne justly. . . . God knows how hard the knowledge of most of these parts is." In an article of great merit he preaches the faith of thoroughness, and he cannot conceive that we should do as *little* scientific work as we can, but as *much*. Whatever the scheme of examination, let it be thorough, and constantly practised, for we are safe in the possession of no virtue until its practice has become habitual. One of the general logical laws on which diagnosis proceeds is the "Law of Parcimony." "Causes are not to be multiplied beyond necessity." We should choose, however, not always the smaller number of causes, but the number of causes that explain the phenomena most satisfactorily. Eternal vigilance is the price, and a good rule for the medical man is to send his patients to the surgeon or the *post-mortem* room with a written diagnosis. He will be often enough laughed at, but he will gain enough to compensate him for the ridicule. And he may console himself by remembering that the surgeons and pathologists, for all their scorn, have fields of labor of their own, where they, too, like us, are groping in darkness, and only by slow degrees feeling their way to the light.

The Mineral Waters of Mt. Clemens, Michigan, as Viewed and Compared with those of European Watering Places. By Dr. Richard Leuschner.—The author regrets that, whereas German, Austrian, and European resorts in general, enjoy the distinction of being conducted on a scientific basis, at American watering places there is as yet ground for improvement in this respect.

The Treatment of Chronic Purulent Otitis Media. By Dr. James F. M'Kernon.—We should never lose sight of the fact that we are medical practitioners first and specialists second, and all these cases, when indications demand it, should have general building up and tonic treatment, in order that the local condition may improve the more rapidly.

Tuberculosis of the Iris. By Dr. William F. Mittendorf.

Journal of the American Medical Association, May 25, 1901.

The Pathology of Active Tuberculosis of the Pericardium. By Dr. H. Gideon Wells.

Tuberculosis of Fascia. By Dr. J. Clark Stewart.—The author believes that tuberculosis of fascia occurs with sufficient frequency to entitle it to more attention than it has received in the past. It occurs in two well-marked forms, and the recognition of these forms is essential to its proper surgical treatment. Fibrous tissue associated with, and resulting from, tuberculous infection is to be viewed as tuberculous tissue, and treated accordingly. Such fibrous tissue may, in some cases, need the test of animal inoculation to absolutely prove its tuberculous character.

Sarcoma of the Pancreas. By Dr. George A. Boyd.

A Case of Epithelioma Developed on the Basis of a Healed Lupus Vulgaris Treated by X Rays. By Dr. David Lieberthal.

Ureteral Implantation into the Bowel for Diversion of the Urine. An Experimental Research. By Dr. Jacob Frank.—From his experiments the author concludes that bilateral implantation into the rectum simultaneously is primarily and remotely an extremely dangerous procedure, and can have no favorite place in human surgery. While no single permanent implantation of the ureter into the rectum has demonstrated an absence of inflammatory reaction on the part of the kidneys, the author believes that it is only justifiable where other means fail, and that it has but a limited place in pelvic surgery. While stricture did not take place, yet it cannot be said that scar contraction at the opening into the rectum will not, in months or years, produce one. That the rectum will tolerate the presence of urine cannot be doubted.

An Overlooked Nasal Factor in Ear Disease. By Dr. Chevalier Jackson.—In this article the author refers to the often-observed hypertrophic thickenings on both sides of the vomer, near the posterior free margin, which deflect the inrushing blast of dust-laden, dry, cold air against the Eustachian eminences, resulting in perpetual irritation of the mucous membrane in the vicinity of the tube mouths. As to treatment, there can be but one indication, and that is to take off the air-deflecting projection and let the inspiratory blast go back and strike against the posterior pharyngeal wall, as Nature intended.

Compound Fracture of Olecranon, with Dislocation of both Bones of Forearm. By Dr. B. N. Torrey.

Tubercular Disease of the Knee-joint and Hip-joint in Children. Diagnosis and Treatment. By Dr. Edward A. Tracy.

Cough due to Reflex Irritation in the Upper Air-passages. By Dr. Frank S. Milbury.—The author's conclusions are those also of Mayer. A cough is reflex in its origin: 1. When it is spasmodic, practically constant, without, or with but little, expectoration and temperature. 2. When the physical signs of the pulmonary disease are absent. 3. When it persistently resists all medication for permanent relief. 4. When the general health remains comparatively undisturbed. 5. When, upon removal of the cause, it promptly ceases. Often, in conjunction with the local, general treatment as well is necessary. Digestion and alimentation and all neurotic conditions should have the most careful consideration.

Appendicitis in a Child Less than Two Years Old. By Dr. George W. Newton.

Philadelphia Medical Journal, May 25, 1901.

The Surgical Treatment of Chronic Ulcer of the Stomach. By A. W. Mayo Robson, F. R. C. S.—The author speaks of the method of employing the decalcified bone button. The advantages he mentions are: 1. It provides an opening of the exact size intended, with no possibility of the passage being made too small by the drawing up of the sutures before the knots are tightened. 2. It provides immediately an open channel between the two anastomosed viscera. 3. The bobbin protects for from twenty-four to forty-eight hours the new line of union from pressure and from the irritation of the visceral contents. 4. It facilitates the application of the sutures. 5. No foreign material is left in the alimentary canal which may irritate or cause subsequent trouble, for the bobbin rapidly dissolves in the alimentary juices. 6. This method has been proved by ample experience to be rapid, easy, efficient, and safe. For stomach operations it is used in gastro-enterostomy, in pyloroplasty, in gastroplasty, and in pylorectomy or partial gastrectomy, and in the latter operation it is unnecessary to use more than two continuous sutures for the whole operation.

Late Results of the Treatment of Inoperable Sarcoma with the Mixed Toxines of Erysipelas and Bacillus Prodigiosus. By Dr. William B. Coley.—The risks of this treatment are practically nil, if proper precautions are observed. In upward of two hundred cases the author has had but two deaths. He points out that the method is advised only in inoperable tumors, and practically only in sarcoma; in other words, in the entirely hopeless cases. The percentage of probable cures depends largely upon the type of cell, varying from perhaps four or five per cent. in the round-celled to nearly fifty in the spindle-celled variety. Success has not followed the treatment in melanotic sarcoma. While the treatment is not recommended in carcinomatous growths, it has been the experience of the author that in many cases the toxines exert a marked inhibitory influence in carcinoma, although it is rarely curative. The author explains the action of the toxines upon malignant tumors upon the theory that such tumors are the result of some infectious micro-organism.

Trauma as an Exciting Cause of Paralysis Agitans. By Dr. F. Savary Pearce.—The conclusions which seem to be more definite as regards trauma as an exciting cause of paralysis agitans are that the later the origin of the disease, the more apt is trauma to have been the exciting cause; in any event, it is more apt to produce an aberrant type of the malady, especially when the insult to the nervous system has been primarily in the periphery of the body rather than of the central neurons.

Two Cases of Lobar Pneumonia following Ether Anæsthesia, with Unusual Course. By Dr. W. S. Schley.

Lancet, May 18, 1901.

The Pathology and Diseases of the Thyreoid Gland. By W. Edmunds, F. R. C. S.—In the second of the Erasmus Wilson lectures upon this subject, the author first considers the effects produced upon animals by excision of the parathyreoid glands only. It has been asserted by some that parathyreoidectomy is more fatal than total excision of the thyreoid and parathyreoids, but the author's experiments do not bear out this view. The changes occurring in the thyreoid lobes left in these operations are interesting: The colloid diminishes or completely disappears, and its place is taken by a watery secretion; the vesicles, instead of remaining round, become branched and the secreting cells become columnar, or, multiplying, fill the cavity of the vesicles with round cells. These changes are identical with those known as "compensatory hypertrophy." This coincides with the view that the parathyreoid glands manufacture the secretion and the thyreoid glands store it. A study of the eye changes observed in these operations tends to support the suspicion that the parathyreoid glands are involved in the pathology of Graves's disease. The author goes on to study the effects produced by an excess of thyreoid gland in the system. In monkeys, large doses of thyreocolloid produce well-marked symptoms: Proptosis, dilatation of pupils, widening of palpebral fissures, erection of hairs on the head, the hair falling out in patches, paralysis of one or more limbs, emaciation and muscular weakness, and, finally, death from asthenia. Of the above effects, those produced on the eyes are caused mainly by action through the cervical sympathetic. The injection of thyreocolloid into thyreoidless dogs causes a rise of blood pressure, instead of a fall as in normal animals.

Cases Illustrating the Surgery of the Thyreoid Gland. By H. B. Robinson, M. S.—Two classes of cases are reported by the author: The first group consists of cases of parenchymatous goîtres, with general enlargement of the gland, almost symmetrical, without any pulsation or other signs of Graves's disease. In young subjects a rapid increase in size not uncommonly takes place about the onset of puberty, and no doubt bears some direct relation to the awakening activity of the sexual organs. Three such cases are reported, in two of which thyreoidectomy was performed. Thyreoid extract was given in all three cases, and recovery took place in all. The second group of cases are the thyreoid gland adenomata, encapsuled tumors embedded in the gland substance as elsewhere. A unilateral enlargement is almost without exception due to an adenoma, especially if malignant disease can be excluded. There is usually a localized convexity in some part of the anterior surface of the gland, and if the enlargement is marked the trachea will be displaced to the opposite side. The development of these tumors is usually slow and pressure symptoms are rare. In dealing with these adenomata strict conservatism should be adopted. It is quite unnecessary to remove the whole lateral lobe. Five such cases are reported by the author, the results following operation being most satisfactory.

A Pharyngeal Pouch of Large Size Removed by Operation. By R. J. Godlee, M. S., and T. R. H. Bucknall, F. R. C. S.—The authors report the case of a man suffering from a swelling which looked exactly like an enlarged gland on the left side of the neck, at the level of the hyoid bone in front of the sternomastoid. This was removed by operation and proved to be a large pharyngeal pouch. Such pouches probably all arise in connection with one or other of the visceral clefts, and the following varieties occur, depending on the position of the obliteration of the cleft: (1) It may remain open throughout its entire length, giving rise to a complete fistula; (2) no external opening may be formed and a pharyngeal pouch with a blind extremity may remain; (3) the internal aperture may be shut off from the pharynx, leaving a blind external fistula; and (4), both internal and external openings, being closed, a "dermoid" cyst of the neck may remain. It is very difficult to determine which of the visceral clefts is concerned in the formation of such a pouch, but many facts point to the congenital origin of pharyngeal pouches and fistulæ and to their probable connection with the visceral clefts.

Flies and the Science of Scavenging. By Dr. G. V. Poore.—In this article the author considers the genesis of flies and their relation to proper scavenging. He is a warm advocate of covering all the scavengings of a camp with earth as soon as possible. Such burial of fæces must be done methodically and carefully and with every attention to detail. Nitrification in the soil is the aim of the sanitarian as well as of the agriculturist. The author is opposed to the use of chemical disinfectants. These are expensive, generally evil-smelling, often poisonous, and lead to an increase of the material to be transported. Experiments have shown that from the point of view of the innocuous transformation of organic refuse into "soil" deep burial is a mistake. The use of quicklime in the treatment of excreta is quite unnecessary.

A Case of Symmetrical Retinal Detachment Occurring during Labor and Associated with Albuminuria, Resulting in Complete Recovery. By R. G. Hann, M. R. C. S., and R. L. Knaggs, F. R. C. S.

Is the Murmur of Mitral Stenosis Systolic or Presystolic in Rhythm? By Dr. H. Walsham.—The author has made use of the x rays in determining whether the murmur of mitral stenosis is systolic or presystolic in rhythm. He describes shortly what is seen of the action of the normal heart on the fluorescent screen and how to determine the beginning and end of systole. In cases of mitral stenosis, examined in this way, he finds that the thrill and the murmur which are characteristic of the disease are both distinctly presystolic in rhythm, thus agreeing with the generally accepted view.

Opotherapy in Gynæcology. By Dr. J. Phillips.—The author deals with the question as to whether there is any real ground for supposing that treatment with animal extracts is efficacious, and, if so, on what lines and in what manner it should be carried out. The three extracts considered are: (1) Thyreoid extract; (2) ovarian extract; and (3), mammary extract. The value of thyreoid extract in the amenorrhœa of obesity and myxœdema is well recognized. But the administration of ovarian and mammary extracts is surrounded by great uncertainty. The author has found ovarian extract to be of definite service in cases of natural and artificially induced menopause; but in amenorrhœa and dysmenorrhœa it has been of no value. It may be given by grafting the fresh gland under the skin, by subcutaneous injections of the organic extracts, or by the administration by the mouth or the rectum of ovarine tabloids or the

glycerine extract. The last method is the one to be preferred. Mammary extract is best given in the raw state, cow's udder being cut into thin slices and made into a salad.

Some Questions with Regard to Acute Middle-ear Inflammation. By Dr. P. McBride.—The author calls attention to the fact that there is a form of adenoids, producing no other trouble, which is responsible for recurring attacks of middle-ear inflammation. On examination with the rhinoscopic mirror, a layer of adenoid tissue is observed occupying the space between the Eustachian orifices and apparently pressing upon their margins. On digital examination, the lymphoid tissue will be felt, but there is not any great amount present. The attacks of ear trouble cease when the adenoid tissue has been removed. The author does not believe that the new method of plugging the meatus with aseptic dressing after the perforation of an otitis media is at all suitable for all cases, and still adheres to the use of the catheter and Politzer's bag. The question of mastoid operation should be considered wherever there is excessive discharge or a small perforation in a bulged membrane. Free incisions in the drum are only of temporary value in such cases. In operating it is of the utmost importance that the middle-ear structures be respected, and for this reason Schwartze's method should always be adopted where possible.

A Simple Form of Electrical Light and Heat Bath, with Eight Cases of Osteo-arthritis Treated by it. By F. C. Eve, M. B.—The apparatus here described consists of three thirty-two-candle-power electric lamps, fixed on an aluminum base and protected by a wire cage from contact with the skin of the patient or with the blankets forming the walls of the chamber. The temperature of the chamber gradually rises in from fifteen to twenty minutes to from 200° to 250° F. Even in the most obstinate cases of arthritis the pain always subsides at the end of an hour's baking. The author reports eight cases of rheumatoid arthritis in which the use of the "electrothermogen" was invariably followed by a reduction in the amount of pain and stiffness. Some of the cases, however, seem only to improve up to a certain point. The apparatus is cheap, light, portable, odorless, and convenient.

British Medical Journal, May 18, 1901.

The Lower Uterine Segment and the Contraction Ring. By Dr. W. J. Smylie.—(The Ingleby lecture.) An exact definition of the lower uterine segment is impossible, the nearest approach to it being that it is "a portion of the uterus which before parturition resembles the body, and after it the cervix." Its origin is still uncertain and four different theories are held at the present time with regard to it: 1. That it develops during pregnancy (*a*) from the lowest part of the corpus uteri; (*b*) from the upper part of the cervix. 2. That it forms only during labor (*a*) from the cervix uteri; (*b*) both from the body and the cervix. The structural division of the uterus into an upper contracting and a lower distensile portion is of the utmost importance in the first stage of labor. The lower part being weaker, it yields, and the lower pole of the ovum bulges into it, the lower segment embracing the presenting part so closely that nothing is forced between. As the os dilates, the lower segment is gradually changed from a hemisphere to a cylinder, and the child passes through it and is expelled. In the third stage the lower segment and cervix form a thin-walled collapsible tube, which affords no support to the upper, which contains the placenta. The upper segment, therefore, sinks down into the pelvis. But when the placenta is expelled the upper segment rises above the umbilicus, and the lower segment can be felt above the pubes. The author has discarded Credé's method of placental expulsion and allows the uterus to expel the placenta unaided. There are three signs that expulsion has taken place: (1) Elevation of the fundus above the umbilicus; (2) elevation of the lower segment above the pubes; and (3) protrusion of the cord through the vulva. To observe the last sign more easily, it is advisable to tie a ligature at the vulva; when this ligature is found five or six inches away from the vulva the placenta has left the uterus.

Where the lower segment is not formed or where it is unduly weak, the membranes are exposed to undue strain and premature rupture. Prolapse of the cord is usually due to the failure of the lower segment to closely embrace the presenting part; some malpresentations are also due to the same cause.

The lower segment of the uterus is the part most frequently involved in rupture. In normal labor the contraction ring is dilated by the resistance of the uterine contents and the excentric tension of the longitudinal fibres of the uterus. Its contraction is therefore due to a loss of resistance in the uterine contents at the site of the ring, diminished excentric tension, and possibly to an abnormal development of the circular fibres of the ring.

The Dangers and Diagnosis of Breech Presentation and its Treatment by External Version toward the End of Pregnancy. By Dr. H. R. Spencer.—The mortality in children born by the lower extremities is very high. One of the causes of the death of the child in these deliveries is the low insertion of the cord relatively to the cervix, leading to its prolapse or to its being pressed upon during labor. Premature respiration may be aroused by the action of the external air upon that part of the body already born. The small, soft buttock takes the brunt of the labor instead of the larger and harder head; all the viscera are liable to be injured by the pressure to which their delicate tissues are subjected during the act of birth. Injuries to the lungs frequently cause the death of the child from pneumonia after a few days. The testis is an organ especially liable to injury during the birth by the breech, on account of obstruction of the spermatic veins by pressure, and of pressure by the fingers of the doctor. Sometimes a hæmatocele is formed either in the tunica vaginalis, processus vaginalis, or cord. Hæmorrhages into the muscles are very frequent in breech presentation. Hæmorrhage into the sterno mastoid muscle, giving rise to the so-called "sterno mastoid tumor," is a frequent example. The Prague method is a fruitful source of this injury and should never be employed.

The diagnosis of breech presentation is best made by abdominal examination; it gives certain results before the onset of labor at a period when the diagnosis by vaginal examination is difficult or impossible. The author describes the various steps of the abdominal examination and the points to be looked for. A valuable means of detecting the head at the fundus is by a movement of shaking or succussion with one hand. On grasping the fundus lightly with the left hand, the head can be tossed between the fingers and thumb with remarkable distinctness. Where a breech presentation is diagnosticated at the eighth month of pregnancy, the author recommends

the performance of external version. He has performed this operation six times; the mothers were delivered, with head presentation, and recovered and the children survived. Some sort of abdominal belt should always be worn after the operation. Among the contraindications to external version are multiple pregnancy, flattened pelvis, dead fœtus, and placenta prævia.

Some Instances of Cystic Affections of the Breast, with Remarks. By A. M. Sheild, M. B.—There are two important points which are significant of the diagnosis of cyst. The first is variation in size, the second variation in local tenderness. Nothing is more deceptive than to argue of the nature of a breast tumor from the condition of the axillary glands. Glandular enlargement may be absent in carcinoma and present in a cyst. The use of the exploring trocar and cannula is of great value in doubtful cases. If a cyst is found and its contents are clear and devoid of the elements of blood, the injection treatment may be carried out, but the cases for this method of treatment must be selected with great care. The author reports four cases of cyst of the breast, which illustrate these points. In one case there was distinct dimpling of the skin, contrary to the generally accepted teaching of Mitchell Banks that the skin over a cyst is quite free from dimples or depressions.

Some Remarks upon an Analysis of 5,000 Cases of Death from Malignant Disease. By Dr. E. N. Nason. —The author has analyzed 5,000 cases of death from malignant disease, and concludes that although, up to a certain age, increasing years, with presumably decreasing cell vitality, renders the individual increasingly liable to cancer, this is only true up to a certain point. There comes a time beyond which increasing age renders the individual less, and not more, liable to cancer. It looks as though a certain amount of vitality or activity in the special cells of the organs affected is necessary, or at least most suitable, for the production of a cancer, and that when this vitality is diminished beyond a certain point a greater stimulus is needed before a malignant tumor can be started. In the uterus the maximum liability is reached immediately after the cessation of functional activity.

All the predisposing causes of malignant disease resolve themselves into conditions in which the resisting powers of the individual cells have most probably been reduced. It is in just such a condition that the invasion of a parasitic organism might be expected to have most chance of success. So that one can hardly refrain from suggesting that the various so-called predisposing causes are simply conditions which prepare the soil for the advent and growth of some essential exciting cause, possibly a parasitic organism.

Erythema Multiforme and Vaccination. By Dr. N. Walker.—The author has observed four cases of erythema multiforme following vaccination, and holds that the vaccination was causally related to the skin eruption. Instances have been reported by other observers, and the author is inclined to adopt the suggestion of Gilchrist, that a toxine is produced by vaccination which, circulating in the blood, produces, as many other toxines do, that form of erythema which we know as erythema multiforme, and especially that variety described as erythema iris.

Deutsche Medizinal-Zeitung, May 6, 1901.

Bacteria of Food Preparations.—Dr. Bruno Schürmayer calls attention to the inconsistency of insisting upon sterilized milk for infants and invalids, and of giving them food preparations containing milk which are, as he demonstrates, full of bacteria. He cites as diseases which may be transmitted by impure milk products, typhoid fever, cholera, tuberculosis, thrush, anthrax, and scarlet fever. Toxæmias may arise from toxines developed in the milk or imparted to it.

May 9, 1901.

Practical Experiences with Hydriatics in Measles and Scarlatina.—Dr. R. Putzer has found that, in suitable cases, hydriatic measures have made a good impression in these diseases upon the temperature, the pulse, and the diuretic action of the kidneys.

Münchener medicinische Wochenschrift, May 7, 1901.

Rheumatic Tendinitis Ocularis.—Dr. A. Pichler reports a case in which the tendon of the superior and inferior rectus muscles of the eye became inflamed in a rheumatic subject. The ailment yielded promptly to sweat baths and treatment by salicylates.

Diagnosis of Tumors of the Frontal Lobe.—Dr. Höniger reports the case of a man, fifty-four years of age, who began to have epileptic seizures about three years before his death. He was confused, had pains in the back and abdomen, and was not able to sit up in bed unassisted or to stand erect. While lying, however, he could easily move his limbs. The author correlates these, the principal symptoms, with the autopsy findings and points out the details of a possible diagnosis.

Tuberculous Meningitis in Tuberculosis of the Male Generative Organs.—Dr. M. Simmonds calls attention to the frequency of tuberculous meningitis accompanying tuberculous disease of the male genital tract. He has found the combination in one third of the cases he has examined *post-mortem*. He emphasizes the importance of the surgical removal of tuberculous foci in the genitals, to avoid this seemingly favorite complication.

Kissingen Baths in Heart Disease. By Dr. Leusser.

Curative Baths in Heart Disease. By Dr. Stifler.

Bullet Wound of the Bladder. By Dr. B. Bayerl.

Extracranial Syphilitic Eye Diseases (*concluded*). By Dr. O. Schwarz.

Wiener klinische Rundschau, May 12, 1901.

Case of Spina Bifida Occulta.—Dr. Max Reiner, in reporting a case of this kind, says that the clinical diagnosis may be made when certain typical symptoms are present, including the maldevelopment of the spinal cord, its membranes and its bony covering, without the presence of a hernial protrusion. Myelocystocele of small size may lie deep in the fasciæ or in muscle or fat masses, so that they will escape clinical observation. The absence of a protrusion may be due to the interruption of the development of the sac. Myeloceles and meningoceles may remain small and, covered with normal skin, may appear only vaguely as small cysts.

Technics of Radiography (*conclusion*). By Dr. Peter Bade.

Therapeutic Value of Ichthyol.—By Dr. J. W. Frieser.

Wiener klinische Wochenschrift, May 9, 1901.

Clinical Diagnosis of Renal Infarcts (*continued article*). By Dr. Rudolf Schmidt.

Action of Suprarenal Extract upon the Nose and Larynx.—Dr. L. Harmer has used the suprarenal extract in solutions of ten and of fifty per cent. in Chiari's clinic. As an anæsthetic, he found it of great value, especially when it was not desirable to use cocaine. He was not impressed with its value as a hæmostatic, but he regards it highly in the treatment of the acute catarrhal conditions.

Tears of the Vaginal Vault during Labor (*conclusion*).—Dr. H. Ludwig has reported a large number of cases. He speaks of the complications, the sudden delivery of the child and the placenta, simultaneous laceration of the bladder, descent of the intestines, etc. Threatened vaginal rupture gives no definite symptoms, nor are the subjective symptoms often important. The usual objective signs are: Cessation of labor pains, disappearance of the presenting part of the fœtal head, followed by the birth of the child and placenta, descent of the intestines, symptoms of beginning peritonitis, sensitiveness of the abdomen, vomiting, dyspnœa, collapse, rapid pulse, a grave facial expression; in other words, the physical signs which usually accompany rupture of the uterus. Hæmorrhage may appear externally, or may go on internally. The treatment must be directed toward the delivery of the fœtus and its appendages if it lies in the abdominal cavity, and toward closing the vaginal wounds surgically. Hæmorrhage is to be stopped by suture, drainage must be invariably practised to avoid infection, and, occasionally, hysterectomy must be performed. The prognosis is bad. Prophylactically, women with a pendulous abdomen must wear a binder throughout pregnancy, and must keep their bed and remain in the recumbent position during labor. The abdomen must be held up during the labor to secure the proper entrance of the fœtus into the pelvis. Operative measures on such patients must always be performed under anæsthesia and must be devoid of all force.

Gazette hebdomadaire de médecine et de chirurgie, May 9, 1901.

Adipositas Dolorosa.—M. C. Achard and M. C. Laubry report a case in a woman, seventy-nine years of age. They call attention to the main symptoms as observed by Dercum and themselves. The fat may be deposited symmetrically and is often in the form of nodular masses. The pain is severe and is increased by pressure. Sensation is disturbed, there is muscular atrophy or hypertrophy (in the hands), alopecia and brittleness of the hair are observed, hæmorrhages occur and psychic disturbances may appear. The origin of the disease is obscure.

Indépendance médicale, May 15, 1901.

Social, Economic, and Patriotic Views of Tuberculosis.—M. Samuel Bernheim makes an earnest plea for the establishment and maintenance of sanatoria and dispensaries for the treatment of pulmonary tuberculosis. He shows what the social and economic gain to the State would be under such a system, well regulated and well supervised.

Riforma medica, April 17, 1901.

Researches on the Active Substances in Cultures of the Bacillus of Typhoid Fever. By Dr. A. Paladino-Blandini.—Cultures of typhoid bacilli contain two substances which differ from each other chemically and biologically—a nuclein and a nucleo-albumin. The property that these cultures possess, of conferring upon the blood of inoculated animals an agglutinating power, depends on the presence of a special nucleo-albumin. This nucleo-albumin is alone capable of conferring specific agglutinating properties on the blood of animals treated with it. This nucleo-albumin (like anti-arsenin, as observed by Bereska) does not act except through the medium of the white blood cells.

April 18, 19, 20, 22, and 23, 1901.

On the Therapeutic and Hæmatopoietic Action of Sodium Cacodylate. By Dr. Carlo Chiaporri.—The author found, from an experience with fourteen cases, that the action of sodium cacodylate is as follows: The injection of this drug is followed in from twenty-five to fifty-five minutes by an increase of the red cells amounting to from 600,000 to 1,160,000. This increase was not noted in three of the fourteen subjects, but these three were gravely anæmic. Only in one case was there no increase after injection of sodium cacodylate, although the degree of anæmia was not marked.

The increase of hæmoglobin is not proportional to that of the red blood cells. The drug has no influence upon the number of white blood cells. Successive counts of red blood cells established the fact that the new red cells in the blood which came after the injection of sodium cacodylate again disappeared in from one to four hours. It is probable that these cells are eliminated, and in order to determine this the author investigated the amount of urobilin excreted before and after the injection of the cacodylate. Urine, passed after the injection, was more highly colored than that passed before, owing to the increased amount of bilirubin, which also showed itself on chemical analysis.

Poggi, in a recent study, showed that young red cells may be recognized in the blood by a peculiar method of staining with methylene blue. The author found that in one case the blood contained ten per cent. of Poggi's corpuscles before the injection, and twenty per cent. after the injection of the cacodylate. From this it may be concluded that the increase in the number of red cells which results from these injections is attributable to the entrance of new red cells into the circulation, but this theory must be proved by further experiments.

April 24, 1901.

On Uretero-enteroplasty. By Dr. Niccola Giannettasio.—The author conceived the idea that the appendix vermiformis might be employed for the restoration of the continuity of a ureter where ureteroplasty was necessary. For this purpose he operated upon three rabbits the appendix being absent in most common domestic animals. He killed these animals after a time, and found the appendix in good condition, save in one case where a suppurative process had developed in its vicinity, as a result of imperfect asepsis. He removed the appendix closing the wound in the cæcum with Lembert sutures The upper end of the ureter was then sutured into the open end of the appendix, while the other end of the ureter was sutured into the closed end after an incision had been made therein for this purpose. The sutures were applied accurately, according to Lembert's rules. The advantages of this method of ureteroplasty are stated to be as follows: There is less disproportion between the calibre of the ureter and the appendix than between the

ureter and other organs used for ureteroplasty. His method enables one to utilize an organ measuring seven or ten centimetres and not infrequently twelve or thirteen centimetres in length. The method is applicable in both sexes. It has the advantage of removing a useless and dangerous organ, and the operation in itself is less dangerous than all the other methods proposed. The author now proposes to study the influence of the bacteria in the appendix upon the kidneys after implantation.

April 25, 1901.

A Contribution to the Study of Acromegaly. By Dr. Giuseppe Finzi.—The author presents the history of a case of acromegaly and concludes as follows: The chief characteristics of this case, in addition to the acromegalic aspect, were: The supraciliary pain, the persistent winking, the exophthalmos, the atrophy of the optic nerves, the glycosuria and azoturia, the neuritic symptoms in the upper extremities, especially on the right side where there was muscular atrophy, the amenorrhœa, the anaphrodisia, and the general weakness. In all probability the lesion was a tumor of the hypophysis which compressed the posterior angle of the chiasm, causing bilateral temporal hæmianopsia.

Vratch, March 31 (April 12, New Style), 1901.

Memorial Number Devoted to the Late Viatcheslav Avskentievitch Manasseine, Editor of Vratch.—This number contains materials for a biography of V. A. Manasseine, who was professor of the practice of medicine in the Military Medical Academy of St. Petersburg. He was one of the most prominent figures in Russian medical affairs, and his journal, *Vratch,* has been noted for its independence and its strict ethics. He was especially interested in an association organized in aid of needy students and in associations of similar character for physicians. *Vratch* will be discontinued on January 1, 1902, in accordance with the last will of the deceased.

April 7 (April 19, New Style), 1901.

Haffkine's Lymph and other Remedies against the Plague in Man, which Produce an Active Immunity against the Disease. By Dr. A. F. Vigur.—The author has studied, experimentally and clinically, the various substances which produce active immunity against plague, with a view of determining the position of Haffkine's serum among these remedies. The question as to the location of the plague antitoxines and toxines is an important one, and it must be determined whether these substances exist principally in the bodies of the bacilli themselves or in the media in which these germs grow. Yersin, Calmette, and Borel, in 1895, showed that filtered cultures of plague bacilli were harmless, while injections of dead plague bacilli, taken from agar cultures, were deadly in animals, proving that the plague bacillus contained a toxine in its body. Subsequent investigations, however, showed that older cultures contained toxine in the filtrate; in other words, that after a while the nutrient medium became poisoned with the products of the germs. The immunizing property resided principally in the bodies of the germs. (*To be continued*).

Balantidium Coli as a Cause of Chronic Diarrhœa. By Dr. N. S. Solovieff (*concluded*).—The balantidium, by virtue of its motility, penetrates between the glands of the healthy intestinal mucosa, thence passes into the submucosa and multiplies therein, producing pathologic changes, which have been described in the last issue. These parasites may also penetrate into the muscular layers and into the subperitoneal connective tissue. The generally accepted view that the balantidium lives only on the surface of the intestinal mucosa is, therefore, wrong. The presence of these parasites in the deeper layers of the intestinal wall accounts for the chronicity of the disease and for its tendency to relapse.

Gastrotomy for the Removal of a Foreign Body. By V. V. Rosanoff.—The foreign body in this case was a glass test tube, which the patient had swallowed. While in a state of intoxication, he had put a number of coins into his mouth, and suddenly felt a choking sensation. He bent down, and succeeded in getting out all of the coins except one, larger than the rest. Assuming that this last coin was arrested in his throat, he quickly seized a glass tube that lay close at hand, and pushed the coin down with it. He lost his hold on the tube and swallowed it; a week later the larger coin was found under a bench near the site of the accident. The operation was successful, and he recovered without any complications.

The Koumyss Treatment and Some Koumyss Settlements in the Ufa Government. By Dr. P. V. Zesarevsky.

Klinitchesky Journal, February, 1901.

On the Varieties of Gastralgia. By Dr. C. A. Ewald.—The author presents the histories of five patients with various types of gastralgia. Formerly, when there were no exact methods of diagnosis, all forms of pain in the stomach which recurred spasmodically were styled gastralgias or cardalgias. At present it is a recognized fact that the most diverse pathologic processes may be the cause of this pain. The author emphasizes the importance of a thorough general examination in all these cases. In three patients of the five presented there were Argyll-Robertson pupils and other symptoms calling attention to the possibility of nervous lesions, and hence, probably, gastric crises had to be dealt with. In one patient there was progressive general paralysis. In tabetics the gastric crises may be rendered worse by abuse of morphine. The other two patients did not show any nervous symptoms; in the first the pains were due to accumulation of food in the stomach as a result of the lack of gastric juice, and to spasmodic contractions of the œsophagus as a result of the hyperacidity of the contents. The last patient was suffering from chronic alcoholic gastritis, and the pains were due to irritation of the nerves of the stomach by food; they disappeared when the patient was fed by the rectum.

On the Surgical Treatment of Diseases of the Stomach. By Dr. A. P. Langovoy.

On Idiosyncrasy toward Quinine. By Dr. I. F. Gorbatcheff.—It is difficult to determine in any individual case what dose of quinine will produce the maximum therapeutic effect without toxic symptoms. Quinine must, therefore, be given cautiously when large doses are required, especially when there is reason to suspect disturbance of the respiratory or circulatory functions. The author reports six cases of quinine idiosyncrasy, in which small doses of this drug produced unexpected disturbances. When such cases are met with, it is well to combine the quinine with some stimulant, such as strychnine, coffee, etc.; to give it in divided doses; to change the form of administration; to add bromides, hydrobro-

mic acid, or opium. If all methods fail, the drug must be stopped temporarily, or even permanently. In treating the untoward symptoms occasioned by the idiosyncrasy, the gastric disturbances, as well as the nervous and psychic symptoms, may be allayed with opiates, while ergot of rye is recommended for the eruptions. Ice on the head and narcotics proved useful in one of the author's cases.

Roussky Archiev Pathologyi, Klinitcheskoy Meditsiny y Bakteriologyi, February, 1901 (Russian Archives of Pathology, Clinical Medicine, and Bacteriology).

Cellular Poisons (Cytotoxines). By Dr. I. I. Metchnikoff.—The author gives an account of the investigations on the cytotoxines which have been made within the past three years. Cytotoxines are poisons of cellular origin, which at the same time act as toxic agents upon the cells. Bordet, in 1898, found that, while the serum of a normal guinea-pig did not affect the red blood corpuscles of a rabbit, the serum of a guinea-pig that had been inoculated several times with rabbit's blood destroyed the red cells of this animal. The substance which produces this destruction is styled hæmatoxine or hæmolysine. It has been further shown that this hæmolysine consists of two classes of substances. The first of these, the alexine, or, as the present author prefers to call it, "cytase," is very unstable and is destroyed by a temperature of from 55° to 56° C. The other, called "substance sensibilisatrice," or "philocytase," resists this temperature, and is destroyed only on heating to from 65° to 68° C. The combined action of both these substances is necessary in order to destroy the red cells of the rabbit. Philocytase is present only in the serum of animals that have been inoculated with blood (active serum), but cytase is present in normal animals in the same quantity as in inoculated animals. Hence the serum of a normal animal becomes hæmolytic when a certain dose of the serum of an inoculated animal is added to its blood. This is styled "rendering serum more active." Philocytase is called "substance sensibilisatrice" because Bordet supposed that this substance was not a destructive agent, but rendered the cells more sensitive to the cytase. The study of cytotoxines will be of great importance in the medicine of the future. In some diseases it will be necessary to administer anticytotoxines, in others the cytotoxines themselves. The author predicted in a former article that new growths would be treated by anticytotoxines which destroyed certain cells.

So-called Lipoma Arborescens. By Dr. N. N. Michailoff.—The so-called lipoma arborescens of various authors is not a lipomatous tumor, as has been stated. The ramified growth is simply the product of a chronic inflammation, a hyperplasia of the normal tissue of the synovial membrane, with an abundant fatty infiltration in the larger tumors. The most frequent cause of this inflammation is the slow action of the toxine of tuberculosis. The author describes a rare case (the seventh in literature) of such an arborescent lipoma in the tendons of the extensor carpi radialis longior in a man aged thirty-two years.

On Glycosolvol. By Dr. S. Levachéff.

A Method of Quantitative Determination of Urea in the Urine. By Dr. A. P. Braunstein.

Miscellaneous.

Ringworm Acquired from a Cat and Resembling Syphilides.—Mr. Pernet (*British Journal of Dermatology,* January; *Medical Age,* April 10th) presented to a recent meeting of the Dermatological Society of London the case of a woman, aged twenty-three years, who attended University College Hospital for circinate lesions of the face and body. Singly, and at first sight, some of the lesions were suggestive of a circinate syphilide. The patient had attended the department for syphilis seven years previously. She now had several disks from one half to one inch in diameter on the chest, nose, chin, and cheeks, and three on the neck. The eruption began on the end of the nose as a scratch. The most inflamed disk was on the middle of the chest, three quarters of an inch in diameter, with a well-defined border one eighth of an inch in width, flat and crusted. A smaller patch close by was commencing to clear in the centre. On inquiry as to animal infection, it was elicited that a kitten the patient handled had something the matter with its fur. The kitten was brought and examined, and denuded patches with stumps were found on its tail. A stump removed showed a white powdery sheath to the naked eye. Microscopically, this stump exhibited a sheath of small spores, indistinguishable from *Microsporon Audouini* as to size and arrangement. No trace of beaded elements. On the same slide three narrower stumps were seen. They had frayed ends, proximal and distal, with a sheath of spores starting from near the proximal, or root, ends and surrounding the stumps for some distance, but leaving a fair length of the distal end free. On pressing down the cover-slip the spores were detached in masses—no chain formation. Inside the stumps there were plain slender mycelial elements as in *Microsporon Audouini,* with spores external to stumps. It was noticed that the stumps broke up into longitudinal strands. Scrapings from the kitten's tail revealed masses of spores, no doubt from sheaths around the stumps, and a few epithelial cells here and there, but no mycelium was observed. Scrapings from the woman's lesions showed abundant mycelium. It was short, as a rule, with segmentation here and there. The filaments varied in size—some were coarse, others slender, branching, or budding, occurring laterally and at right angles to the main filament. These characters Mr. Pernet considers as belonging to the *Microsporon Audouini.* There were no graceful, long, dichotomously branching filaments as occur in large-spored ringworm. Cultures from the woman were unfortunately contaminated. The diagnosis arrived at was microsporon of the cat.

Letters to the Editor.

NOTES ON THE NOMENCLATURE OF BACTERIOLOGY.

1691 CAMBRIDGE STREET, CAMBRIDGE, MASS.,
May 3, 1901.

To the Editor of the New York Medical Journal:

SIR: On this subject I should like to venture a few suggestions, which, though they may not merit approval, may stimulate an increasing interest in furthering the establishment of accuracy and uniformity in the terminology of bacteriology.

In this important field it is a well-known fact that in spite of many years of study by thousands of our greatest intellects, with its consequent rich and vast literature, no definite system of classification has been agreed upon and adopted by our leading authorities for this class of vegetable organisms which lie in that bor

derland illustrating the evolutionary continuity between animal and vegetable life.

Migula, one of our latest and highest authorities on bacteriology, in his *System der Bakterien,* gives a very able and critical *résumé* of the various systems of classification proposed, sees defects in each, and substitutes one of his own. Marshall Ward, *On Characters or Marks Employed for Classifying Schizomycetes,* expresses some very suggestive ideas on the same subject. Coppen Jones, in his translation of Fischer's *Structure and Functions of Bacteria,* says: "The different meanings attached to the words 'bacillus' and 'bacterium' deserve notice. In two of the most recent systems of classification the senses in which they are used have little in common. Lehmann and Neumann apply the word 'bacterium' to all rod-shaped forms in which spores are unknown. The genus 'bacillus' embraces those in which spores have been found, irrespective of the manner of ciliation. Migula, on the contrary, uses the term 'bacterium' for all non-motile rods, and 'bacillus' for the peritrichous species. Perhaps the best plan would be to drop altogether the word 'bacterium' as a generic term, seeing that it is now used as a collective name for the whole group of micro-organisms."

But, while the present state of our knowledge may not warrant the positive adoption of any one system of classification, nevertheless, it is to be borne in mind that the classification first based on morphological characteristics of bacteria, though crude and incomplete, has given rise to their distinctive names as bacillus, coccus, spirillum, etc. This leads me to the consideration of the point I wish especially to call to the attention of the medical profession, for not only are the various more or less well-known names of certain bacteria used according to individual preference by various writers, differing naturally in different languages, but the inconvenience of long names has quite commonly led to abbreviations (*B. tuberculosis* for *Bacillus tuberculosis*) or even simply the use of the qualifying adjectives (pyogenes aureus for *Staphylococcus pyogenes aureus*). But, worst of all, in a recent number of the *Medical Record* the author of an exceptionally good and scientifically accurate article refers to the "spores of anthrax" (using the name of the disease for the name of the micro-organism)—all this for want of a recognized, uniform, really scientific, and practical nomenclature. Then, too, in consulting the literature of the *Bacillus anthracis,* for instance, one finds references under such a diversified list as this: *Metallacter anthracis, Bacillus anthracis, Bacillus du charbon, Bacterium anthracicum* (or *anthracis*), *Milzbrandbacillus,* anthrax bacillus, bactéridie du charbon, bacillus of splenic fever, and bacillo del carbonchis. Though long usage and the consensus of opinion of most authorities have settled on the term *"Bacillus anthracis"* as the preferred specific designation, yet Migula, in accordance with his classification, has adopted as *the* name *"Bacterium anthracis."*

However, it seems to me that, so far as medical literature is concerned at any rate, the *Bacillus anthracis,* the *Bacillus diphtheriæ,* the *Bacillus tuberculosis,* and others will always be known as such. Now, in view of these inconsistencies and differences of opinion, can, nevertheless, all the above-mentioned be harmonized and put on a rational basis by such a modification of the present current nomenclature as will give distinctive scientific names which will find ready acceptance as common names, without introducing radical changes; such, moreover, as can be placed unchanged in any system of classification which may finally be adopted? This, I believe, can be done, and I submit for consideration a few suggestions, which I hope may find favor.

The principle is analogous to that used in chemical terminology, as exemplified by the terminations of such words as sulph*ate,* sulph*ite,* sulph*ide,* nitr*ous,* nitr*ic,* etc. The idea is simply as follows: To the first adjective of the approved name of each micro-organism add the termination -"us" for bacillus, -"cus" for coccus, -"lum" for spirillum (-"um" for bacterium, Migula), leaving the rest of the name, as regards qualifying adjectives, unchanged. Thus, in the names of bacilli, -"us" would simply be substituted for the terminal vowels and the endings -os, -is, -es, -us, -um, and for coccus (including micrococcus, staphylococcus, and streptococcus) -"cus" in place of terminal consonants. Similarly for the others. As examples: Anthracus (*Bacillus anthracis*), diphtherus (*Bacillus diphtheriæ*), lactus aerogenes (*Bacillus lactis aerogenes*), pyogenecus (*Streptococcus pyogenes*), pyogenecus aureus (*Staphylococcus pyogenes aureus*), and intracellularicus meningitidis (*Micrococcus intracellularis meningitidis*). For the sake of brevity it may be advisable in special cases to drop redundant adjectives and use simply the one most characteristic; so in the last instance the name would be "intracellularicus," or, more characteristic, "meningiticus" (in this case for euphony's sake, dis instead of s alone is dropped and cus added).

As with any innovation, the writer expects this at first to meet with some adverse criticism, but he would like, in conclusion, to point out these features and advantages, which may commend themselves to those interested in securing scientific accuracy with practical utility: The terms are distinctive, short, and logically practical, with no essential change in the terminology recognized and in common use. Being definite and concise, they obviate the inaccuracies and ambiguities so common in "scientific literature," as above detailed. But, above all, this method promotes *uniformity,* while giving a specific name which indicates the nature of the organism and at the same time is acceptable to whatever system of classification may be adopted finally.

THEODORE H. ROMEISER, M. D.

Book Notices.

A Compend of Human Physiology, especially Adapted for the Use of Medical Students. By ALBERT P. BRUBAKER, A. M., M. D., Adjunct Professor of Physiology and Hygiene in the Jefferson Medical College of Philadelphia, etc. Tenth Edition, Revised and Enlarged. With Illustrations and a Table of Physiologic Contents. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. viii-9 to 270. [Price, 80 cents.]

THAT this hand-book should have come to the tenth edition indicates its acceptability to students. The new issue shows many revisions in, and additions to, the text. Although it is intended as a quiz compend, there is much matter condensed, by the use of small type, into its reading pages. It is a concise, but very readable manual of physiology.

Anatomisch-klinische Vorträge aus dem Gebiete der Nervenpathologie. Von Dr. KARL SCHAFFER, a. ö. Professor der Nervenpathologie an der Universität zu Budapest; Ordinarius des hauptstadtischen, Elisa-

beth Siechenhauses und der Poliklinik. Ueber Tabes und Paralyse. Mit 5 Tafeln und 63 Abbildungen im Text. Jena: Verlag von Gustav Fischer, 1901.

THE anatomy of the portions of the nervous system invaded by tabes and paresis, the philosophical consideration of some of the symptoms of these diseases, and the relationship between them are the subjects of these lectures. Many of these things are gone into in great detail, but, while the author has in the main brought together all the facts, he does not substantiate fully some of his points. For example, against the theory of the knee-jerk definite objections may be made, and he gives too much weight to the Nageotte theory of the pathology of the posterior spinal roots. The text is amplified by excellent plates, and the volume, while it contains nothing particularly new, is a useful addition to the library of the neurologist.

Hypnotism and Suggestion in Therapeutics, Education, and Reform. By R. OSGOOD MASON, A. M., M. D., Fellow of the New York Academy of Medicine, etc. New York: Henry Holt & Company, 1901. Pp. vii-344.

Hypnotism. A Complete System of Method, Application, and Use, prepared for the Self-instruction of the Medical Profession. By L. W. DE LAURENCE, Instructor at the School of Hypnotism and Suggestive Therapeutics, Pittsburgh. Illustrated. Chicago: The Henneberry Company, 1901. Pp. 5 to 256. [Price, $1.50.]

THE subject of suggestive therapeutics seems to be attaining an increased interest in this country. Since last autumn no fewer than four monographs by American writers have appeared. The press almost daily chronicles the cure of some condition which had defied other remedies. We hear more and more about the universal application of hypnotic suggestion in education, in hysteria, in psychoses, and in other conditions. One might almost be led to suppose that we had been blessed with a new discovery. It seems to be forgotten that even while Mesmer was quarreling with the French Academy of Medicine in the eighteenth century hypnotism and hypnotic suggestion were being successfully used elsewhere, and also that before the discovery of ether or chloroform serious surgical and dental operations had been performed under suggested anæsthesia.

To-day we are called upon to sift the useful from the useless, and to determine in the light of wider experience the therapeutic applicability of suggestion. As a factor in the moulding of society and in the direction of human activity, the influence of one person on another, or suggestion, is practically limitless. On the other hand, the use of formal hypnosis intentionally induced in the patient by an operator for therapeutic purposes is restricted. Hypnotic suggestion may modify symptoms, but it cannot remake ancestry. It may give a better direction to the action of nerve force, but it cannot replace poor neurones with good ones. Its purpose is that of amelioration rather than of cure. It is very necessary for physicians who intend to look into the subject of suggestive therapeutics to realize its limitations. Its benefits and its usefulness will readily become apparent in practice. In well-chosen cases every practising physician will benefit by being able to employ it.

Of the two books before us, the first is the only one we would recommend to medical readers. Dr. Mason is a practitioner of experience, and has already identified himself with psychological medicine in a previous publication. While his present volume shows some of the partiality of the enthusiast, it is none the less a conscientious exposition of what its author believes. Mr. De Laurence's book, while it gives some of the simpler psychological principles of hypnotism, is apparently written for those who are looking into the subject for such good as they may get out of it in their own cases.

Laryngeal Phthisis, or Consumption of the Throat. By RICHARD LAKE, F. R. C. S., Surgeon Laryngologist, North London Hospital for Consumption, etc. With Thirty-six Illustrations, Twenty-one of which are Colored. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. 94.

THE literature of tuberculosis is so voluminous that it seems hardly necessary to bring out a separate monograph upon merely one local aspect of it, but, after looking over the manual of Dr. Lake, we congratulate him upon the clear manner in which he has set forth the essential features of laryngeal tuberculosis. The subject is considered under the headings of predisposing causes, the part played by the nose, symptoms, liability to infection of the different parts of the larynx, associated lesions and their influence, primary laryngeal tuberculosis, treatment, pathology, etc. At the close of the book are given several clinical histories of illustrative cases and a tabulated list of 329 cases which have come under the author's observation. A formulary is also added. The manual is well worthy of perusal by all practitioners who treat cases of tuberculosis of the air-tract.

Lectures on Nasal Obstruction. By A. MARMADUKE SHEILD, M. B. (Camb.), F. R. C. S. (Eng.), Surgeon to St. George's Hospital, London, etc. With One Colored Plate and Twenty-seven Illustrations in the Text. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. x-106. [Price, $1.50.]

THE titles of the three lectures are, respectively, Causes and Diagnosis of the Principal Varieties of Nasal Obstruction, Treatment of Nasal Obstruction, and Treatment of Nasal Polypi. The wide latitude allowed by these titles enables the lecturer to touch upon many practical matters of daily clinical work, all of which are illumined by his lucid manner of presenting salient features and leaving untouched mere matters of historical interest or academic discussion. While the manual is designed primarily for students and junior practitioners, it may be read with profit by the general practitioner who has to meet certain emergencies in nose and throat work. The discussion of the question of adenoids and their removal is especially sensible. The illustrations are good, the type is clear, and the general appearance of the manual is distinctly attractive.

BOOKS, ETC., RECEIVED.

A Practical Treatise on Diseases of the Skin for the Use of Students and Practitioners. By James Nevins Hyde, A. M., M. D., Professor of Skin, Genito-urinary, and Venereal Diseases, Rush Medical College, Chicago, etc., and Frank Hugh Montgomery, M. D., Associate Professor of Skin, Genito-urinary, and Venereal Diseases, Rush Medical College, etc. Sixth and Revised Edition. Illustrated with 107 Engravings and 27 Plates in Colors and Monochrome. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. xx-17 to 828.

Clinical Pathology of the Blood. A Treatise on the General Principles and Special Applications of Hæmatology. By James Ewing, A. M., M. D., Professor of Pathology in Cornell University Medical College, New York. Illustrated with 30 Engravings and 14 Colored Plates drawn by the Author. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. xiii-17 to 432.

A Treatise on Orthopædic Surgery. By Royal Whitman, M. D., Instructor in Orthopædic Surgery and Chief of the Orthopædic Department of the Vanderbilt Clinic in the College of Physicians and Surgeons of Columbia University, etc. Illustrated with 447 Engravings. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. xii-17 to 650.

A Manual of Diseases of the Nose and Throat. By Cornelius Godfrey Coakley, A. M., M. D., Clinical Professor of Laryngology in the University and Bellevue Hospital Medical College, etc. Second Edition, Revised and Enlarged. Illustrated with 103 Engravings and 4 Colored Plates. New York and Philadelphia: Lea Brothers & Company, 1901. Pp. 3 to 566.

A Reference Handbook of the Medical Sciences, embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. A New Edition, completely Revised and Rewritten. Edited by Albert H. Buck, M. D., New York. Volume II. Illustrated by Numerous Chromolithographs and 765 Half-tone and Wood Engravings. New York: William Wood & Company, 1901. Pp. v-1 to 838.

Public Water Supplies. Requirements, Resources, and the Construction of Works. By F. E. Turneaure, C. E., Professor of Bridge and Sanitary Engineering, University of Wisconsin; and H. L. Russell, Ph. D., Professor of Bacteriology, University of Wisconsin. With a Chapter on Pumping Machinery by D. W. Mead, C. E., M. Am. Soc. C. E., etc. First Edition. First Thousand. New York: John Wiley & Sons. London: Chapman & Hall, 1901. Pp. xiv-746.

Oral Surgery. A Text-book on General Medicine and Surgery as Applied to Dentistry. By Stewart LeRoy McCurdy, A. M., M. D., Professor of Anatomy and Surgery, Pittsburgh Dental College, etc. Pittsburgh: The Calumet Publishing Company, 1901. Pp. 3 to 368.

The Acute Contagious Diseases of Childhood. By Marcus P. Hatfield, A. M., M. D., Professor Emeritus of Diseases of Children, Northwestern University Medical School, etc. Chicago: G. P. Engelhard & Company, 1901. Pp. 5 to 135.

Traitement de la coxalgie par la mécanotherapie sans immobilisation au lit. Par le Docteur Paul Archambaud, Directeur de l'Ecole Francaise D'Orthopédie et Massage, etc. Paris: Librairie de la Revue médicale, 1901. Pp. 32.

Die Impfung und ihre Technik. Von Hofrath Dr. med. Conrad Blass, Vorstand des Königlichen Impfinstituts und stadtischer Impfarzt in Leipzig. Zweite durchgesehene Auflage. Leipzig: C. G. Naumann, 1901. Pp. 83.

Miscellany.

Iodoform as an Obscurer of the X Ray.—Professor A. Soret (*Revue médicale de Normandie,* April 10th) records a case in which thin patches of iodoform, which had been used in the dressing, adhering to a hand submitted to the x ray, gave rise on the skiagram to the appearance of spots suggesting the presence of foreign bodies in the tissues of the hand. Iodoform dressings, gauze, etc., in consequence of the great absorption by that drug of the x ray, should be avoided when skiagraphy is contemplated.

Sexual Irritability.—The *Medical Press and Circuler* for May 8th says that it has been estimated that fully twenty-five per cent. of men are at one time or another afflicted with what we may call sexual irritability. They may roughly be divided into three categories: One is the man of the lithæmic type, of fair complexion, large stature, and flabby muscles, in whom defective elimination causes irritation of the urinary tract; a second group comprises the neurasthenics, who are prone to great variations of emotional excitement, the sexual emotion exhibiting the same lack of control as the others; lastly, we have those whose genito-urinary tract is the seat of chronic irritation of gonorrhœal origin. Medicinal and hygienic treatment usually prove effectual, provided that the disturbance is referred to its special source, so that a correct appreciation of the probable ætiology is of extreme importance.

The Secretion of Milk.—Budin (*L'Obstétrique,* November, 1900; *American Journal of the Medical Sciences,* April, 1901) gives several practical points obtained by clinical observation of the secretion of milk. He calls attention to a not uncommon class of cases in which the secretion of milk becomes established, but is for some time not sufficient to meet the needs of the child fully. Experience has shown that if the child is nourished by suitably prepared cow's milk, and the mother is allowed to nurse the child in addition, both do well. The child ceases to lose in weight, but gains, and the mother in a few weeks has an increased secretion of milk, which usually enables her to dispense with artificial feeding. He is opposed to abandoning the nursing of the child because the secretion of milk may not be abundant. He would supplement the mother's supply, giving the mother proper nourishment, and would hope and expect that later she would be completely able to feed the child. He also calls attention to the fact that the supply of breast milk varies in accordance with the child's needs. This is demonstrated by comparing the weight of the child with the quantity of milk furnished and also by observing the secretion of milk in the case of twin pregnancies. Here the supply increases to meet the needs of the two children in proportion with their growth. He narrates some interesting cases in which the secretion of milk has been resumed after a considerable pause.

The Psychology of Swearing.—"Most profane expressions," says the *Medical Press and Circular* for May 8th, "are the fossil remains of religious terms or ejaculatory prayers, and the history of profanity is intimately bound up with the history of religion. What interests us from a psychological point of view is less the origin and precise significance of profane expressions in general use than the reason for their employment. It is held by some that profane objurgations are instinctive or imitative relics of the habit of our wild ancestors of simulating the cries of ferocious animals and of uttering sounds calculated, by their harshness or their volume, to inspire terror. By and by came the time when certain words became sacred by reason of their religious associations, and their employment in verbal warfare would, it was

hoped, cause fear by reason of their awful associations, or, later still, because their unconventional use being severely punished, the deed savored of reckless violence. A few centuries later men took to utilizing the anathemas of the Church for their private purposes, and sought to inspire fear by evoking images of torture and endless suffering. The angry primitive man tried to shock his enemy by calling on thunder and gods; and the angry modern man consigns him, in tones of awful wrath, to eternal punishment. From the shock of terror there came the shock of temerity in taking holy names in vain, so that the greater the reverence of names of saints or places or deity, the greater is the shock to the man sworn at, and, presumably, the greater the relief to the man swearing."

The University of Michigan.—The first summer session of the medical department of the University of Michigan will begin on Monday, June 24th, and continue till August 9th. Twenty-one courses in twelve subjects are offered. These courses are classified as special, designed for graduates and advanced students, for which no credit will be given, and credit courses which duplicate certain portions of the curriculum and on the satisfactory completion of which credit will be given. No allowance for time will, however, be given for work done in the summer. A student cannot, therefore, shorten his residence in college by attending one or more summer sessions.

In *medicine* three courses are offered. Course 1, on clinical medicine, will be given by Dr. James R. Arneill. It is arranged especially for graduates, but is open to students who have passed their junior examinations. Course 2, a demonstration course with practical exercises in medical diagnosis, is also given by Dr. James R. Arneill. This course is the same as that given to junior students in the regular session. Course 3, on modern gastric methods, is to be under the direction of Dr. David M. Cowie, and is designed especially for graduates and advanced students.

In *surgery* two courses are offered, one by Dr. Cyrenus G. Darling and the other by Dr. Darling and Dr. Thomas S. Burr. Course 1, on clinical surgery, is designed for graduates and advanced students; no credit toward graduation will be given. Course 2 is a demonstration course in surgical technique and bandaging. It is the same as the demonstration course in surgery given to the junior students in the regular session.

In *ophthalmology,* course 1 will be on clinical ophthalmology and will be given by Dr. Flemming Carrow and Dr. Guy L. Noyes. The course is arranged for practitioners and advanced students. Course 2 is a demonstration course in ophthalmology, given by Dr. Guy L. Noyes.

In *diseases of the nervous system* three courses have been arranged. Course 1, on clinical neurology, will be given by Dr. William J. Herdman, Dr. Jeanne C. Solis, and Dr. Theophil Klingmann. It is a course designed primarily for practitioners. Course 2, by Dr. Klingmann, will deal with the pathology of the central nervous system. It is a course for graduates and advanced students. Course 3, by Dr. Jeanne C. Solis, is a demonstration course in nervous diseases. It will cover the same ground as that given to the students of the junior year in the regular session.

In *clinical dermatology and syphilology,* the course by Dr. Breakey, is arranged for practitioners or advanced students who desire to review, or especially prepare themselves in cutaneous medicine or syphilology.

In *pathology,* course 1 will be a laboratory course, by Dr. Alfred S. Warthin, the same as that given to junior students. It covers the ground of general pathology as given in Ziegler's text-book. Course 2 will be a special course in pathological technique, by Dr. Alfred S. Warthin.

In *electrotherapeutics* a course in laboratory work will be given by Benjamin F. Bailey. It will be so arranged as to give the students a practical acquaintance with the physics of electricity, its relation to physiological action and its applications in therapeutics.

The *anatomy of the nervous system* will form a course to be given by Dr. Robert C. Bourland. It will consist of lectures and laboratory work.

In *physiology* a laboratory course has been arranged to be given by August E. Guenther. It is intended to meet the demands of students of medicine, dentistry, biology, and those specializing in physiology or psychology, while for teachers of physiology in secondary schools it forms a valuable training.

In *physiological chemistry* two courses are offered. Course 1 is laboratory work under the direction of Charles L. Bliss. Course 2 will be advanced work. This will also be given by Charles L. Bliss and will consist of analysis of food stuffs and drinking water, and the examination of tissues for some of the more common poisons.

A *laboratory course in bacteriology* will be given by Dr. Frederick G. Novy and William G. Carhart. This course will be the same as that required of medical students.

In *histology,* Dr. Lydia M. De Witt has arranged for two courses. Course 1 will be the same as that given in the regular session of the medical department, and will consist of recitations and laboratory exercises. Course 2 will be on *microscopic technique.*

Courses in *chemistry, physics, biology, German and French* are given in the summer session of the literary department, the dates for which for the current year are the same as those for the summer session in the medical department.

Special announcements, giving full particulars regarding the courses of the several summer sessions of the University and the fees for each, can be had on application to the secretary of the university.

A Case of Successful Moral Treatment of a Form of Hysteria.—At a meeting of the New York Neurological Society, held on May 7th, Dr. Mary Putnam Jacobi reported the case of a woman of twenty-four belonging to a neurotic family. Her symptoms had begun four years before her coming under observation, with endometritis and uterine retroflexion. She had been subjected to a good deal of local treatment, including curetting and an Alexander's operation. The latter procedure had relieved the dysmenorrhœa, but had been followed by a fixed pain in the abdomen, not increased by pressure. She professed to be unable to walk or stand, because of severe pain in the back and abdomen which it induced. Examination showed no motor inability, and when started to walk she could walk very readily and energetically. The uterine disease had entirely disappeared. She was moderately anæmic and quite constipated. The speaker said that at some portion of the cerebrospinal tract an area of nerve tissue must have been so nearly on the border of exhaustion that an attempt at function carried it beyond this line. It was conceivable that with the exhaustion of the cerebral centre the very thought of the movement would be followed by pain. According to

Sanier, such hysterical pains pointed to a partial anæsthesia in the brain. Apart from the intermittent pains excited by the sense of walking, there seemed to be a permanent and distressful sense in the back, that of requiring support. In a previous experience with a bed-ridden patient, she had succeeded in making her walk within a week by the application of a Taylor spinal brace. This simple device had given great relief. The necessary nerve stimulus had been secured by the application of static electricity. This remedy seemed to be almost a specific for hysterical pains. The subject of the present report had been persuaded to leave her home and take a room near Dr. Jacobi's office. At first it was not difficult to get her to walk a portion of a block, but when finally asked to walk a whole block she obstinately refused. All sorts of changes in the treatment and methods of management were necessary in order to conquer the patient's wilfulness, yet this was essential to further progress. Her mode of life for each day was mapped out most minutely. By the most persistent and painstaking efforts exerted for a period of four months the patient was finally conquered. During the last eighteen months she had been living a fairly normal life. Dr. Jacobi said that in hysterics the habitual dependence upon fellow minds was immensely intensified. To rid them of a false idea, it must be starved out and atrophied by an entire lack of support from the minds of those around the patient. The essential element of the treatment in this case had been the bringing of the personality of the patient under the control of another mind.

The New Medical Laboratory of the University of Pennsylvania.—The new medical laboratory which is to be erected by the University of Pennsylvania, at Philadelphia, at a cost of over $500,000, will be without a rival in completeness and equipment. It is to provide for the teaching of students and carrying on research in the subjects of physiology, pathology, and pharmacodynamics, in which departments of medicine the greatest advances have been made in the past and may be predicted for the future. The trustees are also contemplating the erection, in the future, of a new medical hall, anatomical building and auxiliary buildings, which will adjoin the new laboratory and form one of the most extensive systems of buildings devoted exclusively to the teaching of medicine either in Europe or America.

The new building will be quadrangular in shape and will be located on the south side of Hamilton Walk, between Thirty-sixth and Thirty-seventh Streets. It will be two stories in height above a high basement, and measure 340 feet front by nearly 200 feet in depth. The long front will face north, securing a maximum amount of the best light for laboratory purposes. All along the front are to be arranged small rooms for research, rooms for professors and their assistants, a library, etc., all opening into a private corridor, so that men employed in these rooms may pursue their work without interruption. Perfect lighting of all the laboratories will be secured, the courts being large enough, with the low front building, to furnish good north light to the laboratories.

The first floor of the new laboratories will be devoted to physiology and pharmacodynamics. To the former will be assigned one large laboratory for practical instruction, one for general research work, twenty rooms devoted to sub-section teaching, research work, rooms for professors, etc. The section devoted to pharmacodynamics will consist of one large laboratory for practical pharmacodynamics; a laboratory, 44 feet by 142 feet, for teaching practical pharmacy; another for general pharmacodynamics, 44 feet by 65 feet; besides a museum and ten rooms for original research work, etc. The rooms in the basement of the building will be used for demonstration work. The second floor will be devoted exclusively to pathology. The entire north front of the building is to be devoted to laboratories for advanced students in pathology and pathological bacteriology, and to the special research and assistants' rooms. Each of the advanced laboratories will measure 31 feet by 44 feet. The east wing will accommodate the laboratory of experimental pathology, while the west wing will be occupied by the museum of pathological specimens. This latter, which is to measure 44 feet by 65 feet, will adjoin the demonstration hall of morbid anatomy, which will communicate with the general pathological-histological laboratory. The last laboratory, the front of which is to consist almost entirely of glass, will be located in a section of the building looking north into a spacious court. This room, 37 feet by 100 feet, will seat one hundred students, and will be devoted entirely to microscopical work. Another section of the building, of equal size with the first, and also looking north into the court, will be subdivided into three smaller laboratories for the instruction in comparative, neurological, and surgical pathology. The same method of lighting, with enormous glass windows, is to be carried out in this group of laboratories. Finally, the west wing of the building will also provide for photographic and microphotographic outfits. The laboratory is so designed that ample space will be available for expansion.

There will also be four lecture rooms in the building, which will each seat 185 students. These lecture rooms will communicate with two preparation rooms each. At the rear of the building there will be two large lecture rooms, each seating 400 students.

The most modern apparatus will be employed in lighting, heating, and ventilating the building.

A Louisville Physician Sues University which Dismissed him.—Dr. Dudley S. Reynolds, one of the founders of the Louisville Hospital College of Medicine and a member of its faculty from its inception, has been dismissed from the institution because of his antagonism to cigarette smoking. He is now suing Central University, of which the medical school is a part, for $15,000 damages. Dr. Reynolds, in his lectures to his classes, denounced cigarette smoking and smokers in unqualified terms. The students took offense and refused to attend his lectures unless an apology was made. This he declined to do. At a meeting of the junior and senior classes of the Hospital College of Medicine, held subsequently to take action on the charge made by Dr. Reynolds that the faculty of the school had acted with the students in their boycott of him, the president of the senior class, in discussing the matter, said: "The faculty had nothing whatever to do with the boycott of Dr. Reynolds. He made objectionable and obnoxious statements to the students and they made up their minds to ignore him entirely. We petitioned the faculty for a successor to Dr. Reynolds, and if they had not removed him we would have left the school."

Neutral Red as a Means of Detecting the Presence of the Bacillus Coli Communis in Water-supplies.—Dr. William Hunter showed (*Lancet,* March 2d) that the use of neutral red, as suggested by Rothberger, afforded a reliable method of distinguishing the *Bacillus coli communis* from the *Bacillus typhosus*, and, further, that it was possible to diagnosticate by means of this method

with certainty the presence of the *Bacillus coli communis* in the majority of fluids within from twelve to twenty-four hours. He now states (*Lancet*, April 13th) that Dr. Makgill has made some experiments with the object of finding whether this reaction affords a means of detecting the *Bacillus coli communis* in water-supplies and of estimating thereby the number of bacilli present. The following is a summary of the results obtained:

Media containing neutral red form an extremely delicate test for the presence of the *Bacillus coli communis*. This is most marked in the case of peptone bouillon, in which the presence of one or two bacilli will produce a reaction within twenty-four hours if other micro-organisms are excluded. In water containing the ordinary varieties of aquatic micro-organisms the reaction is delayed unless comparatively large numbers of the *Bacillus coli communis* are present. Thus, if a cubic centimetre of unsterilized tap-water, containing from ten to twenty colon bacilli to the cubic centimetre, were mixed with the neutral red bouillon, a reaction would be present in twenty-four hours, but, if the bacilli numbered only from three to four to the cubic centimetre, their presence might not be shown until the second day had been completed. By noting such differences in time as varying amounts of the water to be examined require, a fairly accurate idea of the proportions of the colon bacillus present can be gained. By making shake cultures with one or two cubic centimetres of water in neutral red glucose agar, and incubating at 37° C. for two or three days, the colon bacillus can be detected and can be readily isolated when present in extremely small numbers. The reaction in broth has so far proved to be specific. In glucose agar, however—*i. e.*, under anaerobic conditions—the *Bacillus tetani* and the *Bacillus maligni œdematis* produce a reaction similar to that of the *Bacillus coli communis*. Notwithstanding this fact, the value of the reaction in regard to the presence of the *Bacillus coli communis* in water-supplies is scarcely affected. Dr. Makgill intends to publish soon the results of his experiments more in detail.

To Avoid Prickly Heat.—Major R. R. H. Moore, R. A. M. C. (*Journal of Tropical Medicine*, May 1st), says that, having begun to use cocoanut oil gently rubbed into the skin to allay the irritation of prickly heat, and finding it both pleasant and inoffensive, he was encouraged by a paper by Mr. Frederick Pearse (see abstract in *Medical Journal*, July 29, 1899, p. 173) to use the oil more extensively and to abandon the use of soap in the bath. Since then he has been able to keep free from prickly heat, though living in the steamy climate of Lower Bengal. He has also obtained a number of converts to this treatment, many of whom speak of it most enthusiastically.

There is, however, a strong prejudice against renouncing such a national institution as soap, and a still stronger one against adopting what many are pleased to term the filthy native habit of anointing one's skin with oil. Like other prejudices, these are without reasonable foundation.

It is quite possible to clean oneself in the bath without the assistance of soap, for "soap is only required when bathing is neglected." At first when soap is given up the pleasure and satisfaction of the bath is somewhat diminished, the hand no longer glides smoothly over the body in a creamy lather, it sticks unpleasantly, the contact is distasteful and the epidermis peels off visibly. This discomfort is only temporary; after a time the skin becomes firm and glossy, and the hand glides over it as before, with the difference that the smoothness is now the smoothness of a firm, healthy skin, not the meretricious smoothness of an injurious compound the antecedents of which are doubtful.

Major Moore has not tried the mixture of lanoline and almond oil recommended by Mr. Pearse, for he finds cocoanut oil a clean, non-greasy oil specially adapted for the skin. Fresh cocoanut oil has only a faint smell; when rubbed into the skin this disappears almost, if not quite, entirely, though, if kept too long, the oil turns rancid, and stinks abominably. The fear of spoiling the clothes is also groundless; the skin absorbs the oil. It is not like oiling a piece of metal; after two or three minutes' gentle rubbing the oil disappears.

The best time to put it on is before going out for the evening's exercises; strip, pour a little of the oil into the palm of the hand, and rub it over the body from the neck to the ankles, and get your servant to rub the back. It is not advisable to use sponge or rags, which are not easily cleansed and so become offensive. When done, rinse your hands in plain water and dry. If necessary, they can then be washed with soap.

When you come in to dress for dinner, take a bath, using no soap. This is the time when you will appreciate the benefits of the oil. You find you can dry yourself perfectly; the skin is not, as is usually the case in steamy climates, sodden and clammy, it is, on the contrary, firm and glossy; you can pass your hand over it with a sense of pleasure, you have also a pleasant sense of coolness, and you can proceed to dress without breaking out into fresh perspiration. There is no reason why the oil should not be used twice a day if necessary; about a tablespoonful each time.

Major Moore does not think that the application of the oil interferes with the activity of the sweat glands. He is not sensible of any diminution of perspiration, but takes exercise as freely as ever. He agrees with Mr. Pearse that the excessive activity of the sweat glands is not the direct cause of prickly heat. He believes it to be an irritation of the skin produced by the constant bath of perspiration in which the body is kept in hot, muggy climates. This brings it into line with intertrigo and the so-called "flannel rash," eruptions caused by irritating secretions from the body.

Its distribution he holds to be largely accidental, influenced to a great extent by clothes, their nature, amount, and manner of being worn; and also by the obesity of the individual. The places it selects are those where perspiration tends most to collect.

The skin is naturally intolerant of prolonged exposure to moisture, Nature's protective greasy coat offers but a feeble resistance, and in steamy climates it rapidly becomes sodden. The evil is increased by removing the greasy coat by the use of soap, and keeping up a constant vapor bath by means of flannels. The result might readily be anticipated.

In climates where the diurnal ranges of temperature are great, flannels no doubt are useful, but in Lower Bengal in the rains, when the temperature varies but little and the atmosphere is saturated with moisture so that evaporation is reduced to a minimum, they do more harm than good. The cholera belt is a sure producer of prickly heat under these conditions.

Major Moore then considers that the rational treatment of prickly heat lies (1) in preserving Nature's protective coat by abandoning the use of soap, and (2), in reinforcing it when necessary by some lubricant.

THE ADDRESS OF THE PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION.*

By CHARLES A. L. REED, A.M., M.D.

CINCINNATI.

In approaching the discharge of my duties as presiding officer of the fifty-second session of the American Medical Association, I beg to express my appreciation of the generous suffrages by which I have been called to a position of such conspicuous honor. This appreciation becomes all the more pronounced when I reflect upon the magnitude and achievements of this great national body and upon the lustre of the distinguished men who have presided over its deliberations. This thought brings me to the first duty of the occasion, and that is, officially to bring to your attention the fact that since our last reunion three of my most illustrious predecessors have been called from their worldly activities to the realm of rewards. Alfred Stillé, Lewis A. Sayre, and Hunter McGuire, each a former president of the association, died within a single week. Their lives were known of men, their records are ornaments of our annals, and their achievements are their eulogies. They labored zealously and with beneficent results, not alone in the scientific field, but in behalf of an organized national profession; and to guard zealously the splendid legacy which they, among others, have left us, must be one object of our labors upon this auspicious occasion. The hope is indulged that steps may be taken to procure suitable portraits of these and of other deceased presidents of the association, to be placed in some safe gallery until such time as the association may be able to transfer them to its own Temple of Fame. I recommend that suitable formal action be taken on this occasion relative to the life, distinguished services, and the death of these lamented confrères.

Dr. Charles A. L. Reed, President of the Association.

FOREIGN RELATIONS OF THE AMERICAN MEDICAL ASSOCIATION.

The American Medical Association accredited delegates during the last year to several foreign medical conventions, notably the International Medical Congress at Paris, the Dominion Medical Association of Canada, the Mexican National Association and the Pan-American Medical Congress at Havana. To each of these organizations the American Medical Association sustains relations of peculiar intimacy. As one of the great scientific nations of the earth, the United States is naturally an integral part of the International Medical Congress. This association, by a resolution presented by your present executive officer, took the initiative in 1891, in organizing the Pan-American Medical Congress. The first reunion of that congress was held in Washington in 1893, under the presidency of the late lamented Dr. William Pepper. The second was held in the City of Mexico in 1896 under the presidency of Dr. Carmona' y Valle, while the third has been held during the last few months in the city of Havana under the distinguished presidency of Dr. Juan Santos Fernandez. This movement has for its object the establishment of closer relations between the medical profession of the different countries of the Western Hemisphere. It has already borne excellent fruit in the increased patronage of our medical schools from the far South, in the improved status of American medical practitioners in Latin America, in a better understanding of quarantine questions in the different countries, and in the development of a concert in the investigation of the medicinal flora of the Western Hemisphere. Our relations with the medical profession of Canada must be of increasing intimacy, and I indulge the hope that while maintaining the national limitations of our association for delegate and legislative purposes, its membership, with the privilege of participating in all scientific matters, may be freely opened to our brethren who live beyond our immediate borders.

FISCAL AFFAIRS AND THE JOURNAL.

It has passed into unwritten law, born of the gradually developing features of our organization, that your president shall restrict his annual address to a discussion of the affairs of the association and to the great object to which, by the terms of its constitution, it stands consecrated—"the common interests of the medical profession in every part of the United States."

*Delivered at the Fifty-second Annual Session of the American Medical Association, at St. Paul, Minn., June 4, 1901.

In compliance with this rule, and realizing that I am leaving scientific questions to be presented by orators appointed for the purpose, I have pleasure in calling your attention to the satisfactory condition of the affairs of the association, as indicated by the consolidated report of the treasurer and of the board of trustees. From it you will observe that under the judicious management of your board of trustees you had a cash balance at the end of the last fiscal year of $31,004.67, being an excess of $3,696.66 over the preceding year. Your plant has been increased in value to the amount of nearly $10,000, and the net profits of the *Journal* amounted to nearly $14,000. You will be gratified to realize that, in addition, you have safely invested as part of a fund with which to buy a home for the *Journal* and for the association the respectable sum of $25,000. If, however, you have occasion to feel satisfied with the normal condition of your finances, you must contemplate with pride the rapid increase of your *Journal* in quality, size, circulation, and influence. The average weekly circulation grew, during the last fiscal year, from 13,672 to 17,446, and I have added pleasure in informing you that, since the period covered by the report, the weekly circulation has grown to 22,000 copies. For the accomplishment of these splendid results, I feel that you will join me in hearty acknowledgment, not only of the sagacious management by the board of trustees, but the tireless industry and the discreet direction of our accomplished editor, Dr. George H. Simmons.

I feel that it is important, however, to call your attention to the fact that it would have been impossible for your board of trustees to have accomplished these results if, through its action, the association had not become incorporated. Leases were to be executed, purchases were to be made, contracts were to be entered into, money was to be loaned, and bonds were to be exacted, to do all of which it was necessary that the association should become a legally organized corporation. This was effected, *ad interim,* by the action of your board of trustees, which procured articles of incorporation under the laws of Illinois, bearing date of April 14, 1897. I am not aware that this fact, attested by the document which I have laid before the executive committee, has ever been confirmed by the vote of the association. I recommend, therefore, that such action be taken at the present session.

If, however, the condition of the association, and particularly of the *Journal,* is, on the whole, occasion for much satisfaction, certain facts revealed by the report are food for thought. Thus, the *Journal* has an aggregate circulation two and one-half times greater than the aggregate membership of the association. It would seem, therefore, that while the profession at large prizes the *Journal,* it places relatively less than half as much value upon membership in the association. This fact becomes strikingly significant when it is remembered that membership can be acquired by those who are eligible at no additional expense and with but trifling inconvenience. Does the *Journal* fulfill all the wants of the profession arising in connection with the association? Are there no additional advantages to be derived from membership? Is there a lack of *esprit du corps*—a lack of the sense of unity in the profession? Is the existing basis of our national organization distasteful to the majority of the practitioners? Do our subscribers embrace a considerable number of practitioners who, under existing rules, cannot become members, and whose influence, therefore, cannot be secured in behalf of the association? These are questions that I am at liberty to ask, and that you are at liberty to answer.

Another thought suggested by the report relates to the disposition of the accumulating surplus. Shall the present policy for creating a fund for the purchase of property be carried out? Shall a larger proportion of the money be expended in still further exploiting the *Journal?* Shall the members receive a direct advantage from the earnings of the property which they have created, by reducing the annual dues, or shall a certain proportion of our surplus be expended in conducting original scientific investigations on subjects of universal interest to the profession? I cannot resist the temptation in this connection to venture replies to these questions far enough to say that, in my opinion, a reserve should be held in hand large enough to meet any possible contingencies that might occur by fire or other disaster in connection with the *Journal;* that the present generous policy in promoting the welfare of the *Journal* should be continued; that the dues of the association should not be decreased; and that the question of establishing and defraying the expenses of certain commissions for special scientific investigators should be taken under serious consideration. The question of tuberculosis is not yet a closed chapter. The causation of cancer is yet a sealed mystery. The problems of tenement-house reform are not yet solved. The prevalence of various endemic diseases has not yet been made practicable. The systematic investigation of the American medicinal flora, begun under the auspices of this association more than forty years ago, remains an uncompleted task. These are a few among the many objects of a specific character which demand and should receive the fostering care of the association.

I feel, however, that, at the present moment, and under the existing features of our organization, it would be almost impossible to determine, judiciously, either of these very important questions, and I now bring them before the association only for the purpose of directing attention to them, with the hope that they may be taken up subsequently and under more auspicious circumstances.

SCIENTIFIC WORK OF THE ASSOCIATION.

The association began its career with general meetings devoted chiefly to questions of medical education and

professional conduct, and to lengthy reports from various standing committees. In 1860 it divided itself into a few sections, each with a certain autonomy, and each devoted to a particular part of our great scientific work. This change was followed by the establishment of the judicial council, by which means controversial questions, many of them of a personal character, were eliminated from the general meetings. The subsequent creation of the executive committee still further relieved the general meetings of annoying details. Thus relieved, both the general meetings and the sections have grown in scientific importance, emphasizing the persistence of our devotion to what must ever be recognized as the essential, fundamental object of our organization—the cultivation of the medical sciences. It must be acknowledged, however, that great as has been the progress in this particular, too much of the time of our general sessions is yet devoted to the consideration of matters which might, with propriety, be relegated for final action to a smaller body. It would redound largely to the interest of our annual session if the general membership could be entertained and instructed at our general meetings by exercises of a more purely scientific character, of such broad nature that they should not be restricted to any of the sections. A reform in this particular will be a long step in the direction of progress. The sections, in consequence of the faithful labors of their officers, offer strikingly attractive programmes for the present session. In several of the lists will be found the names of invited guests who, through fortuitous circumstances, are not members of the association, but who are, nevertheless, active workers in the scientific field, and whose participation in our labors will enrich the value of our proceedings and enhance the felicities of the occasion. I bespeak for them your cordial welcome. While the officers of sections and your president have exercised the prerogative of inviting guests, who come as guests, and not as members of any class as specified by the constitution, such invitations have been extended solely with the object of advancing the interests of the association. I look upon this privilege, which has been exercised by all of my predecessors and by previous officers of sections, as one of extreme importance, and one which should be continued under any plan of reorganization which may be adopted. It is my conviction, however, that the privilege should be hedged about by certain limitations, one of the most important of which should be that an invitation should not be extended a second time to any person residing within the United States whose professional qualifications may entitle him to membership. With reference to the invitation of persons identified with the allied sciences, the matter should be left absolutely to the discretion of the president of the association and with the officers of sections.

CONGRESSIONAL AND STATE LEGISLATIVE AFFAIRS.

The American Medical Association, during the first fifty years of its existence, exerted relatively little influence upon legislation, either state or national. Since the standing committee on national legislation and the national legislative council of delegates from the State societies have been established, and have become cooperative, there is some evidence that the voice of the profession is heeded at Washington. The experience of the splendid committee of this association, acting in concert with the national legislative council during the last year, has, however, shown the serious necessity for more thorough organization in protecting the interests of the profession and the interests of society as represented through the profession. The inefficiency of our present organization for influence upon Congress was shown in the inability of your committee, notwithstanding its strong *personnel* and the influences at its command, to prevent the degradation of the army medical service. This was accomplished by the passage of a bill under the championship of Senator Hawley, by the terms of which the medical corps of the army is subjected to unfair and humiliating discrimination. This law grades the medical department for rank, promotion, and, in consequence, for pay, below every other department and special corps of the army, and, with the exception of second lieutenants, it is graded below the line. In accordance with its provisions, a medical officer, to obtain a colonelcy, must pass through three times as many files as an officer of either the quartermaster's, the subsistence, or the pay departments; more than twice as many as an officer of engineers or of ordnance, and nearly twice as many as an officer of the signal corps. The effect of this discrimination is not only to lower the rank and pay of medical officers, but must result in lessening the efficiency of the corps by repelling men of spirit and worth.

In every war known to history the deaths from preventable diseases have exceeded those due to battle. At no time has hygienic science been so resourceful as at present in preventing disease. A law which fails to give to armies, either in peace or in war, the fullest protection by the application of the latest scientific developments at the hands of specially trained medical men is unjust to the soldier, to society, and to the medical profession. In view of these facts, the army reorganization law of the last Congress was inexplicable and inexcusable. It, however, forces itself upon your consideration from another standpoint. Physicians are citizens of the Republic. As such they are intellectually, socially, politically and officially the equals of any other element of the body politic. There is no station to which they may not attain; there is no distinction of which they may not be the recipients. Their rights are of manhood origin and their prerogatives are inherent. They are, in very fact, peers of the realm, and the peers of any peers of any realm. When the status of any number of physicians in their representative relationship to society is lowered, the status of the medical profession in general is menaced in corresponding degree. When the Congress, by the enactment of a law, degrades, relatively, the status of an important body of

medical men, engaged in the public service, it strikes at the status of every physician in the country. It becomes, therefore, the duty of every member of the medical profession, jealous of his rights, his prerogatives, and the fair name he may leave his children, to resent as personal between himself and every member of the Congress who voted for this law, the action which cast a stigma upon our profession.

It has been the conviction of many enlightened members of the medical profession that the means employed by the general government for the protection and promotion of the public health are capable of improvement. These duties have devolved upon the Marine-Hospital Service, which was originally designed to give succor to unfortunate people, without other domicile, who were employed upon our rivers, lakes, and the high seas. With the growth of sanitary science this service, being the only established agency available by the Government for this purpose, has been largely diverted from its original object. As a result, under the present wise administration of its surgeon-general, its representatives are abroad investigating the sanitary condition of foreign cities, its agents are at our ports beating back threatened epidemics, while valuable investigations are being conducted in its laboratories. In the exercise of its quarantine functions, however, it comes in conflict with the police power that is guaranteed by the constitution to the different States. The friction thus engendered has been especially marked in the seaboard States. While this is true, the Marine-Hospital Service, in scope and design, does not fulfill in highest degree the objects of a central coordinating agency for the protection of the public health. It was thought to create a department of public health, with its executive officer in the cabinet, but this idea yielded to that of a bureau in charge of a large advisory council, composed of representatives from the various States. Resolutions have been adopted and memorials have been sent to the Congress, committees have been appointed, money has been appropriated by this association; bills have been introduced, and hearings have been had in committee, with the result that the conditions today are precisely the same that they were ten years ago, when the agitation was inaugurated in the session of this association held at Washington.

Secretary Wilson, of the Department of Agriculture, in his report for 1899, recommended that the Congress appropriate money to defray the expense of a systematic investigation of the medicinal flora of the United States, and of experiments upon the neutralization of medicinal plants indigenous to other countries. This recommendation was based upon the fact that the United States is the only great country which either has not conducted, or is not conducting, such experiments, and upon the fact that the proposed measure, touching the avenues of industry, manufacture, commerce, and the public health, was one of national concern. This measure, however, with its manifest importance, was denied even courteous consideration, while its friends were denied a hearing by the committees of the Congress.

The cause of failure on the part of this association to procure legislation by the Congress—and with the exception of preventing the passage of the anti-vivisection bill last year and securing the enactment of the quarantine bill this year, our recent efforts must be recognized as failures—I say the causes of our failure are properly subjects for careful consideration. I have examined the records of the association from the date of its organization, and have been profoundly impressed with the fact that memorials, resolutions, or even more definite propositions addressed to the Congress have, for the most part, represented the views, or rather the impressions, of the individual members proposing them. They have generally been presented in the general meeting, and have been endorsed without the deliberation essential for wise action; but a deliberation which is simply impossible in the limited time available in our general meetings. In certain instances memorials to the Congress have been presented at one session of the association, have been referred to committees and reported back for action, either at a later meeting of the same session or at the succeeding annual session of the association. But it becomes evident that this course lessens the evil but a trifle, for the reason that the committees to which such matters were referred have been constituted either under the leadership of the member proposing the measure or of members of a standing committee who had no interest in or understanding of the proposed measure. Such memorials, resolutions, or propositions, when acted upon affirmatively by the general meeting of the association, have, possibly, been mailed to some member of a congress or of a legislature, but have not been followed by effective work in the rank and file of the profession or among their patrons. When such bills have been presented to the Congress, and have received a certain amount of support from representatives of this association, they have, as a rule, attained only that degree of importance that has made them valuable to their ostensible champions, as something to trade in the game and barter of legislation for something which would please a larger number of constituents and command a larger number of votes. In view of the fact that, after all, the argument of votes is the only one which appeals effectively to the average congressman, it behooves this association, in its efforts to conserve the interests of the profession and of society, to put itself in position to influence the largest number of votes. Every physician, therefore, should, in a perfectly respectable sense, become an active working politician. This subject, however, is of such breadth and of such depth that it may be well for us to pause at this juncture long enough to consider, from the standpoint of fundamental facts, the relationship of physicians to each other, and of the medical profession in the aggregate as an integral factor in society.

THE PROFESSION, THE ASSOCIATION, AND THE COMMONWEALTH.

In approaching a study, however brief, of the relation of the medical profession to the State, or, as I prefer to call it, the commonwealth, I feel that I am inviting your attention to an eminently practical theme; one which may enable us to understand the influences by which we have arrived at our present estate, and the means by which we may advance to even greater achievements. As we approach this theme—this eminently practical theme—we discover that the status of the medical profession, like that of every other element of that complex whole which we call society, is a perfectly natural one. Whatever it may be, it has been attained in the process of evolution, and has been and is determined by laws as immutable as those which govern the commingling of atoms or the sidereal strides of the planets. It is not the result of conventions or of resolutions or of statutory enactments; but these are to be interpreted rather as *indiciæ*, for the time being, of the position of the profession in the body politic. They are, indeed, consequences rather than causes, and as such they are subjects for careful inquiry. It is by a study of them that we are enabled in part to determine those laws, those natural laws, our harmony with which is essential, not alone for the present usefulness and continued progress of the profession, but for the ability of the medical profession to conserve the welfare and promote the happiness of society at large.

But I have said that the position of the medical profession is a natural one. The truth of this declaration is apparent when we go back to the beginnings of society—when we examine the evidences presented by primitive peoples. We are familiar with the classic example so frequently utilized as a starting point in the discussion of sociologic phenomena—the example of the two aborigines, one of whom makes better arrows and the other better mats than his companion, when, presently, one confines himself to arrows, the other to mats, each trading his own for the other's products. Here is an example of the beginning of what the scientists call "specialization of function in the social organism." It is an interesting process, which, based upon varying necessities and diverse aptitudes, results in multiplication of handicraft until somebody is hurt. This is a new necessity, and it is met by a new aptitude, and the possessor of that aptitude—the medicine man, our honored progenitor—steps upon the scene. His companions, appreciating his services, reward him with their arrows and mats; and he, finding the life to his liking, restricts himself to his new-found vocation—and the medical profession is established! As the necessity for his services, whether of charm or incantation, becomes more apparent, the esteem of his fellows becomes more pronounced. As events progress he is accorded certain rights, given certain prerogatives, and hedged about by certain limitations, all calculated to increase his efficiency in promoting the common welfare—and thus is the practice of medicine regulated. He is spared from the battle that he may serve his companions, and he stays away from the chase that he may delve into the great mysteries—and thus is medical education inaugurated. He is the exponent, not only of his professional knowledge, but of at least the average intelligence of his people. He is, in short, an integral part of the primitive social fabric. As such he shares the manners, the customs, the aims, the ambitions of his companions; and he, with them, is controlled by the forces which determine the common state and the common destiny. His status is, therefore, determined by the very laws which control the growth and development of society itself. So true is this that, from the dawn of history until the present day, and in every stage of sociologic development, the civilization of a people may be infallibly determined by the intelligence, the efficiency, and the influence of its medical profession.

THE MEDICAL PROFESSION AND SOCIETY FIFTY YEARS AGO.

It would not be to our present purpose to follow the evolution of society as exemplified in any of the civilized peoples, or, as the scientists say, "distinct ethnic entities of the world," in which the present complexity has been attained by an orderly succession of events. And it would be equally unnecessary to show, what everybody knows, that the medical profession, the heritor, in common with others, of antecedent influences, has been propelled by the same forces and by equally orderly events to precisely the same standard of civilization. The lesson before us is that of the relation of the medical profession to a society, which, but a few decades ago, was the most diverse in origin and the most heterogeneous in constitution known to modern history; but a society which, at the dawn of the twentieth century, is one of the largest, richest, and most intelligent of the world, a society well amalgamated, and which by common consent of even adverse critics is moving in harmony with the most advanced influences of civilization. I fancy I should suddenly find myself unpopular with the audience if I were to intimate that you, who comprise it—that you, the representatives of the medical profession—have failed to contribute your full quota to the great progress which that society in general has achieved, or that you do not reflect in intelligence and morality the highest type of civilized man. I hasten to allay your apprehension, for I have no such intention. On the contrary, I ask you to indulge with me in a retrospect of American society during the last half dozen decades that we may the better understand the important part that you, and the profession that you represent, have played in the attainment of present results.

As I have already stated, the middle of the nineteenth century found diverse conditions of society in the United States. The older cities of the seaboard were the centres of an advanced civilization. The remoter counties of the same States, however, were then, in the absence of rail-

roads, the telegraph, and modern mail facilities, more remote from the centres of American influence than is St. Paul to-day from St. Petersburg. The great tide of emigration that had already poured and was yet pouring over the mountains and spreading in lonely habitations or widely separated communities over the vast valley of the Mississippi from the lakes to the Gulf, was busily engaged with the serious problem of existence. The forest was to be felled and the prairie was to be subjugated, habitations were to be built and crops were to be raised. In the midst of these exactions, institutions of higher learning were established, and to an extent patronized, and some strong men were produced. But it must be recognized as true that society in general had but little time and less money to devote either to schooling or to the amenities of life. The medical profession, under these circumstances, was precisely like the community of which it was a part. There were but few medical colleges, and they, for the most part, were but meagrely equipped. Many doctors became such while going from one town to another. Ignorant inventors of alleged systems of cure hawked their wares in the highways and the byways. Dogmatism that was destructive to intelligence was rampant, while schism was fostered by the baneful commercialism that too generally pervaded the heterogeneous mass of forty thousand people that comprised the medical profession. In eight of the twenty-six then existing States no laws affecting medical practice had ever been enacted; in eleven, laws previously enacted had been repealed; in three only were there any restrictive laws, and these proved inefficient; while the facts could not be ascertained relative to the remaining four States.

THE ERA OF ATTEMPTED VOLUNTARY REGULATION OF MEDICAL PRACTICE.

To remedy these evils, and actuated by the love of science, the promptings of self-interest, and by devotion to the interests of humanity, representatives of the various State medical societies met in convention over half a century ago and organized the American Medical Association, with the avowed object of having its members represent and take cognizance of "the common interests of the medical profession in every part of the United States." It sought to cultivate medical knowledge among its members, to elevate the standard of medical education, to promote the honor and influence and interests of the medical profession and to enlighten the public concerning the relation between the medical profession and society. Emulation and concert of action in the profession and friendly intercourse among those engaged in it were additional aims of the founders of this great body of representative American medical practitioners. A constitution, by-laws, and certain rules of conduct were adopted. The constitution provided for a delegate body, delegates being accredited from recognized medical societies, medical schools, and eleemosynary institutions. The rules of conduct prescribed in detail the deportment of a physician, the deportment of the patient, interdicted the licensure of sectarian physicians, and proscribed from consultation those whose practice was based upon an exclusive dogma. The influence of the new association was extended chiefly through the avenues of the various State societies, many of which adopted the rules of conduct that had been prescribed by the newly formed national body as the basis of affiliation. Several of the State societies, notably those of Massachusetts, Rhode Island and Mississippi, finding either that the prescribed rules of conduct were not suitable to their respective local conditions, or feeling that they were sufficiently in touch with the ordinary forces of civilization to require no such formulæ, never adopted the rules of conduct prescribed by the national body. The Medical Association of Alabama adopted the rules with rather a naive proviso that somebody be appointed to call attention to such of the special teachings of these rules "as may seem to require elucidation in view of special circumstances and conditions." Other State societies adopted more or less modifying resolutions, but the general spirit of ostracism and aloofness was maintained during the succeeding three decades. The result of this movement was immediately salutary; it developed an *esprit du corps* in the great body of the profession; it gave an authoritative definition to medical education, and it created a strong and influential national body within the profession. At the same time, however, it became apparent that the organization did not possess the necessary inherent strength to accomplish its avowed object to regulate the practice of medicine. As time passed schismatic medicine grew apace, its colleges multiplied, its practitioners appeared all over the country exemplifying that law that always makes the blood of the martyrs the seed of the Church. Quackery of the most flagrant character was found everywhere, and society was unprotected from its ravages, while the inability of a voluntary unchartered organization to enact and to execute plenary laws was reduced to a demonstration. The medical profession, as an organized body, discovered that its relation to the commonwealth was, as the result of its own proscriptive policy, scarcely more intimate or more influential than at the beginning of the thirty years' hopeless experiment.

THE ERA OF EFFECTIVE LEGISLATIVE CONTROL OF MEDICAL PRACTICE.

The era of effective legislative control of medical practice came as the natural reaction from the demonstrated failure to acomplish the same result through voluntary organization; but it came as the result of the sentiment which had been propagated largely through the influence of this association. The representatives of progressive medicine, turning from the national association, invoked the aid of their respective State societies in taking up the question with their respective legislatures.

The profession in each State, however, recognizing its own local conditions, proceeded in its own way to attend to its own business. The very earliest attempts to secure State legislation revealed the fact that the so-called irregular practitioners, under the stimulus of ostracism and the fostering care of public sympathy thereby induced, had become so numerous and so influential that in the majority of States nothing could be done without their cooperation. It was no longer a theory, but a condition, with which the real reformers were confronted—and they met it. California, in 1876, through its regular medical society, took the initiative. After conferences with the representatives of the sectarian societies, and after securing their cooperation, a law was procured creating a licensing board composed of representatives of both the regular and sectarian schools of practice. Illinois, confronted by precisely the same condition, took precisely the same course. Alabama, always progressive, but the happy possessor of other conditions, was able to place the regulation of medical practice for the time being under the control of its incomparable State Medical Association. Colorado created a mixed board. New York, confronted by conditions even more complicated than those in other States, took up the same task. The profession of that State, acting through its organized body, containing among its members many of the most honored and illustrious names in American medicine, found it doubly necessary to enter into treaty with the denominational physicians. It realized, however, that the rules of conduct to which it had always conformed contained, among other provisions, one which made it unlawful to ". . . examine or sign diplomas or certificates of proficiency for, or otherwise be especially concerned with the graduation of persons whom they have good reason to believe intend to support and practise any exclusive and irregular system of medicine."

As the thing expressly interdicted by this rule was the very thing which it was proposed to do, and which had been done in other States, and which it was very necessary to do in New York, the medical society of that State amended the rules of conduct so that it or its members might, at discretion, enter into professional relations with any or all persons whom the law of the State at that time recognized to be practitioners of medicine. When this action was brought to the attention of this national body it resulted, not as might have been expected, in the amendment or the abrogation of the rule which had grown obsolete in the march of events, but in its tacit reaffirmation and in the opprobrious excommunication, for the time being, of the entire profession of the great Empire State. This action, viewed impartially after the lapse of nearly twenty years, becomes the more extraordinary when it is observed that similar action was never taken with regard to Massachusetts or Rhode Island or Mississippi, the societies of neither of which had ever adopted the prescribed rules of conduct; nor with regard to California or Illinois or Colorado, each of which had, by overt act, if not by open declaration, so far as this rule is concerned, taken an equally non-conformist position. It is not surprising that, with such an example before the State societies, the experiment in consistency has not been repeated. But the movement of effective regulative legislation, once inaugurated, happily spread with great rapidity. Mixed boards of licensure are now to be found in the majority of the States of the Union, and in the majority of such boards are to be found members of the American Medical Association engaged in issuing licenses to practitioners of exclusive dogmas, and sitting in consultation with sectarian physicians, not over a dose of medicine, but over the vastly more vital question of the qualifications of those who are to care for the sick of our Republic.

THE MEDICAL PROFESSION AND SOCIETY AT THE BEGINNING OF THE TWENTIETH CENTURY.

The results of the twenty-five years of statutory regulation of medical practice are in striking contrast with the results of the quarter of a century of attempted regulation by methods of proscription. At the conclusion of that humiliating experiment, as at the beginning of it, there was not a single effective medical practice law on the statute books of a single State of the Union. To-day there are forty-eight State or Territorial licensing boards, the most of them being composed of representatives of both the regular and the sectarian schools of practice. The laws of the different States are of varying efficiency, the one procured by the Medical Society of the State of New York, at the price of yet-maintained excommunication from this body, standing to-day as the model of excellence for the entire country. Under the influence of these laws, instigated by members of the American Medical Association, and which, after all, are but expressions of the sentiments of the medical profession confirmed by society at large, many substantial reforms have been accomplished. The medical schools which, in this country, have labored bravely and efficiently under adverse conditions, have been stimulated to increased efficiency. One of the first changes accomplished was the practical standardization of requirements to enter practice; and one of the first features of this standardization was to secure for the student "the aids actually furnished by anatomy, physiology, pathology, and organic chemistry"—the four cardinal studies which, strange-sounding as it seems, it was necessary solemnly and specifically to insist upon a half century ago. It follows, therefore, that with broadened and increasingly uniform curricula, it cannot be said that schools even of sectarian antecedents entirely "reject the accumulated experience of the profession," nor can it be said that, in a sectarian sense, they any longer possess an excuse for existence. Their graduates, or such of them as do not base practice on an exclusive dogma, are, in many instances, met in formal consultation by even conservative regular physicians, and, in more

than one instance, are made members of medical societies that are in affiliation with the American Medical Association.

The Illinois State Medical Society, which has always been among the foremost in reform movements within the profession, at its recent annual session, unanimously

"*Resolved,* That the school of graduation shall be no bar to membership in the Illinois State Medical Society, providing such physician is recognized by the local societies as qualified and not claiming to practise any exclusive system of medicine."

The Ohio State Medical Society, by precedent, if not by formal action, established the same rule.

We thus see that the proscriptive rule which, during the more than twenty-five years of its dominance, propagated the very evils it was intended to correct, is rapidly expiring by limitation in the face of new conditions that have been induced, in spite of it, by beneficent and catholic legislation. In the State of New York alone the annual registration of sectarian physicians has diminished nearly ninety per cent. under the operation of its present laws. In the State of Ohio many physicians who are graduates of sectarian schools are making application to have their classification on the register changed to "regular," while equal reactionary movements are observable in other States. Thus we observe the passing of Homœopathy and Electicism just as did the calm scientists of Rome witness the passing of the "Humoralism," the "Methodism," the "Electicism," and the "Pneumatic School" of that period; and just as passed the "Chemicalism," the "Iatro-physical School," the "Iatro-chemical School," and the "Brunonianism" and the dozen other "isms" of later epochs, each leaving its little modicum of truth as the memento of its existence. And let us felicitate ourselves that, with the passing of the particular sectarianism of the last century, there is also the passing of its concomitant evils, such as existed in even greater degree in the time of Galen, who "found the medical profession of his time split up into a number of sects, medical science confounded under a multitude of dogmatic systems," and, as if relating the effect of the cause, the historian continues, "the social status and the moral integrity of the physician degraded." The further results of this new order of things, however, are observable, not alone in the modified curricula of the medical schools, but in the changed organic relations of the institutions themselves. Under the pressure of legal requirements the weight falls with almost fatal force upon the small, private and poorly equipped institutions. These institutions, in the interest of self-preservation, and to protect respectable alumni, are forced either to expand their enterprises or to seek relations with universities which are deeply founded in the community; or else actually to go out of existence. The majority of the schools seek connection with the universities, by which step alone they become logical objects for endowment, and it is to be hoped that this movement will continue until in this great country medical education shall be as firmly established as it is to-day in any of the transatlantic nations.

Another of the new conditions which has developed within the last quarter of a century, as the result of an increasing professional unity, is the efficient sanitary regulations, national, state and municipal, that now afford protection to the people from diseases that were formerly devastating in their effects. It is not necessary in this audience to mention small-pox, cholera, typhoid fever, diphtheria, anthrax, leprosy, and the bubonic plague, each of which has been brought under relatively effective control, but I do feel that it is necessary to emphasize the fact that there are many unsolved problems relating to the prevention of disease that stand as a challenge to the industry, the ingenuity, and the courage of the profession. While these various changes have taken place, others of almost equal importance are observable in the relations of physicians to society. While the community, instigated by the medical profession, has given to that profession a legal status, definite and increasingly influential, and has given it certain prerogatives and certain exemptions, it has, likewise, hedged it about with certain limitations and imposed upon it certain liabilities. There are numerous laws, both common and statutory—*lex non scripta* and *lex scripta*—that admonish the physician that his conduct carries with it a liability not defined by self-imposed rules, and the numerous courts of our land proclaim that there are tribunals "other than his own conscience to adjudge penalties for carelessness or neglect" on the part of the physician. So numerous, so unjust, and so disastrous are actions before such tribunals that they have caused the development of a new, legitimate and beneficent enterprise, in the development of a company to insure physicians against malpractice. It may be true that in certain States and localities these laws are unjust, and that there is a grave error in their administration by judges created under our wretched elective system; but if so, the facts only emphasize anew the necessity for more complete organization of the profession and for the more active exertion of its influence upon elections.

THE REORGANIZATION OF THE ASSOCIATION.

This brings us again to a realization of the fact that the results that can be achieved only by the unification of our national profession cannot be attained under the present organization of our association. The disproportionately rapid growth of the *Journal* as compared with that of the association can have no other significance. The weakness of the committee on legislation, at Washington, was a question neither of personnel or of industry, but arose purely from the fact that there was no efficient organization in the rank and file of the profession by which speedy and effective influence could be brought to bear upon members and senators. Equal difficulty has been encountered in several States where organization has

been similarly defective. The demand for more effective organization of the association has come from all over the country and resulted in the adoption of a motion at Atlantic City authorizing the appointment of a committee of three to report a plan of reorganization at this session. Another motion was adopted authorizing the creation of a supplementary committee of one from each State and Territory, entitled a committee on organization, which has been filled by appointing for the most part the retiring presidents of State societies for the current year. The committee on reorganization, consisting of Dr. J. N. McCormack, of Kentucky, Dr. George H. Simmons, of Illinois, and Dr. P. Maxwell Foshay, of Ohio, has given to the important question entrusted to it a most careful and painstaking consideration. It has laid before you the results of its deliberation. In doing so it has emphasized the principle that this association has its origin in the organized profession of the respective States. It emphasizes the fact that the delegate body should be so small that it can remain in prolonged session and give to the various subjects under consideration that deliberate attention which has not been possible under the existing scheme of organization during the last forty years. It recognizes the paramount importance of the scientific feature of our work by relieving the general meetings and the sections alike of the troublesome details that now consume the limited and valuable time of the sessions. It remedies the glaring and serious defects in the present constitution. It prepares the association, by perfecting the organization, to meet important and pressing questions. These considerations, together with the fact that the existing constitutional provision relative to delay of action on pending amendments has been met by the appointment, a year ago, of a committee for the avowed and published purpose of reorganization, and by the action of the committee in laying the results of its work before every member of the association—I say these considerations and these facts prompt me to advise the adoption of the proposed constitution and by-laws in their entirety at the present annual session of the association.

The committee on reorganization, under the restrictions of the resolution creating it, has, very properly, left undisturbed the existing rules of conduct. These, if construed to have a fundamental importance, and if vigorously enforced as they now stand, would disintegrate the association in a single day. This reason, and others already given, confirm me in the conviction that such rules should be either amended or abrogated, or, if reaffirmed, it should be by general resolution endorsing their underlying principles but disclaiming the present applicability of their details. There are, however, various views entertained upon this subject, and that the matter may be approached in a spirit of tolerance, that it may be discussed coolly and impartially, that a consensus may be reached, and that harmony may be attained, I recommend that the general questions of the revision of the rules of conduct be referred to a special committee on ethics, consisting of three members, with instructions to report to the legislative body at the next annual session of the association.

THE NEW SCHOOL OF MEDICINE.

The changes which I have advocated are essential for the attainment of the purposes of the association and for the fulfillment of the high destiny of our national profession. They are demanded by the changes that have taken place during the last fifty years. The legislative functions have passed from voluntary organizations to the Congress and the legislatures, where they belong; but it still devolves upon the profession in the organized capacity, to stimulate, to restrain, or otherwise to control the law-making power. The responsibility of the profession is increased, rather than diminished. Science has come to have a clearer meaning. He who now proclaims a dogma cries alone in the night, while the world sleeps. They who demand a creed may read its varying terms only in the progressive revelation of natural laws. Practice has changed. The depletions, the gross medications, the absurd attenuations, the ridiculous anti-mineralism have given away to a refined pharmacy and to a more rational therapy. Sacrificial surgery has yielded to the spirit of conservatism. Prevention is given precedence over cure. Education implies research and discovery, and all may delve. I proclaim, events proclaim, the existence of a new school of medicine. It is as distinct from the schools of fifty years ago as is the Christian dispensation from its Pagan antecedents. It is the product of convergent influences, of diverse antecedent origin. It acknowledges no distinctive title, it heralds no shibboleth. It is a school of human tolerance, of personal independence, of scientific honesty. It is the slave of neither prejudice nor preconception, and abandons the accepted truth of yesterday, if only it be the demonstrated error of to-day. It places no premium upon personal prerogative, and extends no recognition to individual authority. It makes no proclamation of completeness, no pretension to sufficiency. It recognizes that truth is undergoing progressive revelation, not ending to-day, but continuing through the ages. It yields its plaudits to achievement, and recognizes that he is the greatest among men who reveals the most of truth unto men. It greets as a friend him who thinks, though he think error, for, thinking, he may think truth and thereby add to the common fund. It heeds all things, examines all things, judges all things.

To you, the exponents of this new school, of this new generation, of this new century; to you, representatives of the Democracy of Science; to you, citizens of the Republic of Letters, I extend greetings; and here, in our parliament assembled, here, where our will is supreme, I this day invoke upon our deliberations the spirit of liberty, the spirit of courage, the spirit of progress, the spirit of truth.

INTERNAL MEDICINE IN THE NINETEENTH CENTURY.

BEING THE ORATION IN MEDICINE BEFORE THE FIFTY-SECOND ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD IN ST. PAUL JUNE 4, 5, 6, AND 7, 1901.

BY N. S. DAVIS, JR., M. D.,
CHICAGO.

IT is one of the duties of those who address you, as I do to-day, to review what has been newly discovered in the field of medicine or in some limited department of it. At this first meeting of the American Medical Association in the twentieth century, it seems most natural to review what has been accomplished in the last one hundred years. The time at my disposal is too brief to read to you a complete history of the achievements of this wonderful epoch, for more of genuine advancement has been made in medicine during it than during all the preceding centuries together. It is only possible for me to point out some of the reasons for the rapid development of medicine, to recall to your minds some of the most important discoveries and applications of them.

A century is not so long a time as we are apt to think. Our grandfathers were vigorous men, in the prime of life, when the nineteenth century was born. Yet changes so great that they seem miraculous have occurred since then. In 1800 this great country was a wilderness, unknown even to the inhabitants of the few straggling settlements upon the Atlantic coast. Our land contained no great cities. There was little travel from place to place. There were no steamboats nor railways; no telegraphs or telephones. Information traveled slowly by packet ship, canal boat, and stage coach. The discovery of the wonderful properties of the x ray could not then have been flashed over the world in a day and its genuineness and utility confirmed within a few weeks by experiments made simultaneously in all parts of the world, as did happen at the close of the century. To-day all civilized peoples are so united that knowledge has become the common property of them all. In former epochs geniuses delved alone, inspired only by their own enthusiasm. Often, it was many years before their discoveries became widely known or appreciated; and many more before another genius standing upon land already found ventured upon its exploration.

All this has been changed. Learning is not possessed by a few, but by many. In earlier epochs men of genius towered above their contemporaries in learning. To-day thousands crowd about their shoulders, so much higher is the average of learning. All scientific workers are now linked together by the rapid dissemination of news, so that no matter in what part of the world they may be, they are kept conversant with what is being thought and done in every other part, and they are thereby inspired to greater mental efforts.

Knowledge is no longer isolated. It is cultivated in centres too numerous to count. Even in this new land universities with great libraries, finely equipped laboratories, and corps of brilliant teachers and seekers after new knowledge are found in every part of it. Medical societies have been organized in every state and city, and in many counties and towns. But at the beginning of the century there were only four medical schools in this country, and four state societies, organized for the advancement of medical knowledge.*

These changes have been effected chiefly by the rapidity of communication which has been established in all civilized lands and by the greater concentration of the people in large cities.

But it is not in the United States only that the population has increased and concentrated. In 1801 the total population of England and Wales was less than 9,000,000. Of this number more than half lived in the country. At the end of the nineteenth century the population of the same countries was more than 29,000,000, and only one fifth of this number lived in the rural districts. These figures attract our attention to the social changes which have occurred in all civilized lands—changes which have not only effected a greater diffusion of knowledge but have also modified the conditions which produce and limit disease.

At the opening of the nineteenth century, Cullen's *Practice of Physic,* written late in the preceding century, was the standard text-book. A glance at its contents will give us the clearest conception of the state of medical knowledge at that time. In an edition of this work, printed in New York city in 1806, I find no description of structural diseases of the heart; even as a complication of rheumatism heart disease is not mentioned. A single page is devoted to nephritis, but in its description there is no mention of the chemical and microscopical changes in the urine upon which we depend to recognize it and to distinguish its forms. The affections of the respiratory organs were described with similar crudeness, under such chapter headings as Of Catarrh, Asthma, Pneumonic Inflammation, Peripneumonia Notha, and Phthisis Pulmonalis, but the catarrhal inflammations of the nose, pharynx, trachea, and bronchi were not differentiated from one another, nor were catarrhal and croupous pneumonia, brown induration, hypostatic congestion and œdema of the lungs described.

The hypothetical explanation of diseases and their causes which prevailed at that time is well illustrated by the conclusion reached by Noah Webster, who, in his *History of Epidemics and Pestilential Diseases,* writes that typhus and nervous fever are due to "conversion of the perspirable fluids of the body into septic matter."

Nothing will help so much to make clear the progress made in medicine in the last century as to compare the resources at the disposal of physicians of our day with those commanded by our grandparents. At the opening of the nineteenth century medical men knew nothing of

*The colleges were medical departments of Pennsylvania, Columbia, Harvard, and Dartmouth (founded 1797). The societies were New Jersey (1766), Massachusetts (1781), Connecticut and New Hampshire (1791).

the clinical thermometer, of percussion, auscultation, uranalysis, clinical microscopy, laryngoscopy, ophthalmoscopy, of the sphygmograph, or Röntgen rays.

It was not until the year 1808 that Corvisart spread widely a knowledge of percussion as a means of discovering the physical status of the viscera, although the work of Avenbrugger, which he translated, and which was the original description of percussion, had been published nearly fifty years before. The work of Avenbrugger and Corvisart was supplemented in 1819, when Laennec published the result of his labor with the stethoscope, which he had invented four years earlier. From this time dates our clinical knowledge of diseases of the lungs and heart.

In 1827 Bright pointed out the relationship of albuminuria, dropsy, and diseases of the kidneys. At this point clinical chemistry may be said to begin.

At the beginning of the nineteenth century compound microscopes were almost useless, for the images which their lenses made were so distorted and colored that they could not be properly interpreted. In 1812 Dr. William Hyde Wolleston combined two plano-convex lenses so as to correct the spherical aberration which a single double-convex lens produces; and nearly twenty years later Joseph Jackson Lister discovered the utility of combining lenses of crown and flint glass in order to produce an image in the microscope relatively free from distortions and fringes of color. The more recent invention of the oil immersion lens has made bacteriology possible and has solved many of the problems of infectious diseases which puzzled even our fathers in the fifties and sixties.

The dependence of medicine upon ancillary sciences is well illustrated by the sudden birth and rapid development of new branches of medical knowledge which are dependent on the perfection of the microscope.

This instrument has made histology, embryology, modern pathology, and bacteriology a possibility. These departments of science are altogether products of the last century.

It was at the beginning of the century that Bichat divided the structures of the body into what he called "tissues" and showed that there were only a few of them. It is surprising that the great anatomists before him did not make the same discovery.

As modern anatomy has been dependent upon the microscope in order to explain structures, so physiology has been dependent upon experiments on living animals to explain function. It is true that in earlier epochs, at considerable intervals of time, experiments upon living animals were made, notably by Harvey, when he studied the circulation of the blood, but they were never made systematically until the discovery of anæsthesia in the nineteenth century made them painless. No wonder, therefore, that the explanations made by physiologists in 1800 seem to us extremely crude. Haller, for instance, whose printed lectures formed the text-book of most students at that time, thus describes the nature of blood: "Hydrostatical experiments demonstrate in the blood first a kind of volatile vapor or exhalation which immediately and continually flies off from the warm juice with a sort of fœtid odor coming betwixt that of sweat and urin. This vapor, being catched and condensed in proper vessels, appears of a watery nature joined with a small tincture of an alcaline disposition."

A few pages further on, what he says of the blood gives us an idea both of the state of physiological and pathological knowledge at that time: "For the blood in a sound healthy state, not injured by putrefaction or too violent a degree of heat, is neither alcaline nor acid, but mild and gelatinous and a little saltish to the taste; yet in some diseases it is sharp enough and comes near to a state of putrefaction, as for instance in the scurvy, when it corrodes through its containing vessels and in those who have ascites or dropsy whose waters are often much of an alcaline and corroding nature."

At the close of the eighteenth century the part which gland cells play in forming secretions was not comprehended. It was believed that "the albuminous or hardening juices are separated almost anywhere from the arteries themselves, into continuous excretory canals, with any intermediate organ or machine betwixt them." It was believed that all excretions existed primarily in the blood.

The physiologists of this period appreciated the importance of the lungs and the act of respiration, but their exact use they did not comprehend. Haller enumerates several possible functions which they might perform, yet he did not feel sure that any one of them was the real one. For instance, he says: "Our blood acquires its heat principally in the lungs, for that all animals which have lungs and two ventricles in the heart have the heat of their blood commonly twice that of the atmosphere. But does not this arise from the alternate extension and contraction, relaxation and compression of the pulmonary vessels by which the solid parts of the blood are perpetually rubbed together and closely compressed in the attrition that is made during expiration, as it is more rapidly moved and ground together during inspiration?"

Our forefathers one hundred years ago often endeavored to hide their ignorance in long names and resounding phrases, a common practice, indeed, in all times and not wanting to-day, for how much ignorance will our successors find hidden in words now so commonly used as are metabolism and auto-intoxication.

Pathology as a distinct department of scientific medicine originated in the nineteenth century. It was not until 1860 that Rudolf Virchow demonstrated conclusively his famous dictum: "*Omnis cellula e cellula.*" His studies of cells in disease laid the foundation and did much to rear the superstructure of cellular pathology. So rapidly has a knowledge of this subject grown that we can unhesitatingly say that we now possess very accurate and detailed information as to the anatomical changes which disease effects. The insight of physicians was so

greatly extended into the nature of morbid processes by these pathologic studies that enthusiastic devotees of them felt that the application of the microscope to the study of disease would dispel its mysteries. Increasing information, however, soon demonstrated the limitations which exist as to knowledge derivable from a study of morbid anatomy. Most of us remember how, soon after the birth of bacteriology, it was also hoped that from it at least we should learn the true essence of disease. But we know now that in most ailments after the bacteriologist has discovered the offending micro-organism the chemist must help us, for it is usually a product of its growth, not its physical presence in the tissues, that causes disease.

The production of disease by parasites imbedded in the tissues of the human body was suspected from early times, but was not demonstrated until the end of the first third of the nineteenth century, when James Paget, then a medical student, found unusual nodules in the muscles of a man whom he was dissecting. These Richard Owen demonstrated to be the cocoon of a minute animal which he called trichina spiralis. In 1847, Dr. Joseph Leidy, of Philadelphia, found them also in pork, and soon thereafter it was shown in Germany that men could become infected by eating pork containing trichina, and that in consequence there developed in them a definite train of symptoms.

In 1837, Latour in France, and Schwann in Germany, almost simultaneously propounded the view that fermentation and putrefaction were due to the growth of micro-organisms. Liebig, with all the weight of his authority, antagonized this belief in a "vitalistic" explanation of these phenomena. Pasteur undertook to settle the dispute by methods of research, which proved to be the foundation of a new department of science—bacteriology. The results of his experiments were published between 1857 and 1869. He proved that without micro-organisms there could be no fermentation, no putrefaction or decay. These studies prompted many investigators to attempt to demonstrate the suspected relationship of micro-organisms to disease. In 1863 Davaine succeeded in showing that the organisms, seen by him in 1850 in the blood of animals which had died of anthrax, were its cause. This, as some of those before me will remember, aroused a storm of controversy which was not settled finally until after my own student days.

Formerly, such vague terms as "miasm," "humor," and "virus" were used to explain the communicability of contagious diseases, but they have had to be discarded or to be newly defined by the bacteriologist. It was in the sixties that Lister made his studies upon the relationship of micro-organisms to wound infection. The brilliant, revolutionary results of those studies are too well known to you to require elaboration; besides, they belong to the history of the nineteenth century surgery rather than to the history of internal medicine. They were, however, so important in settling the relationship of invisible parasites and diseases that they must be mentioned.

It was at this time, too, that Pasteur and Tyndall finally settled the controversy over spontaneous generation which had raged from time immemorial. The world at last felt convinced that even micro-organisms could not exist where an antecedent organism had not been.

It is needless to recapitulate the long list of discoveries rapidly made from this time onward of the causes of infectious diseases, by such men as Koch, Klebs, Loeffler, Fraenkel, Laveran, and many others.

Although medical men have been incited to search for the causes of disease, in order that they might understand their nature better, and therefore be able to treat them better, such studies naturally led more directly to the prevention than to the cure of disease. That is why the recent epoch-making bacteriological discoveries have greatly stimulated the study of preventive medicine. It is true that the prevention of disease has engaged the attention of medical men and statesmen since the earliest times, but the subject was not studied systematically before the last century.

Hygiene as a separate department of medicine, with a literature of its own, was created only in the nineteenth century.

While, in the eighteenth century, much was done to improve the hygienic state of individuals, and as a result there began before its close to be a reduction in the mortality rate, which has continued up to the present time, public hygiene, or attempts to prevent the spread of disease by state and civic interference, was not fairly established until very recently. Even to-day small communities have no health officers or sanitary inspectors, and few regulations which are intended either to inform the people as to the relative healthfulness of towns and hamlets, or by which the spread of disease is to be lessened. These facts show how new and undeveloped as yet the field of public hygiene is. The mortality statistics which have been gathered in cities since the middle of the last century make it possible to point out which among them are the healthiest, and which diseases are the most destructive. It is to be hoped that these statistics in the future will be supplemented by reports of the kinds and amount of illness, whether fatal or not, that may exist in a given place.

The knowledge recently acquired of infections and their spread has already been applied to their prevention. Such diseases as erysipelas, septicæmia, and tetanus no longer torment surgeons when they can make clean wounds. But so late as 1870 the first of these ailments was common in the hospitals of France. Puerperal fever is to-day as rare as it was common formerly. Typhus fever no longer exists in America, although not uncommon at the beginning of the last century.*

*Typhus forms an item in the mortality reports of Chicago (and other American cities) so late as 1886. This is probably because it was confused with typhoid. Not during the first quarter, and rarely afterward, has genuine typhus occurred in this country.

Indeed, it is rarely seen in any civilized country to-day. At the beginning of the nineteenth century small-pox was so common that few persons reached adult life without having had the disease, and the mortality from it in childhood was great. What is the status of this disease to-day? I venture to say there are many physicians in this audience who have never seen a case, and that a majority of them have not treated more than four or five cases during their whole professional experience. In the early days of this nation's history yellow fever spread to Philadelphia and New York, and provoked much discussion, for it was feared that it would prove as great a pest as cholera. A careful study of the disease and a consideration of the possibility of preventing it was referred to a committee of the New York Medical Society, which reported that yellow fever might be produced in any country by pestilential effluvia. How different is this conclusion from that of recent students of the subject, who assign to it a specific cause that is transmitted from man to man by mosquitoes, which are its host.

Cholera has been brought to our shores several times in the last few years, but its spread has been prevented in each case. In Europe it has also been limited to comparatively small areas. Within a year the plague has been found in this country, in Great Britain, and France, but has caused little alarm, so great is the confidence that it will be successfully suppressed. (Let us hope that this confidence is not misplaced.)

What has been accomplished during the last one hundred years by internal medicine the following statistics will show in part, although it must be remembered that mortality statistics gathered before the middle of the century are not reliable. It is estimated that in 1805, in New York city, from 35 to 40 deaths occurred in every 1,000 inhabitants. During the last decade it has averaged 20 in 1,000, and has been as low as 19 in 1,000. In 1847, the mortality in London from zymotic diseases was 23.26 per cent.; during the last two decades, 19 to 20 per cent. In 1846, the deaths from consumption were 12.67 per cent.; now, approximately 9 per cent. The mortality from diseases of the respiratory organs has been reduced in the same time from more than 12 per cent. to about 7 per cent., and the mortality from diseases of the digestive organs has diminished from about 6 per cent. to less than 5 per cent. In Chicago the mortality rate has fallen, with small fluctuations, from 46 and 64 deaths per 1,000 inhabitants, in the cholera years of 1852 and 1854, to 14 in 1898. The following diseases are among those in which the death-rate has fallen progressively: Cholera infantum, croup, diarrhœa, diphtheria, dysentery, malaria, measles, scarlet fever, and whooping-cough. These are ailments the spread of which has been controlled, either by isolation, or by insuring the people purer food and water. Although the general mortality of Chicago, which is typical of the great cities of civilized countries, has improved, there are some diseases which are increasing in prevalence, notably nervous diseases, heart diseases, cancer, Bright's disease, bronchitis, and pneumonia. To the discredit of my native city must it be said that the mortality from typhoid fever reached its highest point at the close of the century, during 1890, '91, and '92, although its cause and its mode of dissemination, as well as its prevention, were well known.

The general lowering of the death rate is due to the improved hygiene of communities. In what the improvement has consisted is best shown by recalling some of the conditions under which people lived in 1800. At that time few cities had an adequate public water supply. In London, water could be delivered at any house three times a week by one of the water companies; but most households depended upon wells. The sewerage system was quite as imperfect. Outhouses and cesspools were attached to each dwelling. The conveyance of sewage from houses by water did not become general until well into the last century. Ventilation of buildings, and especially of public halls, had attracted attention before the nineteenth century; but the real causes of danger from bad ventilation were not appreciated until bacteriology disclosed them.

In 1800, streets were not paved, and were rarely cleaned. The habits of the people as regarded eating and drinking were bestial. Excessively large quantities of food were consumed by all who could provide it. Alcoholic beverages were universally drunk, and generally in immoderate quantities. No disgrace attached to drunkenness; and it was customary for a man to drink several bottles of wine at a sitting.

Those who compose this audience appreciate how much illness must have been caused by these habits, and how much the relative abstemiousness or temperance of to-day has lessened the percentage of disease.

Prevention of diseases is only possible when a knowledge of their causes, their mode of dissemination, and methods for their suppression, are possessed by all the people. Medical men alone cannot stop their spread, nor will the making of laws do it. Only the intelligent cooperation of those who are ill and those who are well can accomplish it. It must not be expected, therefore, that so soon as the cause of a disease is discovered, that ailment can be suppressed. Time is required in which to educate all classes of people on that particular subject. Unfortunately, many persons are so obtuse that they will not believe in methods of prevention even when the fullest demonstration of their success has been made. A notable instance of this is seen in the recent repeal in England of laws which made vaccination compulsory. The ease with which drinking-water may become contaminated and the danger to health from contamination are not even now appreciated by the public. It is partly because such thorough knowledge is needed by the laymen that tuberculosis, diphtheria, pneumonia, typhoid fever, and similar troubles have not been better controlled in the past. In order that in the twentieth century the fruits of the great discoveries of the last may

be gathered, all members of the medical profession must fit themselves to teach their patients what is known of disease and its prevention. Those who are specially adapted to do so must disseminate their knowledge by popular discourses and essays. When hygiene shall be regarded by all classes as necessary, and as much a matter of course as the use of the railroad, steamboat, the telegraph, telephone, and labor-saving machines, then, but not until then, striking results may be expected.

The wonderful, the revolutionary discoveries made by students of internal medicine during the nineteenth century are not always appreciated as they should be, for their results are often demonstrable only by statistics; and the dramatic rescue of individuals from certain death, which the surgeon at times accomplishes, unfortunately cannot be effected by the therapeutist. It is not in the nature of his art. Great progress, however, has been made in the use of medicines and remedial procedures. Good reasons can be given for their employment, and their mode of action can be explained. Empiricism no longer governs their use as it formerly did. The placing of therapeutics upon a scientific basis began in the last century, when the physiological effect of drugs was first demonstrated by experiments upon animals.

No field of medical research needs cultivation so much as, or is more certain to yield a rich harvest than, therapeutics. It is surprising that we have not a larger volume of accurate knowledge of the effect of drugs than we do possess. Of late, pharmacology has been neglected for studies which have temporarily been more enticing to experimenters, such as bacteriology and experimental pathology. Moreover, a knowledge of these subjects is essential to enable a clinician to apply his therapeutic resources to the mitigation of suffering, the support of strength, and the elimination or destruction of noxious substances. One can safely prophesy that the exact utility and the limitations of drugs and medical procedures will be defined in the present century.

To accomplish this, not only is more knowledge required of the physiological action of drugs, but also better means of accurately measuring their effects when they are given to patients. We know that when pain is relieved we can sometimes measure effects produced upon the heart and blood-vessels and temperature. Beyond this, we depend for knowledge upon the impressions of physicians, impressions which must be corrected and often reversed by a wide experience. Clinicians possess only a few appliances or methods for the exact study of the sick. It is to be hoped that more will be discovered, and that they will also make it possible to register with accuracy the effect of drugs. When this is accomplished, undoubtedly a smaller number of useful drugs will be employed, but these with greater exactness.

It is true that more drugs are used to-day than need be, because patients demand them as a fetish; but this will be changed when laymen learn that it is the function of the physician to teach them what to do to give Nature the best chance to effect repair, what to do to make themselves comfortable and to preserve life; when they learn that it is a physician's function to teach them how to protect others from the same ailment, to foretell the possibility of recovery or death, and to avert or forestall complications. Medical men should include time and faith in their materia medica as important means of effecting a restoration to health. I do not mean faith in a fetish procured in an apothecary's shop, but faith in the wisdom, honesty, and disinterested devotion of physicians, which will enable them to accomplish all that can be done for the suffering.

Although the greatest discoveries in the field of internal medicine have been applicable to the prevention of illness in the masses, much has also been done to increase the chances of recovery of individuals who are sick. I need call attention only to a few of the improvements in treatment which have been effected, to remind you of more. Typhoid fever, which has been a scourge in all civilized countries, and constantly present in all larger centres of population, has not only been greatly lessened, sometimes even suppressed, by improved hygiene, but the chances of recovery of the one who is sick with it have been increased several fold by improved methods of treatment. Twenty-five years ago the mortality from typhoid fever in the hospitals of the world was from 20 to 35 per cent.; to-day it is from 5 to 15 per cent. The better results are due to the cold baths which are used, to a more generous supply of fresh air, to proper feeding, and to protection against, or the prompt treatment of, complications.

One great therapeutic discovery has been made at the end of the nineteenth century—the discovery of antitoxines, the natural antidotes to the poisons of infectious agents. For a very long time it had been known that something developed in the human system during the course of many ailments which gave to the sufferer from them for a variable time immunity from a recurrence of the disease. Until the existence of parasites and of poisons generated by them was proved, an antitoxine was, of course, unrecognizable. Moreover, the possibility of such a thing in diseases, one attack of which did not cause immunity to others, was not even suspected. But the diphtheria antitoxine, the most efficient of those of which we know anything, is one belonging to this last group of ailments. The chemical composition of antitoxines is yet to be discovered. Since antitoxine has been used the mortality from diphtheria has been reduced about one half. The most extensive collection* of statistics gathered from all civilized countries shows that, when antitoxine is used on the first day of the disease, the mortality is 5 per cent., increasing rapidly to 30 per cent. when used on the fourth day or later. Before its employment, the average mortality of the disease was from 25 to 35 per cent. To effect a still greater reduction in the death rate from this ailment, it is necessary that it be recog-

*Das Oesterischen Sanitätswesen, No. 52, 1900.

nized early, and that antitoxine be employed more generally as a preventive for those who have been exposed.

That tetanus antitoxine and plague antitoxine are valuable is admitted. Many others, such as pneumonia, typhoid, tubercle, scarlet fever, erysipelas, and streptococcus antitoxines, are still in the experimental stage. But even though it should be found that few natural antitoxines can be isolated for use as remedies, those already discovered confirm physicians in the hope that specifics will be found some day.

Another therapeutic discovery made at the close of the century, which has thrown a flood of light upon some obscure points in physiology and pathology and has restored to usefulness many who were formerly incapacitated and incurable, is that of internal secretions, and especially the rôle of the secretion of the thyreoid gland. Ingredients in the thyreoid, suprarenal bodies, and ovaries produce as definite effects upon the living body as many extracts from plants or synthetic chemicals. The pituitary body, the thymus, and bone marrow may also have a value as yet undetermined. The rescue of those suffering from myxœdema and cretinism, by the administration of thyreoid, is one of the few happy dramatic incidents which fall to the lot of the practitioner of medicine.

That a much larger proportion of recoveries from tuberculosis occur to-day than formerly is evident from the statistics of this disease, but this lessened mortality is not due to prevention only. Trudeau has estimated that eighteen per cent. of all persons have tuberculous lesions, because a reaction to tuberculin can be demonstrated in that proportion. This statement is confirmed by Councilman, who states that his autopsy statistics show that at least seventeen per cent. of all who die have had this disease. But, in spite of this prevalence, the mortality from the ailment is lessening.

Rabies and tetanus are two diseases which until recently were thought to be incurable. Rabies can be suppressed by killing unowned dogs and by muzzling the rest. Upon this point the following statistics from England are very instructive: In 1887, 217 deaths occurred in Great Britain from rabies; in 1888, 160; in 1889, 312. A muzzling law was then enforced. In 1891 the death rate from the disease fell to 129; in 1892, to 38. The muzzling ordinance was repealed, with the result that in 1894, 248 deaths occurred from mad-dog bites, and 672 in 1895. Again muzzling was made compulsory. The death rate once more diminished; in 1897 it was 151; in 1898, 17; in 1899, 9, and in 1900, none!

Pasteur's great discovery of a method of attenuating the virus of rabies and rendering immune those who have been bitten by mad dogs by rapidly accustoming them to stronger and stronger viruses, has reduced the mortality materially.

Tetanus, formerly quite common in hospitals, is now prevented by properly cleansing and protecting wounds. It has become so rare a disease that to-day most students do not see a case of it during their college course.

The nineteenth century will be known in the history of medicine as the century of experimental medicine, for it is in that field that the greatest discoveries of the age have been made. The names of Pasteur, Koch, and Lister will forever be linked with it as representing its greatest achievements. But these achievements would not have been possible had not the physicist perfected the microscope, and had not Virchow and his pupils explored the field of cellular pathology to its farthest limits. Around Virchow's name as a banner will historians gather the achievements in medicine during the early and middle portions of the century, and around Pasteur's those of its close.

If our greatest needs conditioned the growth of knowledge, we could prophesy what would be the great field of research of the twentieth century, but history teaches us that our needs can often not be met until some sister science has grown, or new methods of experimenting have been devised. Therefore the future must remain a blank to us. However, we are more apt to accomplish what is needed if the problems are kept clearly in mind. We greatly need more exact methods of clinical study, more accurate knowledge of the effect of remedial agents and procedures, but more than all else we need a knowledge of the changes which take place in the living tissue in health as well as in disease.

The anatomist has resolved the cellular structure of the body; the physiologist, the laws which govern the action of its organs and the chemical changes which are wrought upon its surfaces; the bacteriologist has discovered the parasites that infest, and often destroy it; the pathologist has described the anatomical changes which disease produces; the clinician has linked all these facts together and has discovered ways of seeing with the intellectual eye disturbances of physiological function, of determining their cause, and of anticipating the anatomical changes which they will produce. But this does not satisfy us; we want a knowledge of the atomic and molecular structure of cells, of the changes which take place in the atoms and molecules in health and in disease, and of the effect of medicines and remedial procedures upon them.

This knowledge chemistry must give us. I feel sure that, standing as we do at the beginning of a new century, expecting greater developments in it than in the last one, we are halting before new discoveries in chemistry, waiting for new methods of studying metabolism in microscopic portions of tissue. When this knowledge is vouchsafed, medicine will make another stride as great as was made when, by the perfected microscope, cellular pathology and bacteriology became possible.

Let us look forward with confidence to the Virchow and the Pasteur of the future.

THE VALUE OF CLINICAL MICROSCOPY, BACTERIOLOGY, AND CHEMISTRY IN SURGICAL PRACTICE,

BEING THE ORATION IN SURGERY BEFORE THE FIFTY-SECOND ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD IN ST. PAUL JUNE 4, 5, 6, AND 7, 1901.

By JOHN A. WYETH, M.D.,

NEW YORK.

For many years, almost without exception, my predecessors in the address in surgery have devoted their labors to the exposition of some general or special subject in the domain of operative surgery, and, while I would in no measure detract from the value of a thorough technical knowledge, we should not, in our attention to the *art,* fall short of a proper appreciation of the *science* of surgery.

The experienced surgeon soon learns that it requires more than asepsis and the rapid and skilful performance of an operation to achieve the fullest measure of success; that, although a thorough practical knowledge of regional anatomy is essential in the highest degree to the conscientious fulfilment of the professional obligation, it is equally important that there be called into requisition the invaluable aid which laboratory research alone can give in determining an accurate diagnosis; in indicating the most rational measures of treatment, not only in the preparation of a patient for an operation and in the selection of the safest anæsthetic, but for the post-operative management of the case, and in removing as far as possible all doubts as to the prognosis.

Chemical analysis of the normal and abnormal secretions and excretions of the body, *clinical microscopy,* and *bacteriology* should form a part of the educational requirement of every surgeon. I do not insist that the busy practitioner should attempt to master all the intricate processes of the laboratory, for this is only possible to one who devotes years of patient labor in the fascinating department of science, but he should possess that practical knowledge of the chemistry of the body in health and disease and of clinical microscopy and bacteriology which any diligent student, under a competent teacher and in a properly equipped laboratory, should be able to acquire in a three months' course of study.

The instances are exceptional in practice where this knowledge cannot be applied with great benefit to the patient and with satisfaction to the surgeon. It is naturally of greatest value in the cases where no emergency for immediate operation exists, but its advantages are not wanting in these rarer cases, since it comes to his aid in the post-operative period.

Laboratory research, especially in the department of bacteriology, has placed, not only the medical profession, but the entire human family, under lasting obligations for the great benefits which have already been derived from its discoveries, and it may be safely said that it has done more than all else in accomplishing the revolution in surgical thought and practice which has taken place within the last two decades. One of the most notable illustrations of this great advance is the triumph which has been achieved over that once fatal disease, diphtheria.

The discovery by Klebs, in 1883, and the isolation and cultivation in 1884 by Loeffler, of the bacillus of diphtheria had its logical sequence in Behring's invaluable discovery (subsequently elaborated by Roux) that the blood of animals, especially that of the horse, rendered immune to diphtheria by inoculation, first with attenuated and then with more virulent organisms, contained a substance capable of neutralizing the effects of the bacilli or their *toxine* when simultaneously or subsequently inoculated in non-protected animals.

This antitoxine serum in its dose of 10 c.c. of either the 600, 1,000, or 1,500 *immunizing units* is potent, not only to arrest the destructive processes which formerly characterized this disease, but to prevent the infection of those who have been exposed to the contagion. How great is the importance of the knowledge not only that these bacilli are always present in the throat of a patient suffering from diphtheria, but that they are frequently found on the nasopharyngeal surfaces and tonsils of persons free from systemic infection, and as shown by Biggs, Parke, and Beebe, of New York, they may remain as long as five weeks after the membrane has been discharged from infected subjects, all of which points to the necessity for the isolation of the infected individual and the careful disinfection of the throats of those who have been about diphtheria cases (McFarland).

The statistics of Professor Welch, of Johns Hopkins University, show that the ratio of mortality as a result of these discoveries has been reduced more than 55 per cent., and that in 115 cases, in which by reason of an early diagnosis the treatment of serum antitoxine was begun within the first three days of the disease, the mortality was only 8.5 per cent. In 546 cases in which the remedy was begun after the third day of the disease the mortality was 27.8 per cent., the ratio of mortality increasing with fatal precision as treatment was delayed.

To the surgeon, one of the most gratifying results of this great triumph of the laboratory is the fact that he is now rarely called upon to perform the operation of tracheotomy, which was formerly distressingly frequent, nor to witness the sufferings associated with intubation of the larynx. A professional friend in the department of diseases of children informed me recently that, whereas a few years ago he had from ten to twenty intubations of the larynx on account of diphtheria in every month, he now, since the serum therapy was practised, averaged only one or two.

I believe that what is true of this disease is true of all infectious processes, and that as our knowledge expands a safe immunizing serum will be discovered for each special toxæmia. Even now it would seem that this proposition is proved in other infections in which, like diphtheria, the pathogenic organisms are localized at the seat

of infection, their toxic products alone entering the tissues through the circulation.

Of this type is the spirillum, or "comma" bacillus, discovered by Koch in 1884 in the intestinal contents of patients suffering from Asiatic cholera. These germs are not found in the deeper organs, the morbid changes in the tissues being due to their toxine. Immunizing injections of cholera cultures have already been experimentally and successfully employed, and promise rich results.

In this same group, bacteriologists claim a place for the *Diplococcus micrococcus lanceolatus* of Fraenkel, the pneumococcus. Sternberg and Pasteur isolated this germ in 1880, and in 1884 Fraenkel demonstrated it as the prevailing organism found in the sputum of croupous pneumonia. Very late investigations give encouragement to the hope that serum therapy will soon be applied in the early arrest of the invasion of this most painful and fatal malady. Though pneumonia is strictly a medical disease, its early recognition as a surgical complication, or in view of an anticipated operation, is of very great importance. In a recent case which came under my observation at our laboratory, a specimen of sputum was sent in for bacteriological study. It was not blood-stained or "brick-dust," but yellowish-white in color, like the ordinary sputum of bronchitis, and was supposed to be "grippe" or tuberculosis. The bacillus of tuberculosis was not present, but numerous micrococci lanceolati were discovered, and the laboratory diagnosis was made and confirmed within twenty-four hours by the well-recognized symptoms of consolidation with the "brick-dust" expectoration of this disease which supervened.

Tetanus toxæmia, or "lockjaw," the organism producing which was discovered by Nicolaier in 1894, and which for years has baffled the most strenuous efforts of the bacteriologist and clinician, seems at last to be classified with the controllable infections. Professor Osler, in the last edition of his *Practice of Medicine,* says the immunizing serum of Tizzoni has been successfully and encouragingly employed in doses of 2.25 grammes for the first dose, and 0.6 gramme for subsequent doses. Of 113 patients treated by this method 63 per cent. recovered.

It was not until the discovery of the bacillus of typhoid by Eberth in 1880, and the pure cultures of this germ secured by Gaffky in 1884, that there was made possible in the vast majority of cases of typhoid fever a positive diagnosis.

The demonstration of Widal that when ten drops of a twenty-four-hour bouillon culture of the bacilli typhi were added and thoroughly mixed with one or two drops of serum from the blood of a typhoid patient, the bacilli lost their motility and became agglutinated in masses, was one of the most brilliant advances in clinical bacteriology, and of great value in surgical diagnosis.

In many of the lesions of the abdominal viscera, and especially in those located in that battle-ground of surgery, the right iliac fossa, where the physical signs and the febrile movement may suggest either beginning typhoid, intestinal toxæmia, or a pyogenic sepsis, an early diagnosis may be determined in no other way than by the aid of the laboratory.

The practitioner who has not called into requisition the invaluable aid which bacteriology affords in the differentiation of those too often obscure intraperitoneal lesions cannot appreciate the satisfaction which this practical application affords. How often the safety of a patient hangs upon even a few hours' time, and, alas! how often this precious time is wasted in the uncertainties of diagnosis, when a resort to the demonstration of science, available to all, would have plainly indicated the proper method of procedure. We know too well the fallacy of relying upon the ordinary subjective symptoms, and even some of the objective symptoms afford us no accurate clue to the pathological process which may exist. The pulse and the temperature of commencing typhoid may well be mistaken for the pulse and temperature of an appendicitis. The pain and muscular resistance over the right iliac and the right abdominal region are in many instances practically alike. The nausea, the vomiting, and the general sense of uneasiness point neither directly to the one nor to the other disease, but in a crucial test by Widal's reaction, with the blood count pointing to the presence or absence of a leucocytosis, the question is quickly settled. I have seen all the symptoms of appendicitis present in cases in which the blood count contradicted a pyogenic sepsis, and in which Widal's reaction told the story of typhoid. On the contrary, I have dealt with cases which ordinarily would have been most perplexing, in which all the symptoms of typhoid prevailed at a period when it was too early to recognize this disease by Widal's test, and a leucocytosis of from 15,000 to 21,000 proved at the earliest possible moment that the case was one for immediate operation.*

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*Two of the cases occurring in my own work within the last few months may emphasize the great value of this technique.

A man of thirty was seized with quite severe pains which were confined to the region of the cæcum and appendix. Upon palpation there was well-marked resistance in the muscles immediately over these organs, which was not observed in any other part of the abdominal wall. He had vomited on one or two occasions and the temperature ranged from 101° to 103° F. on the second day of this attack. The questions which were presented to the consultants were whether this temperature could be accounted for by intestinal toxæmia, by appendicitis, or incipient typhoid. Although it was too early in the history of a typhoid case to encourage the belief that Widal's reaction would be present, this was made, and with negative results. On the following day, the symptoms still pointing toward typhoid fever, a careful blood count was made and the leucocytes did not count over 7,000. Assured from this that no dangerous pyogenic process was present, the idea of operation, even exploratory, was abandoned until the examination might be repeated on the succeeding day. A second careful blood count showed no leucocytosis, and on the fourth day, although Widal's reaction was still absent, the case was declared to be typhoid, and the subsequent history proved the diagnosis to be correct, since a few days later the reaction of typhoid was present, and the patient went through the regular stages of this fever.

In a second case, a male patient, forty-five years of age, there was a typical typhoid tongue, temperature ranged from 100° to 103.5° F., tenderness and muscular resistance in the right iliac fossa and loose discharges from the bowels not unlike those frequently met with in typhoid. Widal's reaction was tried with negative results on three successive days. The blood count on the fifth day showed the leucocytes numbering 21,000, justifying a diagnosis which excluded typhoid, and confirmed the suspicion of pyogenic sepsis.

The discovery by Bollinger, in 1877, made the diagnosis of that comparatively rare affection, actinomycosis, clear. In examining the yellow granules and accompanying pus discharged from an infected area he recognized the ray fungus, or actinomyces. More recent researches have shown this fungus to be composed of bacilli in various stages of development, some being spores and some more perfectly developed organisms.

In another fortunately rare disease, malignant pustule, caused by the lodgment in an abrasion of the *Bacillus anthracis,* we are indebted to the laboratory for our knowledge of its ætiology. The anthrax bacillus discovered by Davaine in 1863 is not usually found in the blood except in the most malignant cases and in the last stages of fatal infection, but it can be demonstrated in the pustule of inoculation with the microscope or by cultures.

Roux and Chamberland, according to McFarland, have found that filtered cultures will produce immunity when properly introduced into animals, and we reasonably hope from these experiments that the serum treatment will before long be made applicable to infected human beings.

Another rare organism is the bacillus of malignant œdema, which was discovered by Pasteur in 1875 and called by him *vibrion septique.* There are only two cases of this disease so far reported in man, and they were subjects of abnormally low resistance infected by the hypodermic administration of a product of musk.

The *Bacillus pestis,* or bubonic plague organism, was discovered in 1894 simultaneously by Yersin and Kitasato in blood drawn from the finger-tips of infected individuals and in the broken-down lymph glands, and is described by Kitasato as greatly resembling the microorganism of chicken cholera.

Bacteriological research has robbed the puerperal state of much of the anxiety and dread which formerly attended this ordeal, not only in preventing sepsis, but in recognizing the infections already established in time to prevent a general peritonitis or septicæmia. The puerperal uterus or this organ when the seat of non-puerperal endometritis offers an ideal field for bacterial proliferation and invasion, since septic organisms entering the cavity may rapidly penetrate the endometrium and enter the lymph channels, whence they pass into the venous sinuses and lymphatics of the pelvis.

Professor W. R. Pryor, in a paper read before the New York State Medical Association in 1900, says: "Puerperal sepsis, if not rapidly fatal, almost always produces lesions which seriously damage the pelvic organs or the viscera," and that "time is in this serious condition an important element." He recommends the early employment of the Döderlein tube, which, after sterilization, is passed into the uterus, being protected from contact until the fundus is reached. From the serum and débris thus obtained cultures are made, and the character of the operation—either curettage or hysterectomy—determined by the result of bacteriological investigation.

Not only does the laboratory come to our assistance in the diagnosis of certain obscure surgical lesions of the stomach, but it is still more valuable as an aid in arriving at the exact condition of the digestive functions of this organ, any derangement of which it is at times exceedingly important to correct in order to bring a patient into suitable condition to stand an operation. Thus, it is important to determine in certain instances whether or not free hydrochloric acid exists in this organ, and while the total quantity poured into the stomach in the digestive process cannot be accurately measured, clinical chemistry can closely estimate the total quantity found at a given moment during digestion. The acid-combining power of the proteids is known, and by certain tests it is feasible to estimate sufficiently close for a satisfactory diagnosis the quantity of hydrochloric acid secreted. The small quantity of hydrochloric acid which combines with ingested inorganic elements is lost to gastric digestion, serving as it does its function in this process in the intestines.

It is clear, as stated by Van Valzah and Nisbit, that the hydrochloric acid which combines with the proteids and that which remains free together roughly represent the activity of acid secretion. It is logical, then, to conclude that the quantity of hydrochloric acid loosely combined with albumin, together with the quantity remaining free in the contents withdrawn at the end of a particular time after eating a particular meal, is a practical and clinical measure of the secretive activity of the peptic glands, and of the digestive work of the stomach. All of this is made sufficiently exact for practical purposes by the laboratory method of analysis after the simple test breakfast of Ewald and Boas or the more elaborate test meal as recommended by Germain-Sée.*

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*The simplest method is that known as the test breakfast of Ewald and Boas in which on an empty stomach, usually in the early morning, a breakfast roll which contains about 5 grammes of proteids, 39 grammes of carbohydrates, $\frac{1}{3}$ of a gramme of fat and $\frac{3}{4}$ of a gramme of ash, and weighs 70 grammes and 350 c.c. of water (about a glass and a half) are taken. The bread should be thoroughly chewed and insalivated before being swallowed with the water. Usually in one hour's time a tube is introduced and the contents of the stomach withdrawn, usually by expression, or by siphonage and then filtered. An estimate of the acidity of the filtered contents is made by using a decinormal solution of potash or soda. The number of c.c. of this solution which will neutralize 100 c.c. of the filtered contents of the stomach expresses in figures the acidity of the fluid withdrawn. At the end of an hour, under approximately normal conditions of digestion, the total acidity should be 50 to 60, the hydrochloric acid albumin 30 to 40, the free hydrochloric acid 10 to 20. Any departure from this rule shows the abnormal absence or excess of this important agent.

The test meal of Germain-Sée is at times preferable, since it contains a larger quantity of proteids than the test breakfast of Ewald and Boas just given, but the method of procedure is practically the same. The presence of hydrochloric acid can be recognized by Gunzborg's reagent which is composed of:

Phloroglucin	2 grammes;
Vanillin	1 gramme;
Alcohol (absolute)	30 grammes.

By spreading three or four drops of this reagent in a porcelain crucible, adding upon this the same quantity of the filtered contents, and slowly warming the crucible, after several seconds a red color appears, and at times the red crystals of free hydrochloric acid are seen. Or the simpler method of employing a filtered paper which has been soaked in a 0.5 per cent. alcoholic solution of diamethylamidiazo-benzol and dried. This in the presence of a trace of free hydrochloric acid turns distinctly red.

The presence of lactic acid in the stomach contents, as shown by Kelling's test,* has a distinct diagnostic value, since it takes place in comparatively rare conditions, and since these conditions are seldom fulfilled except when carcinoma is present.

Lactic acid is dependent upon the presence of a special bacillus which thrives in the stomach under abnormal conditions, and is capable of converting glucose and lactose into lactic and carbonic acid. Boas goes so far as to insist that the persistent presence of lactic acid in noteworthy quantity during the digestion of a saucer of oatmeal, chemically free from lactic acid, is a specific sign of carcinoma of the stomach.

While the stomach may, under varying conditions, contain hosts of various bacteria in addition to the one just considered, there are only three others that are of importance as pathogenic organisms. First, the *sarcinæ ventriculi* (in their usual cube arrangement), which when found indicate insufficiency of the stomach muscle due to non-malignant obstruction. They are not found in carcinoma, since they perish in the presence of lactic acid, which, as we have just shown, is so common in malignant diseases of this organ.

Another micro-organism is the *yeast plant,* also found when motor insufficiency exists. It may be present when the stomach contents are alkaline, neutral, or acid.

The *Bacillus geniculatus* is present under the same conditions which produce the lactic-acid organism and is considered also to be suggestive of carcinoma.

When the presence of blood is suspected in the stomach and is not clearly defined by the microscope, chemistry comes to our aid in its recognition by the glacial acetic acid and ether test.†

A study of the discharges from the rectum is as yet of little value to the surgeon. Beyond the recognition of blood or pus, or cast-off cell elements in certain malignant neoplasms, there is but a single organism which is of real diagnostic value, namely, the amœba of dysentery, described by Lamb in 1859, which is a motile mass of protoplasm about 20 micromillimetres in diameter, containing a single nucleus and one or several vacuoles.

In the differentiation between the pathogenic organisms of specific and non-specific urethritis, microscopy and bacteriology are our only infallible guides. They teach us to eliminate the various bacteria found in the external genital and urinary passages, not bearing directly upon the ætiology of urethritis, and to recognize distinctly the two forms of diplococcus, the gonococcus of Neisser and the pseudo-diplococcus, which, while not morphologically different from the specific disease-producing organism, can be readily distinguished by special modes of staining as well as by cultures. In the daily routine of practice the exact nature of every suspicious urethral discharge should be subjected to careful scrutiny. The patient is entitled to the satisfaction of a negative result, which is easily demonstrated by staining the smear with methylene blue, which clearly defines both organisms. If no cocci are revealed, all anxiety is put at rest, but if there are present both varieties of these organisms, occupying as they do the protoplasm of the pus corpuscles, a further research and the differentiation of the true form from the false diplococcus is imperative. The pseudo-coccus retains the violet color of the aniline-gentian water violet stain, while with careful laboratory technique the addition of the Bismarck brown brings out the gonococcus, the protoplasm of a single pus corpuscle showing at times both the blue stain of the pseudo-coccus and the diplococcus of Neisser, which retains the brown color.*

Bearing in mind the fact that the gonococcus of Neisser may remain dormant in these passages for months, and, as maintained by some observers, for years, incapable of a further inoculation of the seemingly immunized patient, but capable of exciting the most acute and injurious inflammation in an innocent victim, it becomes a matter of the greatest importance to subject to most careful study the external genito-urinary passages where an infection has once existed. It has been demonstrated that an artificial urethritis, such as that which nitrate of silver produces, will develop the dormant gonococci and cause their presence in the discharge.

Keys and Chetwood, in their excellent volume on venereal diseases, place well-deserved emphasis upon the value of the Gram test for recognizing these organisms. They properly insist that the diplococci should be of the recognized size and have within the protoplasm of the pus corpuscle their proper shape and arrangement and remain negative to Gram's staining. Even when cultures are made to demonstrate the specific organisms beyond all doubt, resort should still be had to the Gram staining as a final means of identification.

In cases of pyelitis, many of the difficulties which for-

*Kelling's test consists of 5 c.c. of the filtrate diluted to 50 c.c. with distilled water, to which one or two drops of official 5-per-cent. solution of the perchloride of iron are added. The yellowish-green tinge indicates the presence of lactic acid.

†To 10 c.c. of the filtered contents add 3 c.c. of glacial acetic acid, and extract the coloring matter of the blood by shaking with 5 c.c. of ether. This turns the ether extract brown. When this discoloration does not take place there is no blood. To carry the demonstration further, to the brownish decanted ether extract, 10 drops of fresh tincture of guaiac with a few drops of peroxide of hydrogen are added. After vigorously shaking, the mixture becomes clear blue if blood is present.

*Dr. Jeffreys, the director of the laboratory in the New York Polyclinic, employs the following differential stain:

Use Gram's stain followed by a contrast stain, such as Bismarck brown. To prepare this stain proceed as follows:

Prepare aniline water by emulsifying 8 drops of aniline oil in about 10 cubic centimetres of water. Filter through a wet filter. To this aniline water add about one tenth its bulk of a saturated alcoholic solution of gentian violet. Stain smear with this "aniline water gentian violet" one or two minutes. Wash in warm water and then immerse in Gram's solution for one minute. The formula for this solution is as follows:

Iodine	1 gramme;
Iodide of potassium	2 grammes;
Water	300 c.c.

Thoroughly wash in 95-per-cent. alcohol until no more blue appears to wash out; then wash in water. Counterstain for one minute with a saturated solution of Bismarck brown in 3-per-cent. aqueous solution of carbolic acid. Wash, dry, and mount in balsam. After this treatment, pseudo-gonococci should be stained violet, and gonococci should be brown.

merly stood in the way of differential diagnosis between renal calculi, simple pyogenic pyelitis, or the presence of tuberculous disease in this organ are now overcome by the careful methods of the laboratory.

The presence of the bacilli of tuberculosis in one or both kidneys, even when they are exceedingly infrequent in the discharge, can be demonstrated in urine drawn by urethral catheterism or by the more simple process of bladder segregation, when the suspected organisms are with other detritus thrown down by the centrifuge. The carbolfuchsine stain decolorized with 5-per-cent. sulphuric acid brings out in brilliant red the outlines of the bacilli of tuberculosis, while the addition of 95-per-cent. alcohol decolorizes the smegma bacillus, and thus eliminates this possible source of error to any but the more expert laboratory workers.*

In the effort to arrive at the general condition of a patient, the chemical, microscopical, and bacteriological study of the urine is only second in importance to that of the blood, and when we consider the additional and exact information which can thus be obtained concerning any pathological process at any point in the urinary tract, the value of this analysis is very materially increased. A careful study of the urine is always indicated before determining what anæsthetic it is safest to employ in the operation to be undertaken. When there is no important lesion of the heart, either in its valvular mechanism or in the blood supply and nutrition of its muscular walls, few surgeons, I hold, would employ ether in a protracted operation in which there was any suggestion of an acute nephritis, or in certain chronic forms of Bright's disease.

It is commendable practice to study through several days the quantity of urine passed, keeping accurate measurement, as well as making a qualitative analysis of that which is passed under conditions as nearly as possible similar to those to which the patient had been subjected before coming under observation, and then under conditions of rest, with proper alimentation and the free opening of the alimentary canal with calomel and Carlsbad salts (which agents in my experience most readily do away with fermentation and the production of gases in the bowels); to note the changes which occur in excretion.

The presence of oxaluria is, in my opinion, a contraindication to a serious surgical operation, for the reason that it is pathognomonic of a disturbed nutrition due to insufficiency of the digestive fluids, and to fermentative processes in the intestinal tract.

An excess of *uric acid,* evident in the rosettes or rhombic or quadrate crystals (one sixth objective), found in the urine *which has not been passed* more than three or four hours, has also a pathological significance scarcely less than that of oxaluria. It indicates a condition of defective nutrition which is part of the gouty or rheumatic diathesis, predisposes to chronic nephritis, and is one of the symptoms of various acute inflammatory processes, of leucæmia, cirrhosis of the liver, gastro-intestinal catarrh, and is often present in diabetes mellitus.

The chemistry and microscopy of the urine further inform us when ammoniacal decomposition of the urine is taking place within the bladder, suggesting insufficiency of this organ due to obstruction of the urethra or to atony of the bladder muscle. The large rhombic masses or stellate and cross-shaped rosettes of the triple phosphates only exist in these abnormal conditions of the bladder, and with the brownish-colored thorn-like crystals or urate of ammonium are important aids to diagnosis.

The presence of epithelia from the various portions of the urinary or genito-urinary tract, of spermatozoa, and of various bacteria chiefly pyogenic in character, is further and well-recognized evidence of the value of the microscope in surgical diagnosis. In rarer instances, the hooklets of echinococcus, the embryos of filaria, and the ova of *Hæmatobium Bilharzii* are thus discovered in the urine. The writer has been able once to demonstrate the presence of the eggs of the last-named parasite in the bloody urine of a missionary in Africa, where he had by long residence acquired the disease.

From the laboratory we are taught the well-known tests for albumin and sugar by which all sources of error may be eliminated in determining not only their presence but the quantitative analyses as well. The pathological conditions in which these substances are excreted are at times exceedingly grave, and it is of vital importance that their presence be discovered so that timely and judicious treatment may be instituted, or operation avoided which under such unfortunate conditions would be invariably fatal.*

In glycosuria the surgeon must know whether he is dealing with what Pavy designates as alimentary diabetes, in which the sugar eliminated by the urine is derived solely from the food as result of defective carbohydrate assimilation, or whether that almost hopeless condition of composite diabetes in which abnormal disintegration is taking place is present.

No less important is the estimate of the amount of urea which is being eliminated in a given quantity of

The following process is used at the Polyclinic laboratory in determining the presence of the tubercle bacillus in the urine and fæces. The sediment is thrown down in the centrifuge, the smear dried slowly over the Bunsen burner and stained with carbolfuchsine, which is then warmed over the Bunsen burner for three or four minutes without being dried. Then wash with water and decolorize with 5-per-cent. sulphuric acid, and again wash with water. After this add 95-per-cent. alcohol, which decolorizes the smegma bacillus and again wash in water, counterstain with methylene blue, and dry. With the $\frac{1}{12}$th oil immersion, the clusters of tubercle bacilli are readily seen.

*To determine the presence of albumin, the nitric acid and heat test is classical and reliable. The simplest quantitative analysis as recommended by Hare is to fill the tube for the centrifuge to the 10 c.c. mark with urine, to which is added 2½ c.c. of potassium ferrocyanide solution (one part to ten); 1½ c.c. of acetic acid is also added. After mixing the fluids well the centrifuge is rotated until the albumin is precipitated. Every 1-10th c.c. mark on the tube represents 1 per cent. by bulk of albumin; that is, if the albumin extends up to the 3½ c.c. mark the albumin amounts to 35 per cent.

Fehling's test in the demonstration of sugar and the quantitative analysis by means of yeast fermentation is another important laboratory process, without recourse to which the surgeon in a certain group of cases cannot satisfactorily work.

urine. Employing the simple apparatus of Doremus with the sodium hypobromite solution,* within a few minutes' time, by the evolution of nitrogen gas in the presence of this, the amount of urea which is being carried off by the kidneys is readily demonstrable.

Non-parasitic chyluria (that form not due to the presence of filaria) is a rare affection, but it does exist, the fluid coagulating almost like jelly. In these conditions the microscope shows little that is pathological excepting some minute granules and oil droplets similar to those in milk. (Osler.)

The presence of blood in the urine, even in the most minute quantities, can in almost all cases be recognized by the microscope, and in those exceptional instances of hæmoglobinuria in which the corpuscles have disappeared, the blood crystals of Teischmann may be recognized by the addition of a drop of strong acetic acid to a few drops of urine placed upon a watch-glass. For this condition of blood pigment in the urine in which the blood-cells are absent, Osler suggests the name methæmoglobin. He further states that when granular pigment or darkly pigmented urates or fragments of blood-disks do not point clearly to the presence of blood, the two absorption bands of oxyhæmoglobin, and, more commonly, the three absorption bands of methæmoglobin, of which the one in the red near G is characteristic, may be determined by the spectroscope. In general, however, the red and white blood corpuscles and filaments of clot are clearly recognizable with the one sixth objective. Even without the microscope the presence of a very minute quantity of blood distributed through the urine can be recognized by Heller's test of adding a few cubic centimetres of urine to a drop or two of strong solution of caustic soda and boiling the mixture. If blood is present, a bottle-green color is produced and the phosphates fall to the bottom of the test-tube in fine flakes, tinged brownish-red by the coloring matter of the blood. (Hare.)

When blood is found in the urine as a complication of papilloma of the bladder, particles of the broken-down tumor are very frequently found in the urine, and under the microscope the epithelial elements of this neoplasm are easily recognized and point clearly to the source of the hæmorrhage. In hæmorrhage from the kidney substance blood casts tell unmistakably of its source.

Chemistry demonstrates in the urine the presence of indican, or indoxyl sulphate of potassium, a product resulting from the decomposition of albuminous products in the intestinal tract under the influence of bacteria. It is always suggestive of persistent constipation, is found in obstruction of the intestinal canal, in carcinoma of the liver or stomach, and in peritonitis, and is one of the symptoms of pernicious anæmia. Urine containing this substance, if treated with two or three times its volume of hydrochloric acid, turns a violet color.

A careful analysis of the various casts found in the urine under different conditions is of inestimable value. Blood casts indicating not only hæmorrhage from the kidney, but acute inflammatory conditions, and casts composed of pus corpuscles and studded with micrococci suggesting pyelonephritis, are most valuable results in laboratory research. It also tells us of the existence of granular casts which indicate a chronic or subacute inflammatory process in the substance of the kidney, which is accentuated when fatty casts are found, and that hyaline casts have a grave significance, as they are most frequently associated with chronic interstitial nephritis, and that the waxy variety is very common in chronic suppurative processes, usually in the bones and joints.

To-day one of the most attractive subjects of laboratory research is the blood, and although hæmatology is practically in its infancy many valuable discoveries have already been made, and in the proper study of a patient a knowledge of the blood is as essential as that of the urine. It may throw no light upon many cases, but the reward will be tenfold in that particular instance where the diagnosis is made definite and clear. It is necessary to know the normal blood thoroughly by constant practice in order to recognize the abnormal changes which may be present in a given case, and I can think of no more useful way of spending the time not taken up by practice than by going over these important features of laboratory technique.

A knowledge of hæmatology enables the surgeon to detect any form of anæmia and to determine whether it is a type of blood impoverishment which can be corrected, or whether it is of the graver or more pernicious forms which would either preclude an operation, or, if this were absolutely necessary, would enable him to announce to those entitled to information the gravity of the outlook. In ordinary practice it is not always essential to differentiate between a pernicious anæmia and a leucæmia, or whether this latter condition is present in the lymphatic or splenic-myelogenous form, for the reason that all of these graver varieties call a halt to operative measures when these can be avoided. But the anæmia which comes from malnutrition or malaria or chlorosis can be positively diagnosticated by a study of the blood.

The richness of the hæmoglobin may in a fair measure be determined by the comparative color test of the blood in proper solution, as observed through von Fleischl's hæmometer. When a low percentage of hæmoglobin is present, it is an indication to avoid any operative shock until the impoverished condition of the blood can be corrected by proper nourishment, by rest, or by medication, when this is positively indicated. This also sug-

*Solution A, bromine and sodium bromide each 125 grammes, water 1,000 c.c. Solution B. sodium hydrate 400 grammes, water 1,000 c.c. Take of A and B each one part, water three parts. They are only to be mixed when needed for use. After the tube has been filled with the solution the pipette is filled with urine to the one c.c. and the point carefully introduced beyond the bend. The urine in the pipette is then expelled by compression of the bulb, care being taken not to force any air into the tube.

gests the aid of the microscope in a further investigation as to the condition of the corpuscular elements of the blood. It is advised by Mikulicz never to operate when the register of the hæmometer shows less than 35, and it would probably be safer to place the standard ten or fifteen points higher. Even in the simple forms of anæmia, the degenerative changes in the blood elements, especially in the red cells, are easily recognized, and are full of valuable suggestions.

When the red cells are near the normal count (about 6,000,000 to the c.c.) they may still show certain characteristic deformities of individual cells (poikilocytosis) as well as variations in size in the presence of microcytes and macrocytes which appear in the field, and which are not seen in the normal blood. If the red cells are paler in color than normal, if they undergo crenation or breaking at the edges, and do not form rouleaux, it is evident that anæmia is present.* The danger signals are still further in evidence when nucleated red cells (normoblasts) appear, and when there is added to these either the giant red cells (megaloblasts) or abnormally small microblasts, the condition is still more serious, since these corpuscles never exist in the normal blood.†

Hæmatology further enables us to differentiate with reasonable precision between chlorosis and pernicious anæmia. In the former, though pale in color, the blood coagulates rapidly, while in the latter coagulation takes place slowly and the red corpuscles do not tend to the formation of rouleaux. The red cells in chlorosis (which are smaller and paler than normal and are frequently deformed) vary from 4,000,000 to 2,000,000, rarely falling as low as 1,000,000, while in pernicious anæmia, in which the average diameter of the red cells is increased, the count rarely rises above 1,000,000, and is often below this. Cabot gives 1,000,000 as the average number per cubic millimetre. The white cells are also diminished, varying from 4,200 to as low as 500, with lymphocytosis as a prominent feature. Megaloblasts are found in both conditions, but while plentiful in pernicious anæmia are rarely noticed in the milder disease, chlorosis. The more megaloblasts in pernicious anæmia, the more hopeless the case.

The surgeon would be extremely unfortunate to fail in the recognition of these often obscure lesions, and, if possible, to correct them before subjecting his patient to the severe ordeal of an operation. In the early recognition of septic processes—chiefly pyogenic—surgery can no longer disregard the value of the blood count, especially the estimation of the leucocytes.

The relative number of leucocytes in a given quantity of blood, or their proportion to the red corpuscles, can be readily determined by the use of the Thoma-Zeiss apparatus, which, as is well known, consists of two pipettes, one for the red and one for the white, with a well-outlined and peculiarly constructed slide or counting apparatus, and employed with the ordinary one sixth laboratory objective. The differentiation by the use of the Daland hæmatocrite is not considered sufficiently exact to be satisfactory in the hands of the majority of hæmatologists. It is essential in making these differentiations to bear in mind the normal conditions that at the sea level the average number of red cells per cubic millimetre is 5,000,000 in men, and 4,500,000 in women, and 6,000,000 in the young and more vigorous adults, while the white cells average about 7,500 per cubic millimetre for each sex.

Certain conditions not considered normal influence the number of leucocytes, since in the latter months of pregnancy they are moderately increased, and after parturition and during the early weeks of lactation a leucocytosis may be present without pathological significance. After hæmorrhage the leucocyte count is increased, and in diphtheria, erysipelas, trichiniasis, all extensive forms of endometritis, and all acute pyogenic processes leucocytosis exists except in those cases where the vitality of the individual has been overwhelmed by the severity of the septic process, under which condition the leucocytes no longer respond to the demand for the protection of the tissues, and are not present in the superficial blood in even normal proportions. It is probable that the application of this knowledge is more profitable at present in a study of the various lesions of the abdominal and thoracic organs. We know that in a certain proportion of cases of infection, temperature does not always indicate the increasing gravity of the lesion, while the degree of sepsis can be in great measure determined by the leucocyte count. In impaction of fæces, extra-uterine pregnancy, floating kidney, gall-stone colic, renal colic, ovarian neuralgia, intussusception, volvulus, internal hernia, twisted pedicle, etc., there is no leucocytosis unless complicated with an acute septic process. In abscess of the liver the leucocyte count ranges from 12,000 to 48,000, while there is a well-marked increase in all the septic pyogenic processes of the lungs and the pleura.

In osteomyelitis the leucocyte count ranges, as a rule, from 15,000 to 25,000, and at times higher. Since, in the early stages of this disease, it is at times difficult by subjective symptoms to differentiate between rheumatism and gout, the leucocyte count is invaluable in demonstrating at once the pyogenic process.

In that very rare disease, trichiniasis, the leucocytes register sometimes as high as 30,000, but the special feature is the presence of a large number of eosinophile cells, sometimes as high as 50 per cent., and in rare cases 67 per cent. of the total number of leucocytes being this form of corpuscle. A very considerable number of cases have been reported within the last year in which the diagnosis had been determined by the presence of eosinophiles.

Not only can the presence of the *Plasmodium ma-*

* The average red corpuscle (normal) is seven micromillimetres in diameter.

† A normoblast is a nucleated red cell not over 10 mm. in diameter, with a nucleus of not more than one half the diameter of the same.

lariæ be recognized in the red blood cells, but hæmatology is already able to determine between the different varieties of the malarial parasite. It has been shown that the tertian organism takes forty-eight hours to develop and undergo sporulation; the quartan seventy-two, while the æstivo-autumnal passes through irregular phases, varying from forty-eight hours to several days.

We are enabled to demonstrate also the presence of the spirochete of relapsing fever discovered by Obermeier in 1873. Although the cork-screw, or spiral, threads are rarely seen unless the blood is examined in the height of the fever paroxysm, diplococcus-shaped bodies, believed to be the spores of this organism, are found in the periods of remission.

The time allotted has permitted hardly more than a suggestion of the methods of laboratory research applicable in the daily routine of surgical practice. To me the moral of the lesson is that the *science* and *art* of surgery are inseparable.

THE PROGRESS AND TENDENCY OF HYGIENE AND SANITARY SCIENCE IN THE NINETEENTH CENTURY,

BEING THE ORATION IN STATE MEDICINE BEFORE THE FIFTY-SECOND ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, AT ST. PAUL, JUNE 4, 5, 6, AND 7, 1901.

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HYGIENE is a department of medicine whose object is the preservation and promotion of health, and deals, therefore, with all the factors likely to influence our physical welfare. It is not an independent science, but rather the application of the teachings of physiology, chemistry, physics, meteorology, pathology, sociology, epidemiology and bacteriology to the maintenance of the health and life of individuals and communities. The subject is very properly divided into personal and public hygiene. In the former the doctrines are applied to individuals, in the latter to communities and States.

This branch of medicine has received such an impetus within the last few decades that many persons regard it as of modern origin; such, however, is not the case, for on turning to early history we almost invariably find that the health of the population has been made a subject of legislation. Hygiene was practised by the Egyptians, the old Indians and Hebrews, and a study of the habits of the primitive peoples shows that a desire to prevent disease is innate to all men.

The Greeks and Romans paid special attention to the physical culture of their youth; they also paid much attention to the water supply, and Athens was provided with sewers at an early period of her history.

The teachings of Hippocrates, 400 B. C., doubtless bore many fruits, and whether it is true or not, as stated by Galen, that he ordered, during a pestilence at Athens, aromatic fumigation and large fires in the streets, we have at least his writings on air, water, soil, habitations, and occupations, and his views of local and seasonal influences on sporadic and epidemic diseases. In Homer's *Odyssey* reference is made to Ulysses purifying his house with burning sulphur, and Aristotle, in his *Politica,* shows his sanitary acumen when he says: "The greatest influence upon health is exerted by those things which we most freely and frequently require for our existence, and this is especially true of water and air."

The Romans, amidst their military operations, found time to construct the Cloaca Maxima about 2,400 years ago, which not only served for the removal of refuse, but also helped to drain many of the marshes, and still constitutes the principal sewer of modern Rome. Aqueducts were made to cover miles upon miles of the surrounding plains, and their splendid ruins, many of which have been restored and are now used for their original purpose, attest the munificence and abundance with which the first of sanitary requisites was supplied to the Eternal City. It is stated that between 400 B. C. and 180 A. D. about 800 public baths were established, among them the Thermæ Caracallæ, which alone would accommodate 3,000 bathers at one time.

During the reign of the Cæsars attempts were made to drain the Pontine marshes; sanitary officials and physicians to the poor were appointed and homes for poor girls and orphans were established. In the meantime the true spirit of Christianity asserted itself, and we read of the establishment of hospitals so early as the fourth century; these were speedily followed by infant and orphan asylums and homes for the poor and incurables. During the Middle Ages sanitation received a decided check, ignorant and brutal prejudices appear to have been the ruling spirits, and for many reasons it was the most insanitary era in history.

PESTS AND INSANITARY CONDITIONS OF THE MIDDLE AGES.

About this time most of the towns in Europe were built in a compact form, surrounded with walls; the streets were narrow and often winding for defensive purposes, shutting out light and air from the houses. The accumulation of filth was simply frightful. Stables and houses were close neighbors, human filth was thrown on the streets or manure heap. The dead were buried within the churchyards. Sewers and aqueducts having been permitted to fall into disuse, the inhabitants were compelled to resort to wells with polluted subsoil water. All the conditions were favorable for the spread of infectious diseases, and in the fourteenth century alone the Oriental or bubonic plague, according to Hecker, carried off one quarter of the population of Europe, or over twenty-five million victims.

Although this disease had been described as early as

the third century, B. C., a lamentable state of ignorance is shown, when we remember that the majority of people regarded the plague as the dispensation of God's providence, an evidence of divine wrath, which they hoped to allay by all sorts of self-inflicted punishments, and the passion plays of Oberammergau and elsewhere originated about this time. Others accused the Jews of being the cause, and hundreds were burned at the stake until Pope Urban IV placed them under his special protection. The Faculty of Paris attributed the epidemic to the conjunction of planets on a certain day in 1345, and the Faculty of Leipzig, with equal gravity, asserted that it was connected with earthquakes, unseen waves of air, inundations, etc. Venice alone of all Europe took a sensible view of the matter, and for the first time in history, in 1348, appointed three guardians of public health, and the rules adopted later to isolate infected houses and districts for forty days have given rise to the term quarantine—from *quaranta giorni.*

The repeated invasion of the Oriental pest appears to have everywhere compelled some sanitary efforts, and an imperial decree, in 1426, required the appointment of city physicians throughout Germany, whose duty it was to adopt preventive measures. A city ordinance of Nürnberg, in 1562, gives detailed directions as to the quality of bread, beer, and wine offered for sale, the cleaning of streets and houses, the disposition of infected clothing and bedding, the fumigation with sulphur and straw of pest-houses, etc.

In 1685, Prussia established a central medical bureau, and appointments of health-officers and privy medical counsellors were made, whose duties consisted in advising the men entrusted with the care of the government on matters relating to public health, and some of these titles are still in vogue in Europe. At the beginning of the eighteenth century, Prussia, upon being threatened with an invasion of the bubonic plague from Austria, created the Collegium Sanitatis, popularly called the Pest College, which was really the beginning of the present State board of health. In 1762 a sanitary council was established in every Prussian province for the prevention of disease among man and animals. About the same time sanitary improvements in the way of widening streets for the purpose of supplying more air and light to the habitations, and better methods for the collection and removal of the wastes of human life, were introduced, but, broadly speaking, at the close of the seventeenth century the habits of the people in Europe were generally filthy, and in striking contrast to those observed among the most untutored savages of the present day.

In Madrid, we are told by Barcome, in his *History of Epidemics,* that "not even a privy existed in 1760. It was customary to throw the ordure out of the windows at night, and it was removed by scavengers the next day. An ordinance having been issued by the king that every householder should build a privy, the people violently opposed it as an arbitrary proceeding, and the physicians remonstrated against it, alleging that the filth absorbed the unwholesome particles of the air which otherwise would be taken into the human body. His majesty, however, with commendable zeal, persisted, but many of his citizens, in order to keep their food wholesome, erected privies close to their kitchen fire-places."

With such unsanitary conditions we need scarcely be surprised that the mortality in towns was greater than their birth-rate, and that the city population had to be recruited continually from the country. Toward the close of the eighteenth century many sanitary reforms were effected, however, especially in connection with infant and orphan asylums, and the management of schools and prisons. Of special importance is the brilliant discovery, or rediscovery, of vaccination by Jenner in 1796.

PROGRESS OF SANITATION IN THE NINETEENTH CENTURY.

The nineteenth century can boast of many advances in hygiene, particularly since the European invasion of cholera in 1830. The English towns which had been visited by this disease and those fearing similar scourges were willing to profit by their sad experience, and freely instituted sanitary reforms in the establishment of sewers, public water supplies, sanitary homes, etc.

The example of England was followed by all civilized nations, with similar results. The efforts of sanitation, as taught by Dr. Parkes, were demonstrated during the Crimean war and, as beautifully expressed by Virchow during our civil war, reached "the highest point in humane efforts ever attained in a great war," and, we may proudly add, have even been excelled during our late Spanish-American war.

PROGRESS OF SANITATION IN THE UNITED STATES.

While the people of the United States were not slow in adopting and originating sanitary measures of great value, our ideas of personal liberty, guaranteed to us by the Constitution, evidently prevented early legislation in matters of public health, for fear that such legislation might affect the personal habits of the citizen and lessen his freedom of action. Dr. Samuel W. Abbott, in his masterly exposition of The Past and Present Condition of Public Hygiene and State Medicine in the United States, records, however, the gratifying fact that the early colonists recognized the need of preserving their records, which constitute the foundation stone of public hygiene, by enacting a law in 1639 "that there be records kept of the days of every marriage, birth, and death of every person in this jurisdiction."

The importance of vital statistics is not fully appreciated at the present day, and yet, as remarked by Dr. Billings, "when we wish to study the healthfulness of a city, whether it is getting better or worse, or judge correctly the effect of certain sanitary laws, we should not only know the number of deaths, but also the amount

and character of the prevalent disease, together with accurate information as to the number of population at different ages." It is a matter of regret, therefore, that even now only ten States, Connecticut, Delaware, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Rhode Island, and Vermont, have anything like a satisfactory system of vital statistics.

According to Abbott: "Up to the close of the eighteenth century and for several decades of the nineteenth, almost the only health legislation which was enacted in the different States in the Union consisted in a few laws relating to smallpox, since this pestilence was scarcely ever absent for many years at a time from any city or village, till after the general introduction of vaccination."

Dr. Waterhouse, of Cambridge, having secured a supply of vaccine lymph from Dr. Jenner, introduced vaccination in Boston in 1800, and Dr. Seaman in New York in 1801. In the same year President Jefferson received some virus from Dr. Waterhouse and was vaccinated by Dr. Grant, of Georgetown.

The invasion of cholera from Canada in 1832, and the epidemic of 1848-1849 here, as in Europe, aroused public interest in sanitary reforms, and the Legislature of Massachusetts in 1849 appointed a commission to make a sanitary survey of the State, and we are told by Dr. Abbott "that this was done none too soon, for in that year the general sanitary condition of the State, as shown by the report of the commission, was deplorable and the death rate unusually high. Only a few towns had then introduced public water supplies. Cholera was beginning to appear again and dysentery and other infectious diseases were more destructive than they had been for many years."

HEALTH BOARDS.

New Orleans having lost 8,000 victims of cholera in 1832 out of a population of about 55,000, and anxious to maintain a quarantine, secured the enactment of a law in 1855 for the establishment of a State Board of Health; in 1869 a more comprehensive board was established in Massachusetts, followed in 1870 by California, since which time nearly all of the States and Territories —forty-two in number—have followed the example. *Pari passu* with, and in many instances preceding, the establishment of State Boards of Health, sprung into existence our local Boards of Health, who adopted measures for the control and restriction of infectious diseases, for the abatement of local nuisances, for the sanitary inspection of the food supply, schools, public buildings and institutions and tenements; street cleaning and removal of refuse, registration of vital statistics, supervision of burials and of municipal water supply, sewerage, and sewage disposal, care of bathing establishments, regulation of offensive trades, etc.

EFFECTS OF VOLUNTARY ORGANIZATION ON SANITATION.

In September, 1872, the American Public Health Association was organized; in 1873, the Section on State Medicine of the American Medical Association was created; since then the American Climatological Association, the Sanitary Council of the Mississippi Valley, the American Sanitary Association, and the American Health Resort Association have been organized, and numbering, as they do, among their members some of the best minds in the profession, much good has been accomplished by these bodies and the so-called "sanitary conventions," in moulding public opinion and in framing and recommending health laws. There is no doubt, however, that all these organizations were stimulated into existence by the lofty tenets of our Code of Ethics,* in which the duties of the profession to the public were prescribed as early as 1847.

Indeed, the American Medical Association, according to Dr. N. S. Davis, Sr., gave prominent attention to State medicine and sanitation from its first meetings. At the second annual meeting, in 1849, standing committees were appointed on forensic medicine and on hygiene and reported annually on these topics and on meteorology, medical topography and epidemic diseases until 1860, when work in sections was commenced. Dr. A. N. Bell, of New York, delivered the first address on State medicine in general session of the association in 1874, followed, in 1875, by Dr. N. I. Bowditch, of Boston.† In this connection, I may say that there is need of reliable information on the geographical distribution of diseases like goître, cretinism, etc., and county medical societies would contribute much to the common fund of knowledge by placing on record information of this character.

NATIONAL BOARD OF HEALTH.

The cholera epidemic of 1872 and 1873 resulted in the appointment of a commission by Congress. This, together with the yellow-fever epidemic of 1878 in the Southern States, affecting, according to Sternberg, over 74,000 persons, with 16,000 deaths, called attention to the necessity of some central sanitary organization. In March, 1878, Congress created a national board of health, whose duty it was to make investigations into the causes and means of prevention of contagious and infectious diseases, to indicate measures of national importance and to be a centre of information for all matters relating to public health. For want of appropriation this important body has ceased to exist, and since 1883 the duties relating to international and inter-State

*Article 1, paragraph 1, reads: As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene and legal medicine. It is their province to enlighten the public in regard to quarantine regulations, the location, arrangement and dietaries of hospitals, asylums, schools, prisons and similar institutions; in relation to the medical police of towns, as drainage, ventilation, etc., and in regard to measures for the prevention of epidemic and contagious diseases, and when pestilence prevails it is their duty to face the danger and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives.

†Information kindly furnished by Dr. N. S. Davis, Sr., and Dr. George H. Simmons, letter of April 18, 1901.

quarantine have been discharged by the surgeon-general of the United States Marine-Hospital Service; his bureau, apart from the management of hospitals and stations for the care of sick and disabled seamen of the merchant marine, has also undertaken the collection and dissemination of mortality statistics and sanitary information, scientific investigation into the causes of disease, the physical examination of immigrants under the law, excluding those affected with contagious disease—service in the office of consuls at foreign ports to assure the accuracy of bills of health—and other miscellaneous duties. Since Congress has failed to act upon the President's repeated recommendation and the petition of numerous medical societies for the creation of a national health establishment, there is no good reason why the scope of duties and powers exercised by the Marine-Hospital Service should not be enlarged. Indeed, the last Congress appropriated sufficient money for the erection of a laboratory "for the investigation of infectious and contagious diseases and matters pertaining to the public health," which marks the beginning of a new era in national sanitary legislation.

NATIONAL AND INTERNATIONAL QUARANTINE.

The question of an efficient system of national and international quarantine against Asiatic cholera, yellow fever, smallpox, typhoid fever, bubonic plague, and leprosy has engaged the attention of sanitarians for years, especially since it has become known that these diseases, particular cholera, are generally carried along the highways of travel and commerce. Special efforts were made after the completion of the Suez Canal and other rapid-transit facilities, to guard Europe from the invasion of cholera from India, and since 1892 these efforts have been quite fruitful. At all events, with efficient quarantine regulations involving inspection of vessels, passengers, and crew, the detention of the sick and disinfection of all others, including personal effects, cargo, and vessels, and proper notification, we have been enabled to keep these diseases from our shores, and, if other nations do the same, they should be restricted to their original home. General Wyman's plan, as outlined in his address before the Pan-American Medical Congress, contemplates an international system of sanitation; while his proposition refers especially to yellow fever in the Western Hemisphere, it is equally applicable to the home of cholera and the Oriental plague.

In the light of the recent researches by Reed and Carroll as to the transmission of yellow fever by means of mosquitoes, our views concerning quarantine and disinfection in this disease may have to be modified, but in the meantime the fight against the mosquitoes will go on; whether this will be effectually accomplished by insecticides and screens, or the more rational method of drainage of the soil, remains to be seen; in either event malarial countries will likewise be benefited.

HAS HUMAN SUFFERING BEEN MITIGATED AND HUMAN LIFE GREATLY PROLONGED BY EFFORTS IN SANITATION?

Our answer is an emphatic "Yes." Professor Finkelnburg, of Bonn, estimates that the average length of human life in the sixteenth century was only between 18 and 20 years; at the close of the eighteenth it was a little over 30 years, while to-day it is over 40 years; indeed, the span of life since 1880 has been lengthened about six years, as shown by statistics, in Mulhall's *Dictionary of Statistics* (Fourth Edition, London, 1899).

The mortality of London between 1660 and 1678 was 80 per 1,000 of inhabitants; from 1728 to 1780, 51 per 1,000; from 1801 to 1835 it was still 29, while at the present time it averages between 17 and 19 per 1,000.

INFLUENCE OF SEWERS AND PUBLIC WATER SUPPLIES.

Without underestimating the brilliant achievements of Jenner's discovery of vaccination in 1796, which as a preventive measure has saved millions of lives, no two factors have contributed so much to the general result as the improvement of the air we breathe and the water we drink. Indeed, we have ample evidence that, with the introduction of sewers and public water supplies, the general mortality in numerous cities, during the past forty years, has been reduced fully one half, the good effects being especially shown by a marked decrease in the number of cases of typhoid fever, diarrhœal diseases, and consumption. The vital statistics of Great Britain furnish the proof. The mortality at Salisbury within the last thirty years has been reduced from 40 to 16 per 1,000; at Dover, from 28 to 14 per 1,000; at Rugby, from 24 to 10 per 1,000; at Croydon, from 28 to 15 per 1,000; and at Matlock, from 18 to 9 per 1,000.

The history of every sewered city shows a lessening of the typhoid death rate subsequent to the construction of the sewers, and that the typhoid rate is always higher in sections supplied with privy pits and box privies than in the houses connected with sewers. In 1895 the speaker pointed out that typhoid prevailed in the city of Washington and suburbs in 1 of 81 houses with privies, and in only 1 in 149 of those connected with sewers, and the health officer of Nottingham has since then presented similar evidence. The only reasonable explanation for this is that sewers carry away the filth that otherwise would contaminate the soil and ground water, but even if there were no wells, these makeshifts are still a source of danger in so far as they favor the transmission of the infection by means of flies, nor can the possibility be ignored that the germs in leaky or overflowing boxes may reach the upper layer of the soil, and, with pulverized dust, gain access to the system. This conclusion, and the agency of flies in carrying the germs from box privies and other receptacles from typhoid stools to the food-supply, was enunciated in my report in

1895 and appears to have found ample support in the experience of the late Spanish-American war.

INFLUENCE OF IMPROVED WATER SUPPLIES.

According to Dr. Abbott, the number of towns in the United States before 1800 having a public water supply was only 16, supplying about 2.8 per cent. of the existing population; in 1850 there were only 83 public water works, supplying about 10.6 per cent. of the census population; in 1897 the total number was 3,196, supplying about 41.6 per cent. of the population.

A summary of the evidence on this subject reveals the significant fact that cities, both at home and abroad, in which there has been the most marked decrease in typhoid fever death rate, are those in which a pure supply has been substituted for a preexisting contaminated one. Thus, for example, the typhoid fever death rate in Boston in 1846-1849 was still 17.4 per 10,000; in 1890-1892 it had fallen to 3.2 per 10,000, the city having in the meantime expended $25,000,000 on its water supply. The typhoid fever death rate in Chicago from 1890 to 1892 averaged 12.5 per 10,000. After improving the water supply it fell with every step in improvement until last year it was only 1.9 per 10,000, a total reduction of 84.8 during the decade. The rate from this disease in Lawrence, Mass., for five years prior to 1893, was 12.7 per 10,000. After the establishment of sand filters, in September, 1893, the rate fell during the first twelve months to 5.2 per 10,000.

Munich was notorious for its excessive typhoid fever death rate, it being 29 per 10,000 in 1856. With the introduction of a pure water supply and improved sewer system it has fallen to less than 2 per 10,000. The experience of London, Berlin, Vienna, Albany and a host of other cities has been precisely the same.*

SEWAGE DISPOSAL AND RIVER POLLUTION.

When we remember that in 1896, 41 per cent. of our population lived in towns having public water supplies, and only 28.7 per cent. in sewered towns, we fear that the municipal authorities have failed to recognize the necessity that a system of public sewerage must go hand in hand with the public water supply, the neglect of which simply compels recourse to the various makeshifts for the collection and removal of excreta, and leads to soil pollution and all the other evils already referred to.

In view of the fact that self-purification of rivers is a slow and uncertain process, and that streams once polluted with excrementitious matter cannot be considered a safe water supply, it is high time for civilized communities to take steps toward removing the danger to be found in rivers, which are the sewers and at the same time the sources of public water supplies.

We know, from statistics collected by the Marine-Hospital Service, that the towns and cities located on the banks of the Ohio, Potomac, Mississippi, Merrimac, Connecticut, Missouri, the Red, the Columbia and Wabash rivers show a marked prevalence of typhoid fever, confirming what has elsewhere been proved, that this disease, as also cholera, dysentery, and diarrhœal diseases, can be carried from one town or city to another by means of water courses. There were probably no fewer than 35,000 deaths caused by typhoid fever alone throughout the United States last year and, based upon an estimated mortality of 10 per cent., it is within reason to assume a yearly prevalence of 350,000 cases of this disease. The average duration of a case of typhoid fever is not less than thirty days. If we calculate that an average of $1 a day is expended for care, treatment and loss of work, and that the value of a human life is $5,000, we have a total loss in the United States of $185,500,000 per annum, from one of the so-called preventable diseases. Reduce the prevalence of this single disease one half, which has been accomplished in England, and the oft-recurring question: "How is it our fathers got along without these so-called modern improvements?" will be satisfactorily answered from an economic point of view.

One of the most pressing needs is an investigation into the pollution of water supplies when such pollution affects or threatens to affect the sanitary condition of the people of more than one State, because the individual States are powerless to protect themselves against the misdeeds of their neighbors. Mr. Bartholdi's bill for the appointment of a river pollution commission was defeated; yet that same Congress appropriated $40,000 for the extermination of the gipsy moth. England enjoyed the benefit of such a commission as early as 1855, and, in order to prevent, remedy and remove the danger of polluted water supplies, adopted a comprehensive system for the disposal of sewage and water filtration, the fruits of which have already been referred to.

No community or individual has a right to pollute streams used for public water supplies any more than a man has to contaminate his neighbor's well. This principle is very well appreciated by some of the nations in Europe. Thus the inhabitants of a town in Belgium suffered from the effects of a river polluted by the French, and the French Government not only compelled the offending town to dispose of its sewage by irrigation, but also granted a subsidy for this purpose.

In the interest of public health it is to be hoped that every State in the Union will take steps toward the prevention of river pollution, except when towns are located close to the sea, and no lower towns are obliged to use the water for drinking purposes.

In 1878 the British Government appointed a committee to inquire into the several methods of sewage dis-

*In 25 cities using unfiltered water the average typhoid death rate is still 7.7 per 10,000; in 5 American cities supplied with water filtered by the American process, the rate is 5.5, against a rate of 1.1 p r 10 000 in cities supplied with water filtered by the natural or English method. The average rate of 5 cities in Europe supplied with mountain springs or deep wells from unpolluted sources is only 0.7 per 10,000.

posal and concluded that it could be best and most cheaply disposed of by the process of land irrigation for agricultural purposes; but as this is not always practicable, other modes of dealing with sewage have been proposed.

It is a gratifying fact that within the past ten or twelve years, over one hundred communities in the United States have established plants for the disposal of sewage. The first attempt was made in 1872 at the State Insane Asylum, Augusta, Me., since which time seventy-eight plants for the disposal by irrigation, and fifteen by chemical treatment, have been established and over forty more projected.

PURE FOOD AND DRUG LEGISLATION.

The first movement toward securing comprehensive legislation against the adulteration of foods and drugs in this country was made in 1879. This is all the more surprising because Dr. Mann, in his *Medical Sketches of 1812*, remarks that "the bread on the Niagara was made of damaged flour, such as was either not nutritious or absolutely deleterious." It was believed also that the flour contained in some instances an earthy substance, and that this adulterating substance was plaster-of-paris. Again, during the civil war, so early as the winter of 1861-62, an extract of coffee furnished the troops in the vicinity of Alexandria produced nausea and vomiting, and subsequently a government contractor, for having practiced food adulteration, was sentenced to a protracted imprisonment.

Instances, therefore, were not wanting pointing to the necessity of such laws; nevertheless, it was not until 1881 that three States, New Jersey, New York, and Michigan, passed laws to prevent the adulteration of food and drugs. The law in New York commenced in the summer of 1882. At the close of the year, 286 samples of food and drugs had been submitted to the public analyst for examination, of which 194 had been reported on. Of 119 samples of food, 50 were found adulterated; while of 75 samples of drugs, 32 were adulterated.

Since 1883 quite a number of States have enacted similar laws, but I regret to say that in spite of the absolute necessity for national legislation, which has been agitated ever since 1892, so far every bill presented to Congress has failed to become a law, and food adulterated in one State can be taken to another and sold. It would lead me entirely too far even to touch upon all the frauds which are daily perpetrated. Some adulterations are harmful, others are not. I will simply refer to a very universal article of food, viz., milk. New York city obtains its milk supply from five States, and this amounted in 1896 to nearly 729,000 quarts a day. Analysis of the milk sold some years ago showed an average dilution with 33 per cent. of water. The State inspector found 12 per cent. of water added and 20 per cent. of cream removed, the fraud amounting to over $10,000 a day. The results in St. Louis, Chicago, and elsewhere were similar, and indicated the desirability of stringent laws to protect the pocket of the consumer, but when we remember the frightful infantile mortality, and the fact that the speaker has recently presented his conclusions, based upon 195 epidemics of typhoid fever, 99 of scarlet fever, and 36 of diphtheria, and that 52 of these outbreaks occurred in this country since 1882, we see at once that the milk traffic should be under strict sanitary control.*

LAWS REGULATING THE SALE OF DRUGS AND POISONS.

Forty-two States and Territories have enacted laws to regulate the sale of poisons, but a careful study shows that they should be amended, and greater restriction placed on the sale of poisons generally. A recent investigation by a committee of the Medical and Surgical Society into the extent of the opium and drug habit in the District of Columbia developed some interesting facts, and led to the conclusion that one class of subjects has developed the opium habit by the use of the milder preparation of opium and some of the various proprietary or secret remedies commonly employed as domestic remedies, such as paregoric, McMunn's elixir, chlorodyne, blackdrop, soothing syrup, diarrhœa mixtures, pain killers, etc. Those of another class have evidently acquired the habit by the constant use of prescriptions containing opium, or its preparations for the relief of pain, the individuals being at first quite unconscious of the enslaving nature of the drug. Still another class of persons belong to the moral degenerates of fast men and women who have acquired the habit by contact with opium habitués, including opium smokers, and through solicitation, invitation, and persuasion have fallen victims to the vice. Since the opium habit is often established by the unauthorized and indiscriminate renewal of prescriptions containing opiates, the New York Legislature very wisely enacted, in 1886, a law that no pharmacist should refill more than once prescriptions containing opium or morphine, or preparations of either, in which the dose of opium should exceed $\frac{1}{4}$ grain, or morphine $\frac{1}{20}$th grain, except with the verbal or written order of a physician.

It is clearly the duty of the State to close opium dens and restrict the sale of poisons, and in regard to the sale of patent and proprietary medicines containing poisonous drugs, the contents should be expressed on the label and the word poison added.

PATENT AND PROPRIETARY MEDICINES.

By the term patent medicine, as properly employed in this country, England, and Europe generally, it must be understood that the composition is known, and can be seen, at the patent office. The proprietary medicine is a secret preparation protected by a trade mark in this

*The results achieved by the health officers of every large city, notably by Reynolds, of Chicago; Wende, of Buffalo, and Woodward, of Washington, in the reduction of infantile mortality, amounting in some instances to over 50 per cent., show the advantage of pure food legislation.

country, and hence preferred by the owner, but both are vaguely termed by the public patent medicines. Up to December 10, 1900, the United States Patent Office had issued patents on the following:* Disinfectants, 321; extracts, 250; hair dyes and tonics, 48; insecticides, 180; internal remedies, 376; plasters, 56; topical remedies, 371; veterinary, 78. Trade marks:† Drugs and chemicals, 319; medical compounds, 5,974, and increasing at the rate of about 250 a year.

The proprietary medicines are subject to the control of the State authorities, and, if containing alcohol in sufficient quantity to be intoxicants, are subject to internal revenue laws; but so far as my knowledge extends, little or nothing has been done in this country and in England to control the sale of secret remedies. Dr. G. Danford Thomas, coroner of London and Middlesex, before the International Congress of Hygiene, in 1891, very justly urged that all proprietary medicines should be under the patent laws, because the composition is at least disclosed; he would abolish licenses to sell them and confine the sale to chemists and druggists only. In these matters we could certainly profit by the example of the Japanese, Italian, French, and German laws. In the interest of public health the profession should demand adequate legislation; as it is now, hundreds of these proprietary preparations, the composition of which need not even be disclosed to the patent office, are advertised in medical journals.

INDUSTRIAL HYGIENE.

The relations of occupation to health and life were studied so early as 1700 by Ramazzini, an Italian physician, and since then numerous monographs have appeared. We know to-day that persons habitually engaged in hard work, especially in factories and indoors, present a higher mortality than persons more favorably situated, and that the character of occupations influences, to a great extent, not only the average expectation of life, but also the prevalence of certain diseases. We know, for example, that tuberculosis is much more frequent among persons engaged in dust-inhaling occupations, and that the sharp, angular particles of iron and stone dust are more liable to produce lesions of the respiratory mucosa than coal, flour, grain, and tobacco dust. We know, too, that certain establishments, like slaughter-houses, glue, soap, and candle factories, chemical factories, etc., are more or less productive of noxious and offensive gases, and that workers in lead, mercury, arsenic, phosphorus, poisonous dyes, etc., suffer especially from the injurious effects, and that other occupations, such as mining, railroading, and contact with moving machinery, involve special danger to life and limb.

For all these reasons the laboring classes need special protection, and in order to render this efficient, it must be provided for by the enactment and enforcement of suitable laws. In 1864, 1867, and 1870, England enacted the so-called factory laws. According to Miss S. S. Whittlelsey's *Essay on Massachusetts Labor Legislation,* child labor, here as in England, was the first aspect to receive attention in legislation, as early as 1836. The first law as regards safety and sanitation was enacted in that State in 1877, since which time, from information kindly furnished by the Hon. Carroll D. Wright, of the United States Department of Labor, thirty-two States have enacted similar laws, including legislation requiring seats to be furnished saleswomen in stores and shops. Indeed, in some of the States the latter requirement is the only sanitary regulation. As a result of these laws, the majority of which were enacted during the last decade, commendable progress has been made in the way of ventilation, heating, lighting, removal of dust and injurious gases, means of escape in case of fire, and prevention of injuries by moving machinery.

It is quite true there are other factors which affect the health and longevity of wage-earners adversely. So, for instance, unsanitary dwellings, faulty nutrition—the results of badly prepared food and cold lunches—cannot fail to lower the power of resistance to disease, especially when the individual, in consequence of these very causes, has also become a victim of the alcohol habit.

SANITARY DWELLINGS FOR WAGE-EARNERS.

No field affords better opportunity for philanthropic work than the erection of sanitary homes for wage-earners at reasonable rentals, the encouragement of cookery schools, the establishment of sanitary lodgings, model eating-houses, and other betterments of industrial conditions.

The vital statistics of London show that the mortality in the improved dwellings for wage-earners is far below the general mortality of the city, the difference being specially marked in the infantile mortality; the general average during the five years ending December, 1890, was 153 per 1,000, while in the "George Peabody" and the "Metropolitan dwellings" it was only 136 and 121 respectively.*

*Information kindly furnished by Dr. J. B. Littlewood, of the Patent Office.

†Information collected from files of the U. S. Patent Office, by the author.

*At a recent meeting of the American Social Science Association, held in Washington, April 18, 1901, Mr. J. H. Patterson, of Dayton, Ohio, read a paper on factory sanitation and described a large manufacturing plant of which he was the head, and their close adherence to the principles of hygiene and the uplifting of mankind. The interior of the factory is painted in cheerful colors, extra windows have been made to give light, forced ventilation to afford plenty of fresh air, and all dust and acid fumes are carried away by exhaust fans. Bath-rooms and well-furnished toilet-rooms are on all the floors. All seats have backs. Clean aprons are furnished by the company, and a dining-room where hot meals are served, and a course in domestic economy is conducted. The grounds around the factory, and the houses of the employees, are healthful and attractive. "We have demonstrated," said Mr. Patterson, "that this system pays the employee, the manufacturer, and the buyer; in the health of one, profit of the second, and the improved quality of the product purchased by the third." Bulletin No. 31, Department of Labor, November, 1900, contains an article on betterment of industrial conditions, showing what has elsewhere been accomplished, every effort being in the right direction, except that free medical attendance is being furnished by certain companies, involving a contract system with physicians, which ought never to gain a foothold on American soil, because it has proved a bane to the profession elsewhere.

When we consider the fact that over 70 per cent. of our population reside in rural districts, that the "bone and sinew" of these are engaged in agricultural pursuits, and that they do not enjoy the benefits of enforced sanitation by local health boards, we see at once the desirability of the family physician extending useful suggestions on healthful building sites and homes, disposal of house wastes, the importance of a pure water supply, wholesome and properly cooked food, etc. As it is now, the diet is faulty, especially the hot biscuits and greasy fried dishes, while wells and privies are often dangerous neighbors. The undue prevalence of typhoid fever in rural districts could be materially checked by disinfecting the stools with three times the volume of boiling water and the adoption of the earth closet system. This is all the more important since infection is often spread through the milk supply, and many of our urban population contract disease in the country during the summer months. While prompt disinfection of the excreta is the only rational method, we should also make an effort to get rid of the flies by prompt disposal of the horse manure in which they breed, the abandonment of open privies and surface pollution, and the removal of garbage and other fly-breeding matter.

SANITATION OF PRISONS.

Most commendable progress has been made in the construction and management of modern prisons. The mortality at the close of the last century, among prisoners in some of the French prisons, was 250 per 1,000; between 1840 and 1849 it was still 80.2 per 1,000, at St. Gallen, while to-day it is less than 30 per 1,000. Tuberculosis, typhoid fever, diarrhœa, croupous pneumonia, and mental disorders are the most prevalent diseases, but much will be done in future to reduce the excessive mortality by improved lighting, heating, ventilation, good food, bathing facilities, etc.

In some of the damp, dark, and gloomy prisons of Germany over 50 per cent. of all the deaths are from consumption. In the Mill-Bank prison of London, from 1825 to 1842, there were 175 deaths, of which no less than 75 were due to tuberculosis. Besides, 90 prisoners were set free on account of being hopelessly afflicted with pulmonary tuberculosis. In the Illinois State Prison, at Joliet, during the year 1895, 39 deaths were reported from consumption; in 1900 only 8 occurred. This decrease appears to be due directly to segregation of tuberculous subjects.

HOSPITALS, SANITARIA, AND DISPENSARIES.

Perhaps no country in the world can boast of better hospital facilities than our own. Indeed, many of our institutions are perfect in sanitary architecture and equipment. There are in the United States no less than 1,776 hospitals, including 35 special hospitals for consumptives; 308 sanitoria, 213 dispensaries, and over 8,000 mineral springs, of which 727 are health resorts. Unfortunately, the liberality with which medical charities have been supplied has given rise to shameful abuses, and persons who would shrink from seeking charity in any other form have abused the privileges offered by hospitals and dispensaries.

Correction of Abuses.—In 1896, speaking of the city of Washington, no fewer than 21 per cent. of the population received free medical treatment; the medical association in 1897 adopted certain rules compelling the attending staff of hospitals and dispensaries to require evidence of dependency; as a result of this system there has been a gradual but positive decrease in the number of charity patients, amounting to over 9,000 last year. It is the simplest, most just and effective remedy for the correction of this evil.

SCHOOL HYGIENE.

During the year ending June 30, 1900, there were 15,341,220 children enrolled in the common schools of our country. When we consider that the mental and physical vigor of a nation depends largely on the environments of childhood and youth, it seems strange that up to within forty years little or no attention should have been paid to the hygiene of schools. The occurrence of so-called school diseases is not surprising when we reflect that children, on beginning school, enter upon a new life and environment. Up to this time they have been allowed to run and play in the open air, exercise the body and senses, without restraint, but now without a period of transition they are obliged to remain for several hours a day in close and sometimes unsanitary school rooms, taxing their minds and straining their eyes for near objects. Experience teaches and statistics confirm the conclusion, that quite a number of children suffer from certain physical defects and diseases, which, because rarely observed before the school period, may be justly attributed to the school environments. Among the most common of these affections are myopia, lateral curvature of the spine, dyspepsia, anæmia, muscular debility, headache, and nose-bleed, nervous affections and tuberculosis. Ware, of our own country, so early as 1812, called attention to the fact that myopia was most frequently developed in the school room, and during the past forty years we have been enlightened as to the cause of this and other defects, and many excellent monographs have been written on the construction of school buildings, arrangement of recitation-rooms, as regards light, ventilation, adjustable seats and desks, proper type for textbooks, and more rational methods of mental and physical training. This, together with a commendable zeal on the part of the authorities to correct existing evils, has resulted in many reforms, the fruits of which are already apparent in a decrease of the diseases referred to.

Medical Inspection.—I cannot enter into details concerning the prevention of the spread of infectious diseases among school children, but desire to emphasize the necessity of medical inspectors, whose duty it should be to

visit the schools, examine pupils, and give such directions as will reduce the dangers of spreading contagious diseases to a minimum; they should also make sanitary inspection of the buildings and present such recommendations as are necessary in the interest of the health of both the pupils and teachers, and as the physicians were perhaps the first to recognize the fact that "the system of education should be made to fit the child, not the child the system," the teachers may derive much aid from such consultations; among the cities that have inaugurated such inspections since 1894 are Boston, New York, Brooklyn, Chicago, Milwaukee, Louisville, St. Louis, Philadelphia, Jersey City, Brookline, Mass., Buffalo, Minneapolis, and Salt Lake City, and they have proved of inestimable value.

SMALLPOX AND COMPULSORY VACCINATION.

In this connection attention is invited to the undue prevalence of smallpox in the United States; the total number of cases reported to the U. S. Marine-Hospital Service during the past fall and winter, up to March 29th, was 11,964, as compared with 7,279 cases for the corresponding period of the preceding year, and it is doubtless due to neglect in vaccination. Dr. Abbott estimates the vaccinated portion of the inhabitants of the United States at not far from 90 per cent., and the revaccinated portion at probably 50 per cent. With the introduction of glycerinated animal lymph every vestige of prejudice against vaccination should cease, and compulsory laws should be enacted in every State, so that smallpox here, as in the German army, may become practically unknown. While quite a number of States have enacted laws requiring that unvaccinated children shall not be admitted to the public schools, it is believed that these laws are not rigidly enforced.

VENEREAL DISEASES.

A careful perusal of Dr. Prince A. Morrow's article on The Prophylaxis of Venereal Diseases (*Philadelphia Medical Journal,* April 6, 1901) should stimulate our efforts in the prevention of diseases which affect, not only the offender, but innocent wives, the offspring, and not infrequently even the medical attendant. According to Fournier, one seventh of the population of Paris is syphilitic, and Morrow, from statistics gathered in New York, believes it is quite possible that Fournier's figures, with some modification, may apply to New York. Neisser holds that gonorrhœa is, with the exception of perhaps measles, the most widespread of all diseases. Other German authorities have computed that fully three quarters of the adult male population and one sixth or more of the adult females have contracted gonorrhœa; that 80 per cent. of all deaths from disease of the uterus and its adnexa are of gonorrhœal origin, while blennorrhœa neonatorum contributes a contingent to our asylums for the blind, estimated at from 10 to 20 per cent.—from 40 to 60 per cent. before the Credé method was instituted—not to mention the destructive effects on the procreative functions. Dr. S. M. Burnett, of Georgetown University, believes that 15,000 of the 50,000 blind persons in the United States lost their sight from this cause, which according to his calculation involves a financial loss to the commonwealth of seven and one half millions annually.

The measures which have been proposed for the control of the social evil and the prevention of its consequences are numerous enough, but not so easy of practical application. On the whole, I believe the remedy lies in public education, and the task as usual falls on the medical profession, especially the trusted family physician. Public lecturers on the purity of man commit a serious mistake, however, when they picture the consequences of the social evil, without offering a suitable remedy. We should make a strong plea in favor of continence, and tell our young men that, while the sexual passion is very strong, it can be accelerated or delayed, excited or lowered by the influence of the will. We should assure them that by the cultivation of pure thought, removal of temptation, normal, mental, and vigorous physical exercise, continence may not only become possible, but easy. And we can hardly go astray if we follow Dr. Parkes in advising a pure young man to make his home, after the age of twenty-one, and thus secure himself both from the temptations and expenses of bachelorhood.

THE MANAGEMENT AND CONTROL OF INFECTIOUS DISEASES.

It is the field of infectious diseases where preventive medicine has and doubtless will continue to achieve its greatest triumphs, and there is ample room, when we consider that during the census year of 1890 there were not less than 102,199 deaths from consumption, 74,496 from pneumonia, 74,711 from diarrhœal diseases, 41,677 from diphtheria, and 25,058 from typhoid fever. In spite of centuries of groping after facts, we knew nothing of the real nature of infectious diseases until the middle of the present century, and even twenty-five years ago the text-books still discussed the subject of miasmata and contagia, whose nature had never been demonstrated to our senses. With improved microscopic lenses and the development of bacteriology, more especially the discovery of the anthrax bacillus by Davaine, Pollender and Brauell (1849-1855), scientific medicine had its birth, and to-day we know that such diseases as tuberculosis, glanders, leprosy, cholera, erysipelas, wound and puerperal infections, gonorrhœa, pneumonia, cerebrospinal meningitis, typhoid fever, diphtheria, malaria, influenza, dysentery, bubonic plague, and possibly carcinoma, are caused by living organisms, capable of reproduction within and without the body, and this is a strong argument in favor of the microbic nature of other infectious diseases, in which the specific organism has not yet been isolated.

The eradication of preventable diseases is the highest aim of scientific medicine to-day. The public should

be made familiar with the nature and causes of infectious diseases, and be taught that many are a source of danger, against which it is entitled to be warned by proper notification through the health officer. This notification should be made compulsory in cholera, yellow fever, smallpox, chicken-pox, typhus and typhoid fever, diphtheria and membranous croup, scarlet fever, tuberculosis, cerebrospinal meningitis, leprosy, glanders, bubonic plague, whooping-cough and measles. And let me say that a prompt and correct diagnosis is the first and most important step in preventive measures. The health department should have competent medical inspectors and a clinical laboratory for the verification of the diagnosis, and have the power in certain of these diseases to display warning signs, enforce isolation and disinfection, and to take such other steps in the way of immunizing agents as may be deemed necessary to limit their spread.

Isolation, to be effective, should extend to all persons who have come in intimate contact with the patient, but this is rarely enforced except in smallpox, in the case of the attending physician, and the wage-earners of the family, but it is clearly their duty to take special precautions in the way of clothing and personal disinfection. Matters of this kind ought never to be left to the discretion of the family, or the attending physicians, for even members of the profession often entertain widely opposing opinions on the subject of quarantine and disinfection, but the principles which ought to be carried out, apart from being a matter of conscience, should be accepted in a practical sense and embodied in effective laws.

Disinfection.—Scientific disinfection had its inception with the labors of Koch and Sternberg some twenty years ago. Although, as we have seen, certain physical and chemical agents were used empirically for ages, now we know from laboratory experiments that they are effective, because they destroy the vitality of the germs. We also know that, in most of the contagious diseases, the infective matter is given off by the patient chiefly through the secretions and excretions, and it is evident that disinfection to be of value must be directed to these and all the media with which the patient has come in contact.

"IF CERTAIN DISEASES ARE PREVENTABLE, WHY ARE THEY NOT PREVENTED?"

My answer is, that while every scientific physician familiar with biologic research knows full well that if the methods of prevention recommended by sanitarians, including the prompt disinfection of the dejecta of every typhoid fever patient, and of the expectoration and excretions of diphtheria and tuberculosis patients, for example, were adopted, these diseases would be reduced to a minimum and probably eradicated in the course of a few years. The facts are, these recommendations have not been generally adopted, because the knowledge gained by experimental medicine is not sufficiently diffused. Nor are we responsible for the fact that so many of our States still permit every charlatan to practise one of the most difficult and responsible of all professions without a uniform and rigid system of examination. However, we owe it to ourselves and to humanity to take positive steps in behalf of higher medical education and laws regulating the practice of medicine.* So long as we permit the existence of irregular and incompetent practitioners, so long will the public be deceived and shall we be obliged to compete with incompetent men, and so long as we tolerate the exponents of so-called "Christian Science," osteopathy, and other quacks, infectious diseases will be spread as the result of ignorance and neglect. A strong organization, such as is proposed for the American Medical Association, and the various State medical societies, will speedily accomplish this and other reforms.

FORECAST OF THE RESULT OF THE CENSUS WORK UPON THE MORTALITY STATISTICS.

Notwithstanding these and other disadvantages in the way of defective sanitary legislation, the American medical profession has reason to be proud of its work in the century's progress of hygiene and preventive medicine. It may be truly said that every hospital or other medical charity owes its foundation and success to the activities of the medical profession. Nay, every law inscribed on the statute books, in the interest of public health in this and other countries, is the work of our noble profession. Acting upon the lofty principle that the education and betterment of the people in sanitation is not less humane than the healing of the sick, the American medical profession has filled the measures of its philanthropy by advocating laws to "regulate the health and physical well-being of communities," and thereby to lessen its own income, but the results obtained during the last ten years are sufficient recompense. By the courtesy of Mr. William A. King, Chief Statistician of the United States Census Bureau, I am enabled to give you a forecast of the result of the work upon the mortality statistics at the close of the century:

The mortality returns for the twelfth census, which relate to the year beginning June 1, 1899, and ending May 31, 1900, have not yet been tabulated in full, but sufficient progress has been made to permit a comparison

*During the year 1900 there were 119 regular medical schools in this country, with 1,079 female and 21,673 male students; of these 22,752 students, 2,327, or about 10 per cent., had degrees of A. B. or B. L. Number of graduates last year, 4,720. The homœopathic schools had 1,584 male and 325 female students, and the eclectics 500 male and 52 female students. The number of registered physicians in the United States in 1900 shows an average for the whole of about 1 to 636 inhabitants. In 31 States and Territories, according to D. McIntyre, an examination is required; in 9, certain diplomas are accepted, all others must be examined; in 5, only a diploma is required; and in 5, the laws practically impose no restriction. In 1900 there were 150 national and State medical societies, 1,097 county and local medical societies, and 282 medical journals, of which 28 were exclusively devoted to hygiene and public health.

of the preliminary results with the figures for 1890 for a portion of the country.

Considering these results for these States in which the returns were secured from registration records in both 1890 and 1900, there appears to have been an absolute decrease in the general death rate of about 1.5 per 1,000 of population. This decrease seems to be most marked in the rates due to scarlet fever, whooping-cough, diphtheria and croup (combined), typhoid fever, malarial fever, consumption, diarrhœal diseases, and diseases of the nervous system, the decrease in the mortality from diphtheria and croup amounting to more than 50 per cent. On the other hand, the rates due to carcinoma and tumor (combined), Bright's disease, heart disease and dropsy (combined), and pneumonia are apparently greater than in 1890, the increase being most marked in case of Bright's disease, carcinoma and tumor, and pneumonia.

The death rate by age periods in the registration States has not yet been computed as the population figures are not yet available, but the effect of the decrease in the rates due to the causes specified is shown by a decrease in the proportion of deaths occurring at each period up to 30 years.

The results in the decrased rate of diphtheria, croup, scarlet fever, typhoid fever, whooping-cough, consumption, malarial fever and diarrhœal diseases are the direct outcome of preventive medicine and are as gratifying as they are striking. We note with regret the increased rate in Bright's disease, heart disease, dropsy and pneumonia, and may well pause to inquire whether our ever-increasing "national drink bill," averaging 17.68 gallons *per capita,* may not be a factor in the development of these diseases, especially since there is reason to believe that the habitual and immoderate use of alcohol, apart from increasing the connective tissue and causing cirrhosis, also produces fatty degeneration, especially of the heart, liver, and arterial coats, probably because it promotes the conversion of albuminoids into fats.

Without wishing to underrate the brilliant achievements in surgery of the brain, stomach, intestines, liver, gall-bladder and other abdominal organs, and even wounds of the human heart which have been successfully sutured in four of the nine cases reported, what, after all, are the ultimate benefits compared with the results obtained by improved methods in sanitation?

Since our knowledge of the nature of infectious diseases has been more and more defined, scientific methods for their prevention have been applied. We have learned, too, that in addition to the germ there must be a suitable soil for its proliferation and that sanitation will not only destroy the environments for its development without the body, but also place the system in the best possible condition to resist in its toxic action.

The application of this knowledge has saved millions of lives besides an incalculable amount of human suffering and distress, not to mention the economic aspect of the question. When we remember all this and the fact that Jenner's discovery at the close of the last century, of a fundamental and practical method of producing artificial immunity, has been far eclipsed in the last twenty years, and that we possess to-day not only curative but also protective sera for diphtheria, erysipelas, tetanus, plague and possibly cholera, tuberculosis, typhoid fever, pneumonia, and a number of other immunizing agents for diseases of man and lower animals, we have reason to believe that the solution of the problem of immunity is only a question of time, and we may indeed expect great possibilities in our battle against infectious diseases.

To the solution of this problem, the labors of Salmon and Smith, Sternberg, Welch, Osler, Councilman, Reed and other Americans engaged in experimental medicine have contributed their full share. Progress has crowned our past, we will not retrograde. Let our conduct raise no blush on the cheek of posterity. Let us hand in hand with heart and mind join in promoting the welfare of American medicine, until she has reached the proudest pinnacle in the world of science, until she has become the fountain-head of knowledge for the benefit of mankind. Then when at last we are called upon to pass through the portals beyond, Minerva Medica, in her sweeping robes of state, will proudly but reverently present us to the Supreme Healer of the Universe as types of the true physician.*

Births, Marriages, and Deaths.

Married.

DODGE—CLEGHORN.—In Chicago, on Tuesday, June 4th, Dr. Austin C. Dodge, of New York, and Miss Mary A. Cleghorn.

FIELDER—IRWIN.—At "Fair Lawn," Greenbush Heights, N. Y., on Saturday, June 1st, Dr. Frank Sidney Fielder, of New York, and Miss Martha Teller Irwin.

PEASE—SPEAR.—In New York, on Saturday, June 1st, Dr. Charles G. Pease and Miss Mary Leonora Spear.

SAPPINGTON—JACOB.—In Belair, Pennsylvania, on Tuesday, June 4th, Dr. John Sappington and Miss Rosa Seldon Jacob.

WAINWRIGHT—HART.—In Englewood, N. J., on Friday, May 31st, Dr. G. Mayhew Wainwright and Miss Jessie Bell Hart.

Died.

BENSON.—In New York, on Saturday, June 1st, Dr. Samuel L. Benson, in the sixty-fourth year of his age.

COMFORT.—In New York, on Wednesday, May 29th, Dr. John E. Comfort, in the sixty-fourth year of his age.

FEENY.—In Stapleton, N. Y., on Friday, May 31st, Dr. John L. Feeny, in the fifty-sixth year of his age.

HOYT.—In Kansas City, Missouri, on Tuesday, May 21st, Dr. Frank Crampton Hoyt, of Mount Pleasant, Iowa, in the forty-third year of his age.

MERGLER.—In Los Angeles, California, on Saturday, May 18th, Dr. Marie J. Mergler, of Chicago.

STOCKDELL.—In Petersburg, Virginia, on Thursday, May 23d, Dr. Hugh Stockdell, in the sixty-sixth year of his age.

SUMNER.—In Boston, on Saturday, May 25th, Dr. Allen M. Sumner, in the fifty-seventh year of his age.

WITHAM.—In Lebanon, Ohio, on Friday, May 24th, Dr. W. L. Witham.

*In the preparation of this address I have been greatly aided by the library of the surgeon-general's office, the historical monographs on hygiene, by Professor Kinkelnburg, of Bonn, now deceased, and Dr. S. W. Abbott, of our own country. I am also greatly indebted to Dr. W. T. Harris, the commissioner of education, and Dr. A. E. Miller, of his bureau. Other acknowledgments have been made in the text and are gratefully renewed.

THE AMERICAN MEDICAL ASSOCIATION

FIFTY-SECOND ANNUAL MEETING, ST. PAUL, MINN., JUNE 4, 5, 6, and 7, 1901.

THE PLACE OF MEETING.

SITUATED as it is upon three plateaus of different levels, St. Paul is admirably located from a scenic standpoint. Along the lowest of these levels, just above the river bank, lie the railway stations, the manufacturing industries and the wholesale mercantile houses. On the second plateau are the retail establishments and some residences, while on the highest level of all with a commanding outlook stands the most beautiful part of the city, that devoted exclusively to the residences.

The first building on the present site of this city was erected in 1841 by the French priest and in 1850 the population amounted only to 1,294. Within the next decade this number had grown to over 10,000 and the city now has some 150,000 inhabitants. St. Paul has been the capital of Minnesota since territorial organization. It has many large manufacturing establishments in various lines and is probably the most important distributing centre in the Northwest, having some twenty-four lines of railway, upon which 300 passenger trains arrive and depart daily, besides being at the head of navigation on the Mississippi River. As a place of residence St. Paul is most attractive, and its municipal authorities have done much to add to its natural advantages by making numerous parks, and by the exercise of great care as regards matters of sanitation. The water supply is excellent and is sufficient to meet the needs of the city for many years to come. The city is well supplied with hospitals, one of which is illustrated on another page, and the Medical Department of the State University, which is in Minneapolis, just without the city limits of St. Paul, is an institution of high standing. Minneapolis, which adjoins St. Paul, is the largest flouring mill centre in the world and is an excellent representative of the progressive cities of the Western portion of the United States.

BIRD'S-EYE VIEW OF ST. PAUL FROM SUMMIT AVENUE.

The physicians of both cities joined in preparing an attractive programme of entertainment for physicians attending the meeting, and left nothing undone that it was possible to do to make the stay of the visitors agreeable.

THE PRELIMINARY MEETINGS.

TO appreciate the atmosphere in which the fifty-second annual meeting of the American Medical Association opened, one must take some note of the quality of men brought together in St. Paul during the few days preceding the meeting, and of the nature of their work, in connection with certain other organizations which, from considerations of convenience, meet in the same city and shortly before the larger association's meeting.

Prominent among these is the Association of Military Surgeons of the United States, which held its tenth annual meeting in the State Capitol on Thursday, Friday, and Saturday, May 30th and 31st and June 1st, under the presidency of Brigadier-General Alexander J. Stone, of St. Paul, surgeon-general of the National Guard of the State of Minnesota. The meeting was rather a small one, and the programme was meagre, although the papers presented were of a high order of interest. This state of things was fully recognized —indeed, the tendency to it had been recognized at the preceding meeting, at which a committee was appointed to consider and report upon means for its correction connected with the mode of publication of the proceedings. Heretofore the association has issued an annual volume of *Transactions*. Necessarily its appearance has been tardy, and this, of course, has been unsatisfactory to some of the contributors of papers, although they seem to have been at liberty to publish their contributions in medical journals of their own selection in advance of the appearance of the volume. The committee's report, presented at this meeting, favored the tentative issue of the proceedings in monthly parts. The report was received and accepted, but definite action providing for carrying the committee's recommendations into effect does not appear to have been taken. There are those who think that the plan of holding the annual meeting at a time so close to that of the meeting of the American Medical Association, and in the same city, tends to defeat the very object in view. Attendance at both meetings, these gentlemen argue, involves for many of the members an absence from home of from ten days to a fortnight, and such a long absence is convenient for only very few of the members. Possibly, it is thought, there is more in these facts to account for the small meetings and the paucity of papers than in any diminution of enthusiasm consequent on tardy publication of the proceedings.

JOHN A. WYETH, M. D.,
OF NEW YORK,
Newly Elected President of the American Medical Association.

But, if this year's meeting was small, it has done what the most gigantic gathering could not have done more convincingly—protested in no uncertain terms against the abolition of the army canteen. Sympathy with this protest is manifested in all professional quarters, and it will doubtless meet with substantial support at the hands of numerous other medical organizations, including the American Medical Association itself.

The American Academy of Medicine is another organization that regularly holds its annual meeting immediately before that of the American Medical Association. It stands, as everybody in the profession knows, for continual advance in education, general as well as professional. It has stood well to its guns this year on the educational question, and, in addition, has contributed to the ultimate solution of the vexed question of inter-State reciprocity in the matter of the license to practise, but has had the misfortune to figure in the lay press as being diametrically opposed to the very objects it is seeking to promote.

Among other meetings held in St. Paul during the few days preceding that of the American Medical Association were those of the Association of Medical Colleges

of the United States, the Minnesota State Medical Society (a *pro-forma* meeting, but one at which an excellent presidential address was delivered by Dr. Davis), the National Association of Life Insurance Examiners, the National Convention of State Medical Examiners and Licensing Boards, and the Association of American Medical Editors; also, during the meeting, that of the American Proctological Society.

With all these meetings to distract the attention of the men who arrived early, to say nothing of the casual discussions held informally in hotel lobbies and other places of chance meeting concerning the proposed scheme of reorganization, the report of the nominating committee, and the choice of the next place of meeting, many a man has found evident relief in examining the Pathological Exhibit, even at a stage when it was still little more than nascent. The exhibit was under the direction of a committee consisting of Dr. Frank B. Wynn, of Indianapolis (chairman); Dr. A. P. Ohlmacher, of Gallipolis, Ohio, and Dr. H. Summa, of St. Louis, who are entitled to great credit for getting together so large and varied a display. The association, for its part, provided an ample and well-lighted room for the purpose, a room seventy-five feet square on the fourth floor of the Ryan Building, with numerous large windows on two opposite sides. The specimens were displayed to the greatest advantage. As was to be expected, most of them came from points not far distant from St. Paul. Among those that seem worthy of special mention are the following:

From the Army Medical Museum, Washington, under the direction of Surgeon-General George M. Sternberg, Colonel Calvin De Witt, and Captain A. E. Bradley, Röntgen pictures of gunshot fractures sustained during the war with Spain and in the suppression of the Filipino rebellion, specimens of fractures from the civil war, specimens showing the lesions of typhoid fever and those of dysentery, casts of ancient Peruvian skulls, showing signs of prehistoric trephining, and a series of dental specimens.

ARMORY BUILDING, STATE UNIVERSITY, MINNEAPOLIS,
Where the Medical Profession of Minneapolis Entertained the Visitors.

From the Bureau of Animal Industry, Washington, under the direction of Dr. D. E. Salmon, specimens of tuberculous disease in the lower animals.

From the Cincinnati Academy of Medicine, under the direction of Dr. Horace J. Whitacre, a collection strong in prostatic and renal specimens.

From the Indiana State Medical Society, under the

ST. JOSEPH'S HOSPITAL, ST. PAUL.

direction of Dr. Frank B. Wynn, a hundred miscellaneous specimens, many of them of unusual interest.

From the Illinois State Medical Society, under the direction of Dr. Maximilian Herzog, about thirty specimens, mostly gynæcological.

From the Kansas State Medical Society, under the direction of Dr. G. A. Boyd, a collection of about thirty-five specimens, together with various species of malaria-bearing mosquitoes.

From the Wisconsin State Medical Society, under the direction of Dr. Gustave A. Kletzsch, a series of specimens illustrating causes of sudden death. Prominent in this exhibit was a collection of gross specimens of various diseases of the eye, embedded in glycerin jelly, prepared by Dr. H. V. Würdemann.

From the Chicago Policlinic, under the direction of Dr. Maximilian Herzog, a collection of miscellaneous specimens.

From the College of Physicians and Surgeons, Chicago, under the direction of Dr. W. A. Evans and Dr. A. Gehrman, a miscellaneous collection of gross specimens, also a series of bacteriological cultures bearing on sanitary work.

From McGill University, Montreal, under the direction of Dr. J. George Adami, two series of specimens, one illustrative of cerebral aneurysms and the other of tuberculous disease.

From the Medico-chirurgical College, Philadelphia, under the direction of Dr. Joseph McFarland, a series of microscopical specimens showing the structure of the various forms of tumor of the breast.

From the Northwestern University Medical School, Chicago, under the direction of Dr. G. Fütterer and Dr. F. Robert Zeit, about a hundred specimens of tumors, several of them showing the relation of the scar of a gastric ulcer to the development of carcinoma.

From the Rush Medical College, Chicago, under the direction of Dr. Ludwig, a large collection of miscellaneous specimens.

From the State University of Minnesota, Minneapolis, under the direction of Dr. F. F. Wesbrook, Dr. L. B. Wilson, and Dr. S. M. White, a large number of miscellaneous specimens, a series of most ingeniously colored wax casts showing the cutaneous lesions of small-pox, etc., and a series of culture tubes shown on a unique plan.

From Hamlin University, Minneapolis, under the direction of Dr. J. F. Corbett, a large series of bony preparations showing various pathological conditions.

From the Central Indiana Hospital for the Insane, under the direction of Dr. George F. Edenharter and Dr.

ST. ANTHONY FALLS, MINNEAPOLIS.

White, miscellaneous gross specimens illustrative of psychic pathology and a series of photographs of the insane.

From the Iowa State Hospital for the Insane, under the direction of Dr. Albert M. Barrett, a collection of miscellaneous psychiatric specimens.

From the Government Hospital for the Insane, Washington, under the direction of Dr. A. B. Richardson and Dr. J. W. Blackburn, a miscellaneous collection of psychiatric specimens.

From the Lakeside Hospital, Cleveland, under the direction of Dr. W. T. Howard, Jr., miscellaneous specimens.

From St. Luke's Hospital, Richmond, Va., under the direction of Dr. Stuart McGuire, a series of urethral calculi.

From the St. Peter State Hospital for the Insane, Minnesota, under the direction of Dr. H. D. Valin, a collection of neurological specimens.

From Dr. Frank Hugh Montgomery and Dr. James Nevins Hyde, Chicago, photographs of cases of blastomycetic dermatitis.

From Dr. Emil Amberg, Detroit, a large series of bony specimens illustrative of ossicular, mastoid, and other aural affections.

The section dinners were held on Tuesday evening, those of the Section in Surgery and Anatomy, the Section in Obstetrics and Diseases of Women, and the Section in Cutaneous Medicine and Surgery at the Hotel Ryan; those of the Section in Practice of Medicine, the Section in Materia Medica, Pharmacy, and Therapeutics, the Section in Physiology and Dietetics, the Section in Hygiene and Sanitary Science, the Section in Pathology and Bacteriology at the Merchants' Hotel; that of the Section in Nervous and Mental Diseases at the Town and Country Club; those of the Section in Ophthalmology and the Section in Laryngology and Otology at the Minnesota Club; and those of the Section in Diseases of Children and the Section in Stomatology at the Windsor Hotel. On Thursday evening a reception and ball, provided for by the physicians of Minneapolis, took place in the armory and on the campus of the University of Minnesota. After the meeting there was an excursion to the Yellowstone Park. The members of the Minnesota State Medical Society, those of the Ramsey County Medical Society, and the physicians in general of

ST. PAUL CITY AND COUNTY HOSPITAL.

the twin cities of St. Paul and Minneapolis showed the greatest hospitality to their professional brethren from other parts of the country, and doubtless it was a confident expectation of this hospitality that called together such a host, for this was one of the largest meetings in the history of the association.

Perhaps the most notable feature of the meeting was the admirable rhetoric of the president's address. Rarely has the presidential chair been occupied by a man so well qualified as Dr. Reed to recount the real needs of the profession in the various States, and never has such a man's address called forth heartier applause. It may well be believed that the address went far in preparing the way for the committee's ready acceptance of the scheme for reorganization which has been outlined in the *Journal.*

The opening prayer, by Bishop H. B. Whipple, was followed by a brief address of welcome by the Hon. R. A. Smith, mayor of St. Paul, who made the statement that the city was the healthiest in the world. The people of St. Paul, he said, enjoyed the double blessing of long life and small doctors' bills. He attributed the low mortality to the natural advantages of the city as regarded location, etc., and to the great advances made in recent years in hygiene and medicine.

The address of the president was delivered by Dr. C. A. L. Reed, of Cincinnati. (See page 969.)

Presentation of a Portrait of Dr. N. S. Davis.—Dr. J. Rawson Pennington, of Chicago, presented to the association a fine portrait of Dr. N. S. Davis, of Chicago, the founder of the American Medical Association, its president in 1865, and its most constant attendant and faithful guide. Among many other honors conferred upon Dr. Davis during his professional career of sixty-five years had been the office of president of the Ninth International Medical Congress. Although eighty-five years of age, he was still able to devote from five to six hours daily to his patients, and to attend promptly to all the duties of good citizenship.

MEDICAL BUILDING, STATE UNIVERSITY, MINNEAPOLIS.

THE PROCEEDINGS OF THE FIFTY-SECOND ANNUAL MEETING.

The first general session was held in the Metropolitan Opera House on Tuesday, June 4, 1901.

The meeting was called to order at 10.20 A. M. by Dr. John F. Fulton, of St. Paul, the chairman of the committee of arrangements.

The portrait of Dr. Davis was accepted with the unanimous thanks of the association, and a motion was made and carried that a committee of three be appointed by the president for the purpose of securing, if possible, the portraits of other ex-presidents of the association.

The Report of the Treasurer.—Dr. T. J. Happel, of

DR. GEORGE H. SIMMONS,
Secretary of the American Medical Association.

Tennessee, a member of the board of trustees, to whom the report of the treasurer was made, stated that on June 1, 1901, the assets of the association were $45,254. Adding to this the value of the plant of the association, swelled the total assets to $66,000.

Saratoga, N. Y., was selected as the next place of meeting and the following officers were elected: President, Dr. John A. Wyeth, of New York; first vice-president, Dr. Alonzo Garcelon, of Maine; second vice-president, Dr. A. J. Stone, of Minnesota; third vice-president, Dr. A. F. Jonas, of Nebraska; fourth vice-president, Dr. James A. Dibrell, of Arkansas; treasurer, Dr. Henry P. Newman, of Illinois; secretary, Dr. George H. Simmons, of Illinois; board of trustees whose terms expire 1904, Dr. T. J. Happell, of Tennessee; Dr. W. W. Grant, of Colorado; Dr. John F. Fulton, of Minnesota; judicial council, Dr. George Cook, of New Hampshire; Dr. H. H. Grant, of Kentucky; Dr. John B. Murphy, of Illinois; Dr. Philip Marvel, of New Jersey; Dr. Louis H. Taylor, of Pennsylvania; Dr. John L. Dawson, of South Carolina; Dr. N. Fred Essig, of Washington; orator on surgery, Dr. Harry Sherman, of California; orator on medicine, Dr. Frank Billings, of Illinois; orator on State medicine, Dr. J. M. Emmert, of Iowa; chairman of the committee of arrangements, Dr. G. F. Comstock.

(To be continued.)

Section in Laryngology and Otology.

The Chairman's Address, by Dr. John N. Mackenzie, of Baltimore, was devoted to a defect in all medical schools, the lack of proper instruction in the study of diseases of the air-passages in the head and consequently the ignorance as to the use of instruments. He took the broad ground of the benefits resulting to the public and obviously to the credit of the medical profession.

The Treatment of Laryngitis.—This was the title of a paper read by Dr. O. T. Freer, of Chicago. He recommended both local and general treatment. The local treatment was best carried out by the use of sprays; every part could be reached. Powders were not so satisfactory, and the probe was dangerous, as it was injurious to the already inflamed tissue. He also desired to emphasize the infectious character of all forms of acute laryngitis. There was an infected mucous membrane, a congested surface covered with leucocytes. All cases could not be treated with astringents; where there was great œdema, it became necessary to use the knife. The speaker passed rapidly over the condition of ozæna. When there was a new formation of connective tissue, with nodular formations or folds, early scarification was recommended. The chronically swollen cords were best treated by many small longitudinal incisions. Ichthyol was very useful in contracting the tissues. The difficulty in throwing the spray below the vocal cords had been relieved by the use of a long tube, which reached to the cords.

Dr. Ingals, of Chicago, had found deep inhalation after the use of the spray of benefit, the fluid being drawn down below the cords.

Dr. Freer said that, unless cocaine was previously used, the inhalation in many cases produced a marked spasm of the glottis.

Œdematous Laryngitis was the subject of a paper by Dr. Joseph S. Gibb, of Philadelphia. He described true

DR. JOHN N. MACKENZIE,
Chairman of the Section in Laryngology and Otology.

œdematous laryngitis as an inflammation of a mucous membrane, attended by serous transudation into the submucous tissues. Much confusion had arisen from the

multiplicity of names, which might be obviated by drawing a sharp line between simple œdema without inflammation and that in which inflammation of the mucous surfaces was an active feature. Much of the confusion had arisen in attempting to classify all œdema cases under one head. The reader cited four cases. As to the ætiology of idiopathic œdema, there were several types of cases: Those in which there was no true inflammatory condition of the laryngeal mucous membrane, those of the acute catarrhal form accompanied by thickening of the mucosa, those of a secondary septic process complicating zymotic diseases, and, lastly, those of an infectious nature. The line could not be sharply drawn between the last two forms. The group included those in which the larynx was secondarily involved. The prevalence of epidemic influenza furnished examples of this disease, and there was about it something favorable to the development of œdema in the mucous membrane of the pharynx and larynx.

Dr. George C. Stout,
Secretary of the Section in Laryngology and Otology.

Total Extirpation of the Thyreoid Gland.—Dr. G. F. Cott, of Buffalo, reported two cases. In the first case there were difficult breathing, a rapid pulse, and a swollen thyreoid. A two-per-cent. solution of eucaine was used and tracheotomy performed. As it was impossible to pass a cannula, a catheter was inserted and passed into the larynx. The next day, thirty hours later, the operation was performed. At first eucaine was used, but, the pain becoming intense, chloroform was given. It became necessary to use a salt solution with nitroglycerin during the operation. After three hours the gland was removed. It weighed five ounces and a half.

In the second case, one of papilloma of the larynx, the patient rebelled against the use of instruments. She was a girl of five years, who had worn a trachea tube for two years. A week ago the reader split the larynx between the cords, removed the papilloma, and sewed up the larynx.

(To be continued.)

Section in Materia Medica, Pharmacy, and Therapeutics.

Experimental Work in Intra-organic and Venous Injections and Blood Extracts in the Cure of Acute Organic Diseases.—This communication, by Dr. W. Byron Coakley, of Chicago, dwelt principally upon the use of sodium chloride, and especially normal salt solution, as a cardiovascular stimulant. The author maintained that it was entirely innocuous, even when injected into organs like the lungs, the spleen, the kidney, or the liver. If injected slowly and with a delicate trocar or needle, it would not produce hæmatoma. He alleged great value for subcutaneous intravenous or intra-organic injections for relieving pain and prolonging life. The normal salt solution was a powerful stimulant to a failing heart. After bleeding a dog until the heart had almost ceased to beat, the injection of a few centimetres of saturated salt solution into the pericardium restored the heart's action. He also maintained that it retarded carbon dioxide narcosis by causing absorption of the gas.

Neglected but Valuable Therapeutic Measures was the title of a paper by Dr. George F. Butler, of Chicago. Bloodletting, which had been discontinued in deference to popular prejudice, was now known to be of great therapeutic value. As a result of a better knowledge of its physiological effects, it had resumed its place in therapy. When performed for removing toxic agents and diluting the serum, its place could be taken in many cases by the modern injection of normal salt solution, but there were other cases in which the reduction of the volume of blood by venesection was indispensable to successful treatment. Counter-irritation, on account of popular prejudice, had also been almost abandoned, yet it was of great service in relieving pain and restoring healthy action. Surgical operations were often of service, irrespective of the location or indications for operation. Insane persons showed improvement, or recovered, after fracture of bones or similar injuries. He also spoke in support of hydrotherapy, massage, and suggestive therapeutics. He said that complex prescriptions were of greater value than single remedies, and were not "shotgun prescriptions" if scientifically composed to meet special indications. In conclusion, he advocated physical culture and especially outdoor exercise.

The Therapeutical Indications Presented by the Conditions of the Blood in Disease.—In a paper thus entitled, Dr. O. T. Osborne, of New Haven, protested against the treatment of disease as an abstraction and the too scientific consideration of therapeutics. We must not overlook the man who had the disease. Success in therapeutics depended often upon the recognition of the individuality of the case and of the varying factors that made themselves manifest in the symptoms. In treating disease special attention should be paid to restoring normal metabolism, the conditions of which varied in different individuals. The treatment must be modified to fit the man himself. The blood changes should have special consideration. The variations in specific gravity might have a wider significance than was usually recognized. The alkalinity of the blood, the physical appearances of

the red cells (shriveled, crenated, nucleated), and the proportion of hæmoglobin and hæmatin were also important, as was the proportion of the different forms of leucocytes. The state of the blood plasma, as regarded its density and constituents, had an important bearing upon disease, especially with relation to osmosis and coagulability. Calcium salts in the blood favored coagulation. One thirteenth of the body weight was blood (except in the obese and in children). This was constantly in motion and required the expenditure of considerable force. Rest in the horizontal position lessened the burden upon the circulatory apparatus. The distribution of the mass

Dr. N. S. Davis, Jr.,
Chairman of the Section in Materia Medica, Pharmacy, and Therapeutics.

of blood might be irregular and local congestions or anæmias result. In normal individuals the thyreoid gland supplied a vasodilator and the suprarenals a vasoconstrictor agent. Increase in secretion of the thyreoid gland might produce functional disturbances without the well-marked lesions of Graves's disease being demonstrable, while, on the other hand, the decrease of thyreoid secretion and predominance of function of the suprarenals may produce high tension, arteriosclerosis, and atheroma. Too high tension called for exercise, warm baths, free catharsis, small doses of thyreoid gland daily, nitroglycerin, or small doses of chloral. In malignant infections there was a sudden loss of a large proportion of red cells, causing symptoms of acute anæmia ("medical shock"). In the opinion of the writer, every case of typhoid fever would do better with the tincture of chloride of iron than without it, just as in erysipelas and diphtheria. During convalescence from any acute disease there was a condition of vasomotor ataxia. Measures to educate the peripheral vessels to react normally, such as massage, electricity, gentle exercise, sponging, and baths, were valuable in overcoming this condition.

Dr. Coakley said that he had resorted to parenchymatous injection of normal salt solution into a hepatized lung during acute lobar pneumonia, with benefit and recovery.

Chronic Myocarditis.—Dr. John H. Musser, of Philadelphia, made a verbal communication on this subject. He confined his remarks to the form of the disease associated with sclerosis of the coronary arteries, and excluded the conditions of myocarditis occurring in acute disease or due to other causes. It was in fact identical with chronic endocarditis of the coronary arteries. The treatment was divided into hygienic and medicinal management. The latter would depend largely upon associated lesions. It was necessary to regulate the conduct of life as regarded business responsibility, active exercise, baths, diet, clothing, and sleep in each case, correcting arrhythmia, high tension, deficient excretion, etc., so as to avoid attacks of angina or lessen their severity. He especially advocated nitroglycerin, gradually increased until physiological effects were produced. Iodide of potassium was of great value. Conditions of acute arrhythmia and arystole gave the clinical appearance of acute œdema of the lungs, but were due to chronic myocarditis, to which treatment must be directed. Small doses of morphine, hypodermically, with strychnine and nitroglycerin where there was apparently increased arterial tension, in other cases morphine and strychnine without nitroglycerin, were very effective in relieving this condition.

Dr. Beatty, of Philadelphia, in discussing this paper, agreed to the hygienic management, but disagreed as to the medicinal treatment. He had found the greatest service in these cases from the use of a derivation of digitalis.

Dr. Solly, of Colorado, said that high altitudes were not suited to these cases.

Dr. Tomkins, of West Virginia, inquired of the reader of the paper how he managed to give iodide of potassium without disturbing the digestion and causing nausea.

Dr. Musser replied that the best method was to give it in milk. Some preparations of pepsin were also useful. Some patients could take only one dose a day, others had to intermit for several days at a time. He had never been able to get good results from hydriodic acid as a substitute.

The Treatment of Obesity.—Dr. Henry Stern, of New York, read a paper on this subject. He recognized several forms of abnormal increase of the body weight. The influence of diet and bodily activity was insisted upon. In the treatment he dwelt upon regulation of habits as well as medicinal measures. In starting the treatment most stress should be laid upon passive and resistance movements, faradaism, massage, and mechanotherapy; in short, all methods contributing toward the improvement of the circulation will be followed by beneficial results. Cold hydropathic procedures resulted in unusual oxidation of fatty material, and the systematic performance of easy gymnastics was not to be neglected in hydroplasmic obesity medicinal treatment. For the heart, strychnine, for the blood, iron, were most useful, with naphthol, bismuth salicylate, or hydrastis canadensis for the intestinal tract. To overcome constipation, saline enemata, podophyllin, leptandrin, and calomel should be used. The thyreoid, as a rule, was contraindicated.

The Treatment of Neurasthenia.—Dr. Harold M. Meyer, of Chicago, read a paper in which he dwelt par-

ticularly upon the necessity of correct diagnosis, especially between this condition and hysteria. The diagnosis must always be made by exclusion. The symptom of fatigue and actual deficient muscular power was an important characteristic of neurasthenia. Rest was important, but the so-called rest-cure, applied indiscriminately, did much harm. Primary, or essential, neurasthenia was to be distinguished clinically from the secondary neurasthenia of acute diseases, such as typhoid fever. Strychnine was the best medicinal agent. Psychical treatment was of great importance.

In reply to questions, Dr. Meyer said that the fatigue symptom was the most important diagnostic sign. All cases of neurasthenia were not pure, but might be complicated with hysteria. In the diet, he preferred milk and cream. He used no proprietary or prepared foods. Cold was a very powerful nerve stimulant, and he has observed good effects from having patients sleep in a cold room.

(To be continued.)

Section in Surgery and Anatomy.

The Cause of Diffuse Peritonitis Complicating Appendicitis, and its Prevention.—The chairman, Dr. A. J. Ochsner, read a paper with this title. He reviewed the anatomical and pathological relationship existing between the appendix and the adjacent organs, and referred to the manner in which the appendix was protected and the enormous blood supply of the omentum. The value of rest as a preventive of the extension of infection in any part of the body could not be over-estimated, and if this was gained another important point was secured in the right direction. Infection of the general peritoneal cavity was caused by disturbance of the intestines. Theoretically and practically, food and cathartics should not be taken into the stomach. The reader cited cases in which the ingestion of these substances had greatly irritated the condition. His mortality in cases of perforative peritonitis had been less than one fourth as high as in patients operated on at once; in cases of diffuse peritonitis there had been a great decrease. From January, 1898, to May, 1901, he had operated in 565 cases of appendicitis with twenty deaths, a mortality of three and a half per cent. The danger of rupture of the circumscribed abscess into the general peritoneal cavity had been a cause of great anxiety. There was increased safety in operating during the quiescent state, and as a result of this treatment fæcal fistula never resulted. The laity should be taught to stop feeding and giving cathartics to patients suffering from abdominal diseases.

Remarks on the Surgery of the Spinal Cord, with Illustrative Cases.—Dr. Andrew J. McCosh, in his paper thus entitled, said he believed that pressure on the cord was urgent reason for operating, and that early operations were important. He was of the opinion that it was wiser to do the exploratory operation, and that there the danger was slight. It was our routine procedure to cut down on the skull to find out if any fracture was present. If relief was to be expected, an operation should be done at once. In his own laminectomies for fracture of the spine, comprising six cases, two patients had recovered and four had died, but not as a direct result of the operation. He did not think it was necessary to apply any special support to the spinal cord.

Spina Bifida, with a Report of an Interesting Case.—In a paper by Dr. Paul F. Eve thus entitled the author said that, associated with spina bifida, were hydrocephalus, talipes, and hare-lip. There might be a tumor, varying in size from that of a marble to that of an adult's head, occupying the central portion of the canal over the posterior aspect of the vertebral column. There were three varieties of this affection: Meningocele, the protrusion consisting of fluid in the spinal cord; meningomyelocele, in which there was a portion of the cord in the sac; and syringomyelocele, the central part of the spinal cord being dilated. Various remedial measures had been suggested, such as acupuncture, injection of iodide of potassium, etc. Extirpation was unjustifiable in young

Dr. J. N. Upshur,
Secretary of the Section in Materia Medica, Pharmacy, and Therapeutics.

infants, and the indications for operation were where the child was over seven years old and where the tumor was rapid in its growth and rupture threatened.

The Methodical Exploration of the Brain for Fluid was the subject of a paper by Dr. Christian Fenger. He reviewed the literature of traumatic brain abscesses and spoke of the efficacy of the aspirating needle. He described a case having a previous history of suppurating disease of the ear, an attack of appendicitis subsequently, of short duration, and then swelling of the elbow joint. He explored the brain methodically, going from one place to another. There was a cicatrix behind the ear, which was the only guiding point. After exploring the brain on the affected side of the head with no results, he then tried the opposite side, where the pus was found, and the patient recovered. He said that methodical exploration of the brain was preferable to all others. Puncture, he said, was harmless, as Spitzka had previously proved in the needle tracings in the brain, which were aseptic. The author's paper was elucidated with photographs, instruments, and human skulls.

The Immediate and Remote Effects of Brain Injury.—In a paper with this title Dr. D. S. Fairchild dealt with the value of first symptoms in determining the nature and extent of the lesion, the bearing on the question of treatment and prognosis, the possibility of the lesion

DR. ARTHUR SWEENEY.
Chairman Committee on Arrangements.

being more or less serious than was indicated by the apparent gravity of the early symptoms, the danger of being misled on these points, the remote effects of trauma on the integrity of the brain tissue in producing epilepsy and mental impairment, and falls from a height or from a rapidly moving train. If the first cause of intracranial hæmorrhage was rupture of the middle meningeal artery, the immediate effect thereof was considered serious, unless surgery intervened. The author reviewed scar proliferation from scars of the brain and said that these cases were amenable to surgical treatment. He presented the question of liability and the medico-legal aspect of cases of brain injury.

A Contribution on the Subject of Operation for the Relief of Tic Douloureux, or Trifacial Neuralgia, differing from the operations now in vogue, in that it depended for its success upon the division of the sensory root of the ganglion, and not upon the removal of the ganglion itself, was presented by Dr. Frazier, of Philadelphia, who very interestingly covered the besetting difficulties with which the surgeon met the technic of the operation, and its applicability in the cases under consideration.

Dr. W. W. Keen, of Philadelphia, believed the time had come when cases of spina bifida should be submitted to operative treatment. In relation to Dr. Fenger's paper, he was sorry that he had limited the exploration to searching for pus. There should be a very clear distinction made in exploring the brain for pus, purulent matter, or serum. Ten years ago he had proposed a methodical operation and formulated several routes by which the ventricles could be reached. He cited several interesting cases of exploring the brain for fluid. As to Dr. Fairchild's paper, he thought the author had taken the right ground, that intereference was imperative. He reviewed the phenomena of the state of unconsciousness produced by trauma.

Dr. McLean agreed to Dr. Fairchild's idea of going without support: he had found it difficult to keep the support on. He thought it was a good step, in spina bifida (Dr. Eve's paper), to attempt closure at the operation without aspirating or injecting of fluid. He believed the skull was elastic and compressible in both young and adult, as was proved by clamping it; the tissue within must change and there must be movement within. The spinal canal was not merely a bony canal, but made up partially of fibrous tissue. He referred to concussion and compression of the brain and subsequent extradural, subdural, and cranial hæmorrhage. Now, he thought, there was another point where one might have depression of the skull. In that case, one might first have a compression there and in time the symptoms of that compression would disappear. In that case the cerebral fluid would escape from the cranium, lessen the cranial tension, and escape into the spinal cord.

Dr. Weir did not believe that we had yet arrived at a conclusion with regard to depressed fractures of the skull without symptoms. In regard to wounds of the scalp, he had recently changed his ideas—he did not now let them alone. Surgeons feared, in penetrating the dura, making adhesions; adhesions must be expected. The speaker advocated the use of celluloid plates at the time of operation or at a secondary operation.

Dr. Frank had tapped the lateral ventricles as early as in 1890 with good results. He did not agree with Dr. McLean that, if a person was hit on the head, it would draw the fluid into the spinal column; it was not necessary to receive a blow on the head to become unconscious or give symptoms of concussion.

Dr. Earl was of the opinion that the time was at hand when surgical treatment for injuries to the skull must be employed.

Dr. Moore believed in the surgical treatment of spina bifida rather than injections.

Dr. Dawbarn related an interesting case of a man who was struck on the side of the head and had symptoms of hemiplegia. Operating on the paralyzed side, there could not be detected a clot or anything abnormal. At the autopsy, however, on the side opposite to that affected, there was revealed an enormous blood clot.

Others who joined in the discussion were Dr. Bernays, Dr. Maxwell, Dr. Means, Dr. Crile, Dr. Tagart, Dr. McKnight, Dr. Baldwin, and Dr. Vaughan.

(To be continued.)

Section in Diseases of Children.

Chairman's Address. By Dr. Samuel W. Kelley.—It is recommended that either the office of secretary be made more continuous than at present or that the secretary be provided with an assistant; also that the custom which appears to expect the chairman of the section to act as toastmaster at the section dinner should undergo a revolution.

The advancement of the surgical side of pædiatrics is very important, and has been slower in its development

than was medical pædiatrics. Its advance may be measured in many different ways: by the recognition of the necessity for and importance of it; by the increase of actual knowledge concerning it; by the spirit of knowledge through text-books and teaching; by the extent and

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Chairman of the Section in Diseases of Children.

the manner in which this knowledge is applied in practice. When thus measured it becomes evident that many of the most prominent writers on surgery have given inadequate attention to the surgical side of children's diseases. At the present time the knowledge of anatomy, physiology, pathology, and the history of diseases has reached such a point in the observations of practical physicians and surgeons that the diseases of children, their peculiarities, and their importance can no longer be quite ignored by the surgical side of the profession. There is now needed no elaborate argument to prove that there is a department of surgery as distinct from that of adult life as the medical diseases of children from those of their elders. In the cases of children abnormities are found, and the same diseases occurring in adults are marked by different phenomena when occurring in children. We are aware what peculiarities surround operative work upon children. How ill they bear hæmorrhage, cold or prolonged shock, and how wonderfully they recuperate when once the stress of the storm is past! In medical journals, medical societies, and medical teaching, too little attention is paid to the surgical subjects. There should be, if necessary, the child's surgeons as well as his physicians; or at least the surgeon should be required to extend his knowledge to the special surgical diseases of children.

Measles. By Dr. J. B. Garber.—The prime cause of measles is no doubt a specific poison, the nature of which has not been fully determined. The poison spreads by contagion from one person to another and is given off by the breath and secretions. No age is exempt from an attack of measles. Recurrence of the disease is not uncommon, especially among children. The pathology of the disease is not marked. The period of incubation is now well established, and is found to be about fourteen days from the time of exposure. The prodromal symptoms last about three days, and are associated, later, with catarrhal symptoms. Fever is always present, coming on as early as the second day; often remitting, and rising again just preceding the eruption; laryngeal cough, drowsiness, loss of appetite, and vomiting usually occur; sometimes, also, convulsions. On the third or fourth day, eruptions appear; usually preceded by the Koplik spots, which disappear as the eruption progresses. When the rash begins to disappear, if the fever continues, look for complications; for in complications lies the danger of measles. Bronchopneumonia, intestinal catarrh, hæmorrhages from the mucous surfaces, and otitis media may occur as complications. The diagnosis is not usually difficult, but is occasionally puzzling in isolated cases. Cases without eruption have been reported; malignant forms sometimes occur; marked typhoid symptoms accompany some of the fatal cases; or the disease may awaken a dormant tuberculous condition. The mortality is low, except in complicated cases. The treatment should be hygienic and symptomatic, with rest.

Dr. Slagle stated that he rarely found the Koplik spots. Second attacks of measles had not been common in his experience, but usually when a second attack was diagnosticated as measles, it had been found that it was German measles.

Dr. Scott thought rubeola a distinct disease, very much more prevalent than measles, but very easy to confound with the second attack.

Dr. J. M. Postle was sure that he had seen true measles undoubtedly recur, in several cases, and had found benefit in the treatment of measles from the internal administration of suprarenal gland.

Dr. Barber called attention to the danger of endocarditis following measles. Dr. Townsend pointed out that the enlargement of the postauricular glands was pathognomonic of German measles.

Pathology and Treatment of Pertussis. By Dr. J. M. Postle.—Pertussis is a toxic neurosis produced by bacteria, probably by those of Czaplewski, Hensel, and Koplik, working in the tissues beneath the mucous membrane of the respiratory tract. These bacteria produce a toxine which has as the point of special selection for attack those nerve cells governing expiration. These nerve cells are depressed with resulting clonic spasm of the expiratory muscles. Excess of carbonic-acid gas in the blood produces powerful stimulation of the nerve cells governing inspiration, at the same time partially or completely destroying the toxine. Children, therefore, when playing around gas-works, have whooping-cough lightly. Dr. Rose, of New York, has treated pertussis by rectal injection of carbonic-acid gas, and this experiment has seemed to ameliorate the symptoms. The whooping sound is produced by inspiration before the laryngeal muscles are fully relaxed. There is a prompt return of the expiratory cells to normal when the toxine has been destroyed by rational therapeusis. Immunization and recovery are complete in from one to three weeks, depending on how near to the full physiological effect the patient is kept while under the influence of the remedies used. The treatment consists of the administration of suprarenal gland tissues, strychnine, or any preparation of nux vomica, which may be given hypodermatically or

by the stomach, and should be pushed almost to the full limit or slightly toxic effect.

The Antenatal Treatment of Hæmophilias. By Dr. J. W. Ballantyne, of Edinburgh, Scotland. Read by Dr. Darnall.—Cases in which the effect of antenatal treatment can be tested are few and far between. Hæmophilia is clearly and persistently hereditary, and shows a family prevalence. The probability is that male offspring will be hæmophilic, though the female offspring usually escapes. There is a presumptive diagnosis then of antenatal hæmophilia when a woman coming from a family whose males are hæmophiliacs is pregnant of a male infant. The following case is reported: Mrs. C., thirty-four years of age, third pregnancy, tall, well built, rather spare, with black hair, sallow complexion, has always lost much blood at her menstrual periods and had *post-partum* hæmorrhage after both confinements. She has a distinct family history of hæmophilia and the first child at birth was white and anæmic. It is still alive, but is a marked "bleeder," having nearly succumbed several times during the cutting of its teeth; the second pregnancy ended in the birth of a male child and was also associated with a *post-partum* hæmorrhage. The infant showed hæmorrhage from the umbilical cord at birth and died at the age of twelve months, during dentition, the cause of death being returned as cerebral hæmorrhage. The mother was now pregnant for the third time. I advised that treatment with calcium chloride might safely be given to the mother, and that this drug would pass through the placenta and reach the fœtal

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Secretary of the Section in Diseases of Children.

tissues, although theoretically the hopes of success were small; also that iron, arsenic and strychnine might be administered in order to improve the general health, increase the tone of the uterine muscle, and lessen the risk of *post-partum* hæmorrhage. This treatment was carried out for three months. On October 3, 1900, a male child was born, red and mottled and healthy in appearance; indeed in all respects normal; there was no hæmorrhage from the cord, no *post-partum* hæmorrhage, for the first time in the mother's obstetric history, and she was able to nurse her infant. The labor was easy, and the whole process normal. Since that time, the infant has never had any bleeding, and does not bruise like his brothers. He has also cut a tooth without a hæmorrhage, while it may be noted that his eldest brother still suffers with a bleeding tendency very markedly. This may be a coincidence, but if so, it is a very remarkable one, and we cannot accept the conclusion that it is merely a coincidence. There are circumstances which encourage the opinion that, after all, the treatment in this case may have had something more than a coincidental relation to the healthy state of the third infant.

A Case of Pyloric Spasm in an Infant.—Dr. C. Herrman reported such a case, having first seen the infant at the age of five weeks. The child was breast fed. In the third week vomiting began, coming on after each nursing. The vomitus was not bile stained. Epigastric peristalsis was noticed. There was persistent constipation, and progressive loss of weight for five weeks. The infant then took a sudden turn for the better. There was less vomiting and gradual recovery. At present the age of the child is seven weeks. It is very small, but fairly well developed.

SYMPOSIUM ON TYPHOID FEVER IN CHILDREN.

Symptoms of Typhoid Fever in Infancy and Childhood. By Dr. J. P. Crozer Griffith.—The author reviews a number of articles that have appeared on typhoid fever in the last few years. The symptoms of typhoid fever in children differ in many respects materially from those seen in adults. To insist that the cardinal symptoms must always be present would lead us into frequent errors in diagnosis. The affection is far from rare in infancy and the failure to recognize it is rapidly disappearing, because we are more on the alert for it, and have the serum reaction test to aid in the diagnosis. The peculiarity of the onset of typhoid in children is its indefiniteness. The great degree of malaise and fatigue is absent. There are loss of appetite, slight indisposition, and some headache. The temperature does not abate, and, although the child scarcely feels ill, the diagnosis of typhoid fever may be made by exclusion. The child is sent to bed on general principles and not because it wants to go. In the second class of cases the onset is sudden, with vomiting and with fever from the start, and the rash is discovered. In infants the symptoms are vague because elevation of temperature is common from slight or undiscovered causes. Perhaps only the Widal reaction will distinguish the disease from indigestion, enteritis, or influenza. Another peculiarity is that the course of the disease is shortened, from fourteen to twenty days being, perhaps, an average length. Abortive cases are common, and it is milder than in adult life and the mortality is lower. Children under five years are less liable to die from it. The roseola is quite as common as in adults. In a few cases I have seen herpes labialis. Desquamation is described by the French writers as occurring frequently. Enlargement of the spleen is usually present, but not usually discovered. There is perhaps nothing peculiar in the respiration. The pulse is often unusually slow as compared with the rate that one would expect for the same elevation of temperature in other diseases. The temperature curve is similar to that in adults. Not infrequently it

rises rapidly without the step-like ascent. Often it remains high without the tendency to morning fall. Toward the end of the attack it falls, often with much greater rapidity than in adults. Indeed, the fall may be almost critical at times. The tongue is not so liable to become dry and parched. Vomiting is a very common initial symptom. It is sometimes troublesome even later in the disease, occasionally directly producing death. Diarrhœa is more likely to be absent than present. Abdominal distention is not often a troublesome symptom, though frequently present. Hæmorrhage is of rare occurrence. When it does occur it is usually in later childhood. Perforation is also of uncommon occurrence. The infrequence of these two symptoms is probably due to the less pronounced development of intestinal lesions. One of the characteristics is the tendency of nervous symptoms to predominate over the intestinal symptoms. Extreme torpor, coma vigil, and carphologa occur much less often than they do in adults. Slight delirium is common, especially at night. A certain degree of apathy is very common, especially in very young children. A condition sometimes seen is that of pseudomeningitis; this sometimes causes confusion in diagnosis. Meningitic symptoms, it is true, do occur in the typhoid of adults, also, but certainly less characteristically. As a rule the diagnosis can be easily made, but sometimes typhoid fever begins in children with all the appearance of acute leptomeningitis and leads for a time to an entirely erroneous diagnosis. Aphasia is a nervous symptom rather to be considered as a complication and occurs probably more frequently in childhood. The discussion of the complications and sequelæ is probably beyond the scope of this paper and will not be entered into.

The Diagnosis of Typhoid Fever in the Laboratory. By Dr. John Lovett Morse.—The author, before taking up the subject to be discussed, protests against the separation of laboratory and clinical methods in the diagnosis of typhoid fever. They should not be thought of separately, but together. Both are fallible and both should be used understandingly, with due recognition of their limitations, or erroneous conclusions will be arrived at. The value of the various laboratory tests is unequal. Some are easy to carry out, some are difficult. All have their limitations. The Widal reaction is present in ninety-five per cent. of all cases of typhoid fever. It seldom appears before the second week. In a small number of cases it may never be present. In others it may be intermittent. Repeated negative tests are very strong evidence against typhoid fever. The reaction may persist in the blood so long as twenty-nine years after recovery from typhoid; hence a positive reaction in the absence of other symptoms is not diagnostic of typhoid, unless one can be sure that the patient has never had typhoid. A negative reaction, followed by a positive reaction, in a dilution of one to fifty, is absolute proof of typhoid. The Widal reaction appears in children under the same conditions as in adults, but it appears earlier, is feebler, and persists for a shorter time. It is of exceptional importance in aiding in the diagnosis of typhoid in children, its especial value being, first, in ruling out many cases of gastro-intestinal disease; and, secondly, in clinching the diagnosis in mild cases that might be possibly overlooked. In infancy the reaction is of less value than in older children and adults, because it may be transmitted to the infant through the mother. The agglutinating power may be transmitted, not only when typhoid is present during pregnancy, but

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even when pregnancy takes place years after recovery. When transmitted through the milk it does not persist for more than a week. Examination of the stools has shown the presence of the typhoid bacilli in from three to five days after the patient has taken to his bed. The test is considered by the author as of nearly equal value with the Widal reaction. The examination of the fæces requires a complete laboratory and much expert knowledge, and is, therefore, not practicable for the average general practitioner. Typhoid bacilli may be found in the urine in from twenty to thirty per cent. of the cases. They do not usually appear in the urine until late in the disease; in a few cases, however, they have been demonstrated before the appearance of the Widal reaction. Recent observers have shown that about eighty per cent. of cases show typhoid bacilli from an examination of the blood, which is usually withdrawn from the veins of the arm, fifteen to twenty cubic centimetres of blood being used. On account of the complicated processes and the technical knowledge required, the test is hardly practicable. In a series of comparative tests the rose spots almost invariably showed the presence of the bacilli before the appearance of the Widal reaction, usually five or six days before. The spots must be carefully excised, however, under antiseptic precautions and the cultures immediately made. The Diazo reaction is simple and can be made by anyone. It may be obtained in most cases of typhoid, often appearing early. As it is also present in tuberculosis, septicæmia, and other febrile diseases, the very conditions with which typhoid is easily confounded, it is of comparatively little value. The leucocyte count is important. It is subnormal throughout the entire course of the disease. The average number is 5,000 to the cubic millimetre, or even less. The increase in the number above normal means some com-

plications, such as hæmorrhage or inflammation, or some outside influence, such as cold bathing. The value of the leucocyte count is only seen when the diagnosis lies between two diseases, one of which has leucocytosis and the other has not, as in typhoid and septicæmia, the latter having a leucocytosis and the former not having it. The diagnosis of typhoid made in the presence of an almost inexplicable leucocytosis is almost invariably wrong. If there is some serious complication, as perforation or hæmorrhage, there will be other symptoms to corroborate it. If a diagnosis is desired from malaria the examination of the blood for the plasmodium malariæ will clear up the doubt. If from meningitis, lumbar puncture should be resorted to. The author concludes that the Widal reaction and the leucocyte count are the most important of the laboratory methods in diagnosis

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of this disease, because they are practicable and easily carried out. Other tests, although perhaps more accurate, are at the same time impracticable.

Report of a Case of Typhoid in an Infant.—By Dr. Francis E. Barrett.—The author first discusses the slowness of the practising physician to recognize the fact that typhoid really does occur in infants. The report is of interest on account of the age and physical condition of the child; the absence of many of the common symptoms, as enlarged spleen, rose spots, coated tongue, and prodromal symptoms, and the continued high temperature without morning remissions. The patient was a boy, aged two years and four months, and had always been physically weak. He had never made any use of his legs. His digestion was weak and there was a certain tendency to gastro-intestinal catarrh. On the first day of the disease the child seemed as well as usual in the morning, but in the afternoon he suffered from pain in the head and nausea and vomiting. The temperature was 103.4° F. Lungs clear, breathing quick, no râles present, heart's action rapid and strong, and the heart sounds clear. The spleen was not enlarged and the liver was normal, but there was a slight tenderness over the abdomen. During the first night he passed urine only once, about thirty cubic centimetres in amount, and this was obtained after a long-continued application of hot fomentations over the bladder and kidneys. The urine had a peculiar odor, educed Fehling's solution, and also responded to Nylander's test for sugar. Albumin not found. Diazo reaction absent. Under the microscope nothing was to be seen but a large number of amorphous urates. Respirations frequently reached as many as sixty to eighty a minute. No urine was passed the second night, and the abdomen was distended and sensitive to pressure. Hot applications were effective and gave relief. The temperature now went to 104° F., and did not fall below this point until the end of the first week. A faint diffuse erythema was noticed on the third day. The Widal reaction was found at the end of the first week. The tympanites was distressing, there was marked weakness, and noticeable loss of flesh. The temperature began to fall about the tenth day and the child began to have a ravenous appetite. On the twenty-second day, for the first time, there was no evening rise of temperature. The treatment consisted of cold baths, cold packs, and irrigation of the colon. Small doses of antipyrine were given the first day. Antisepsis was accomplished by salol and calomel. Turpentine stupes and egg-and-turpentine injections were used. The diet was largely beef broth, chicken broth, and barley water; later, fruit juice and oatmeal gruel. Malted milk produced vomiting; fresh milk, predigested and with lime water, was also employed.

Treatment of Typhoid Fever in Children. By Dr. Henry E. Tuley.—The author considers first the great importance of trained nursing. It is next to impossible for a mother, beset with the cares and responsibilities of a household, and especially if there are other children, to properly care for a patient sick with typhoid fever. The dietetic treatment is important. Milk is unsuited for a regular diet. Broths may be given, whey, predigested milk, some of the cereals and the concentrated foods. No regular routine of medicinal treatment is possible. The treatment should be largely symptomatic, giving only such medicines as are absolutely essential. Jugulation is not possible. No antipyretics should be given internally. The condition of the heart should be jealously watched, and strophanthus and strychnine administered if it begins to flag, while all alcoholic stimulation should be reserved for administration late in the disease. For the condition of flatulence and tympanites, turpentine stupes are very useful, when this drug cannot be given internally. Diarrhœa may be controlled by bismuth. In considering other conditions of serious import, it must not be forgotten that the care of the mouth is essential and important. In hydriatic treatment excellent results have been obtained. Full baths, however, are rarely possible in private practice, but frequent and prolonged sponging gives almost equally as good results. The author concludes with the remark that it is only by eternal vigilance, and with competent and skilful nursing, that these cases are brought through and restored to health.

(To be continued.)

Original Communications.

AN X-RAY STUDY OF THE CAUSES OF DISABILITY FOLLOWING FRACTURES INVOLVING THE ELBOW JOINT.*

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FRACTURES in the vicinity of joints are dreaded by the general practitioner even more than simple fractures along the shafts or bodies of the bone. Fractures in the vicinity of the elbow, being usually more common than fractures near or involving other joints, are always looked upon with special interest. It should be an invariable rule to warn the patient and his friends, in the presence of witnesses, that there is very decided risk of the motion of the joint being impaired, perhaps completely lost. The most painstaking study of the causes of this interference with motion has not enabled us to adopt measures of treatment that will absolutely prevent its occurrence.

Three things are thoroughly well recognized in fractures into the elbow joint: First, that it is not always possible to tell, even under an anæsthetic and with the most careful examination, just what the injury is. Second, that it is not always possible to replace the fragments even in an approximately correct position. Third, that ankylosis will result in a certain number of cases in spite of all care on the part of the surgeon and no matter what plan of treatment may be pursued.

In the *American Medico-surgical Bulletin* for November 1, 1894, I published an article on arthrotomy for deformity following fractures involving the elbow joint, in which I advocated cutting down on these deformities and removing the obstruction to the motion. At the time this paper was read before the Lenox Medical and Surgical Society of New York I presented a boy upon whom I had operated during the previous summer. He had had a fracture of the external condyle of the humerus, which had been treated with the arm but slightly flexed. There was a range of motion of only about ten degrees, so that the arm was practically useless.

When the joint was cut down upon, it was found that the capsule had been torn and was everywhere adherent along a line of callus that had developed over the whole line of fracture. This callus extended into and completely filled the olecranon fossa, limiting extension by interfering with the normal play of the olecranon process. The displacement of the condyle forward prevented flexion by interfering with the natural play of the head of the radius. The callus was carefully removed with a spoon and chisel until extension was complete, and then enough of the displaced condyle was removed to allow the radius to slip easily around. This allowed full flexion. The joint was then closed and the arm dressed in a flexed position and kept at rest until the wound healed, when passive motion was begun. In

FIG. 1.—Supracondyloid fracture of the humerus, showing over-production of callus.

*Read before the Medical Society of the State of New York, January 30, 1901.

FIG. 2.—Supracondyloid fracture of the humerus.

consequence of the youth of the patient, it was impossible to get him to exercise the joint sufficiently, so it was twice necessary to break up the adhesions under ether, but he has now almost a normal range of motion, flexion and extension being only slightly affected.

Other surgeons about this time had begun to advocate the operative treatment of this condition, and some had applied it to compound fractures. In the latter cases there could be no question that it was the proper mode of procedure, and Murray showed to the New York Surgical Society and published in the *Annals of Surgery* (March, 1894, page 336) a notable case. This patient, a man, fell from a scaffold, a distance of fifteen feet, striking on the back of the left elbow. When he was first seen, twenty-four hours after the accident, the soft parts were greatly swollen and lacerated, and behind and to the inner side of the elbow was a wound where the upper fragments had perforated the skin. On enlarging the wound, there was found a transverse fracture passing a short distance above the condyle, and from the centre of

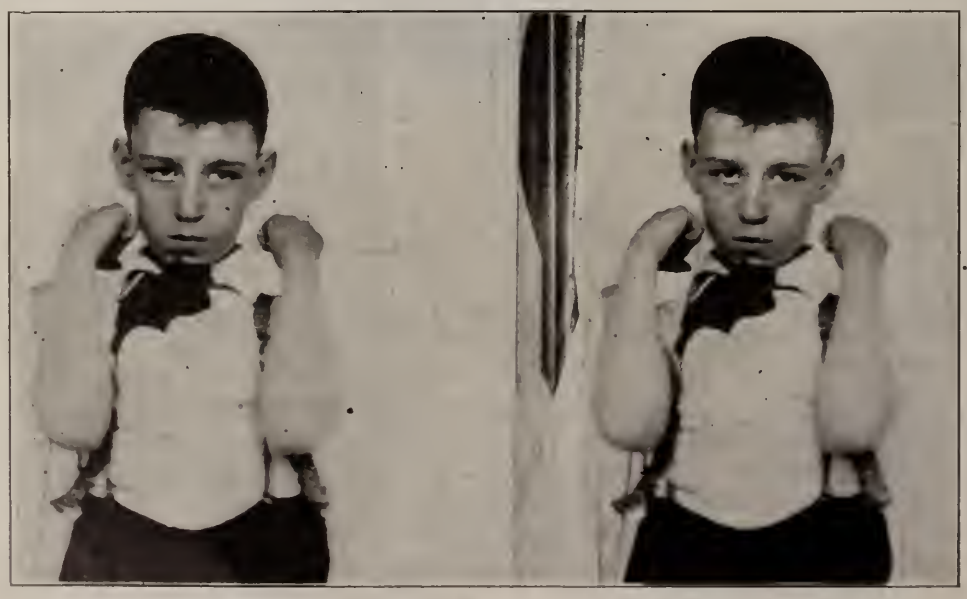

FIG. 2*a*.—Result after treatment, showing full flexion.

FIG. 2b.—Result after treatment, showing extension.

his transverse line a vertical fracture extended into the oint. The external condyle was drawn upward in front f the shaft, and the internal condyle was displaced in-ard by the olecranon, which was wedged upward be-ween the condyles. An incision two inches and a half ong was made over and exposing the external condyle; oles were drilled through the shaft and external condyle; a strand of kangaroo tendon was passed through the holes and tied and the condyle was thus brought into position. The olecranon was then drawn down into place and the internal condyle reduced. With the aid of an aneurysm needle, a strand of kangaroo tendon was passed through the outer wound, behind the condyles, then around the internal condyle, and then in front and

FIG. 3.—Supracondyloid fracture of the humerus.

back to the point of entrance. The ends were tied over the external condyle, and thus the internal condyle was held in place. The wounds were left open, packed with iodoform gauze, and a right-angled splint was applied. They were dressed anew on the third day, but the iodoform gauze was not removed for eleven days. Passive motion was employed at the end of the fourth week. Flexion and extension were nearly perfect, and supination and rotation were completely so. The arm is nearly as strong as before the accident.

Powers, at the meeting of the New York Surgica Society of November 22, 1893 (*Annals of Surgery,* Vol xix, 1894, page 236), presented a boy, nine years of age who had complete ankylosis in extension following backward dislocation of the ulna, fracture of the coronoi process, and considerable callus. Arthrotomy was pe formed, the callus chiseled away, and the dislocation r duced. At the end of four months after the operati the range of motion was from 90 degrees flexion to 1 degrees extension.

FIG. 4.—Separation and inward displacement of the lower epiphysis of the humerus. Inward dislocation of the radius and uln

FIG. 5.—Separation and displacement, inward and backward, o the lower epiphysis of the humerus. Dislocation of the radi and ulna.

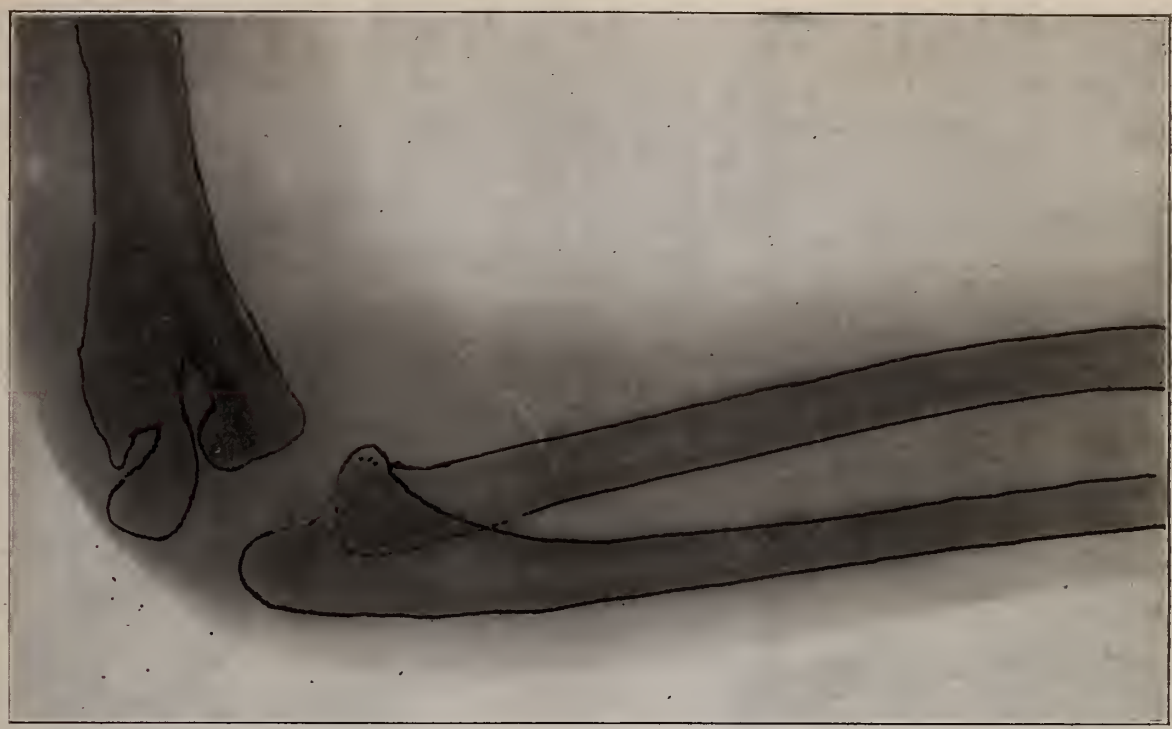

FIG. 6.—Intercondyloid fracture of the humerus. Incomplete fracture of the external condyle.

Wight (*Annals of Surgery,* Vol. xviii, 1893, page 218) has reported ten cases of ankylosis of the elbow joint after treatment of fracture of the lower end of the humerus with the forearm in the extended position. Five of these patients were operated upon, excision of the lower end of the humerus being performed. In four refracture was accomplished, while in one an operation was declined.

Klemm (*Sammlung klinischer Vorträge,* No. 78, September, 1893) recognized the possibility of an operation being resorted to, but said that it should be reserved for those cases in which there was an injury to the soft parts already, or in which without suturing it was impossible to secure reduction of the fragments with proper coaptation.

Mollière (*Revue de chirurgie,* November, 1886) advocated, in connection with irreducible dislocations of the elbow, partial or complete resection of the end of the humerus.

Deces (*Revue de chirurgie,* 1886) had successful results following arthrotomy in two cases of irreducible dislocation of the elbow.

Maydl (*Revue de chirurgie,* 1886) had treated five old dislocations of the elbow in this way.

Stimson (*Annals of Surgery,* Vol. xviii, 1893, page

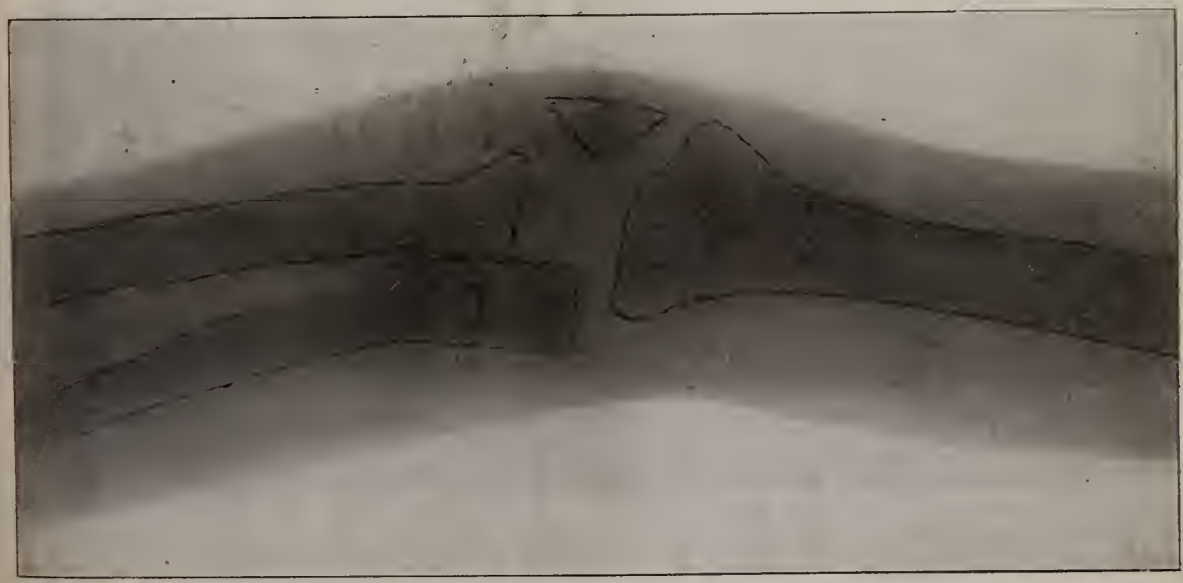

FIG. 7.—Separation of the capitellum and dislocation inward of the radius and ulna.

666) has also advocated the open method in irreducible dislocations.

Moore (*Medical Record,* Vol. xliv, 1893, page 583) advocates, when the fragments of the humerus at this joint are so displaced that they cannot be reduced by manipulation, cutting down upon them at once, under proper aseptic precautions, reducing them through the open wound, and then wiring them in place.

Koenig (*Deutsche Zeitschrift für Chirurgie,* Bd. xxvii, H. 1 and 2) operated in three cases of free bodies in the elbow joint. Extension was limited, and the bodies could be demonstrated before the operation. They were found in the anterior pocket of the joint on the ulnar or radial side. The symptoms were synovitis and sudden pain, pain in motion, and an incomplete extension. He thinks they are caused by trauma. One and perhaps a common method of production is by the chipping away of pieces from the coronoid process or olecranon process of the ulna, as illustrated in Fig. 10.

Oberst (Volkmann's *Sammlung klinischer Vorträge,* No. 311) says that the most frequent causes of ankylosis are:

1. The prolonged rest of the joint in the treatment of the fracture.
2. The inflammation following traumatism.
3. The over-production of callus.
4. The ordinary intracapsular and extracapsular blood extravasation associated with the fracture.

These were the results of clinical experience and practical observation up to the time of the discovery of

FIG. 7*a*.—Result obtained after operation, showing flexion, separation of the capitellum, etc.

FIG. 7*b*.—Showing extension after operation. Fracture of the capitellum, etc.

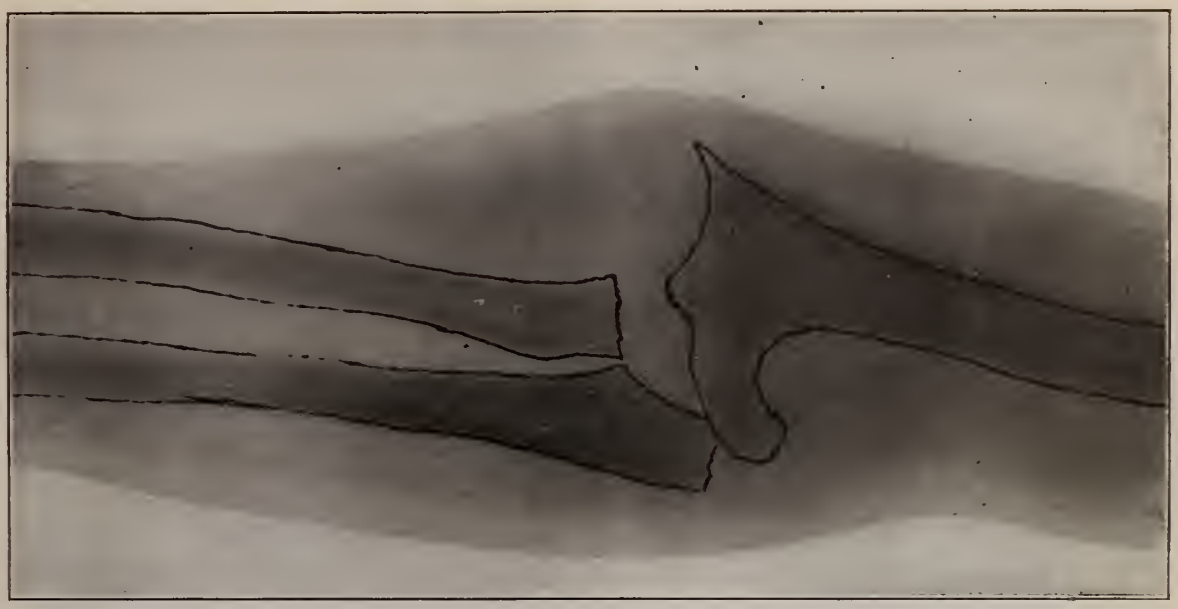

FIG. 8.—Fracture of the internal condyle of the humerus with lateral dislocation of the radius and ulna.

the Röntgen ray. At this time we hoped that all uncertainty in regard to fractures would be overcome, but, unfortunately, we have been compelled to recognize the fallibility of the ray in surgical work. It is not always possible to make out a line of fracture by means of the fluoroscope, and in the hands of untrained experimenters many mistakes result from not recognizing the fact that the image thrown on the plate or screen is only a shadow, and these shadows may be made as unreal and as fantastic as the shadows we cast upon the wall with our hands for the amusement of children. This has made the work with the x ray not a pastime, but a serious undertaking and a special study requiring trained operators to obtain accurate results.

It is an essential nowadays, since the x ray has illustrated how frequently the fractures are comminuted or complicated with partial or complete dislocation, that every fracture of the elbow should be examined carefully under complete anæsthesia. Then, and then only, can one be even moderately hopeful of completely reducing the fragments. The accompanying series of pictures illustrates some of the conditions we may expect to find and some of the conditions that we should strive to obviate. This series is not made up of pictures taken at the time of the injury, but in almost every instance they represent cases that have come under my observation because of limitation of motion.

None of these has been treated in our service for the

FIG. 9.—Fracture of the internal condyle of the humerus. Lateral dislocation of the radius and ulna.

FIG. 10.—Fracture of the internal condyle and chipping of the olecranon.

FIG. 11.—Fracture of the radius below the head.
(Skiagraph by Dr. E. R. Corson, Savannah, Ga.)

fracture, yet it is far from me to criticise the result save in those cases in which the straight position was maintained. In general practice, in the hands of the practitioner who does not have abundant opportunity for treating and observing fractures, I do not believe the straight position of the arm should ever be maintained when treating elbow-joint fractures, except in the case of the olecranon process of the ulna.

Figs. 1, 2, and 3 represent three cases of supracondyloid fractures of the humerus. In the first the arm had apparently been treated about midway between flexion at a right angle and complete extension (about 145 degrees). The photograph shows the condition accurately. The condyles were carried backward while the shaft of the bone was drawn forward. It is evident that in this case if the bones were placed in proper position they were not maintained there. The shaft of the humerus is seen projecting forward so that in flexion the coronoid process of the ulna strikes upon the mass of callus below the more prominent projection of the shaft before it reaches the right-angled position, while the ulna would rest upon the sharp end of the diaphysis in complete flexion.

It is perfectly obvious in this case that further flexion was out of the question, and consequently this boy had a useless arm. Extension was possible to the extent seen in the picture. In operating in this case the projecting portion of the diaphysis was chiseled off and a new coronoid fossa was then cut out with a curette until complete flexion was possible. The arm was then maintained in the position of complete flexion. No attempt was made to improve the extension. The result was remarkably satisfactory. In spite of the extensive dissection necessary to reach the anterior surface of the humerus and the consequent lacération and bruising of the capsule and the synovial membrane, flexion was obtained almost to the full extent, so that the patient was able to reach his mouth, ear, necktie, and the collar button in the back of his shirt band.

Fig. 2 represents the good result that may be obtained in a similar case by careful reposition of the fragments. This picture and also the next one (Fig. 3) were lent to me by Dr. C. C. Page, of New York. In the first the excellent functional result obtained is shown by the accompanying photograph. It will be seen that the only deformity in Fig. 2 is the loss of the carrying angle of the right arm. In both these pictures it is evident that without proper replacement of the fragments flexion inside of a right angle would have been impossible, as in both instances the diaphysis would strike directly against the radius and ulna.

Figs. 4 and 5 represent a somewhat similar condition, the separation of the lower epiphysis of the humerus with dislocation of the radius and ulna. From Fig. 4 one would judge that replacement should be comparatively easily effected, but as a matter of fact it was not put back completely and the dislocation of the radius and ulna offered the great interference with the motion. It was replaced in position by cutting down, refracturing, and cutting away some exuberant callus on the inner surface. I have not seen this boy since he left the hospital, last year, but at that time he had a very fair amount of flexion, well within a right angle, although he was unable to touch the shoulder on the affected side with his fingers. Extension was considerably limited, but my impression was that it would materially improve.

In Fig. 5 we have a similar condition, except that the epiphysis has been completely turned over. In this case it was necessary to make a resection of the olecranon and coronoid processes and smooth off the projecting end of the diaphysis. The functional result was one of the best I have obtained. Fig. 6 shows a splitting, or intercondyloid, fracture of the humerus. The external condyle was also incompletely fractured and displaced backward. Here the olecranon and coronoid fossæ were completely occupied by callus, so that neither flexion nor extension was possible. The motion also was arrested by the displaced condyle interfering with the flexion of the radius. Both fossæ were carefully excavated and the condyle was cut away with a chisel until the radius moved easily. The position of the arm was changed daily on account of the callus in the humeral depression, and the result was a useful arm, though with a decreased range of motion.

Fig. 7 represents a fracture of the capitellum and an internal dislocation of both bones. The mass of callus thrown out about the fractured area was very great and absolutely prevented reduction of the dislocation until it had been chiselled away. It was then possible to force the bones back into their proper position. The range of motion at the time this boy came to me, about two years ago, was very limited, only about 10 or 15 degrees. The flexion was to 145 degrees, giving him a practically useless arm. He now has practically full flexion. The photographs accompanying the radiograph show his condition at the present time.

Fig. 8 shows a fracture of the internal condyle of the humerus with an inward dislocation of both bones of the forearm. In this case a mass of callus rounded out the area between the tip of the condyle and the point from which it was fractured and also filled up the olecranon and coronoid fossæ. The same procedure was undertaken in this patient. The projecting condyle being removed, together with all of the callus that interfered with reduction and with motion, the fossæ were excavated anew, and the result was an improvement in the general condition.

Fig. 9 represents simply another case of the same kind, which was submitted to the same treatment.

Fig. 10 shows an extensive case. There was a fracture of the internal condyle involving the olecranon fossa, and there was also a fracture of the olecranon with a backward and inward dislocation of both bones. The callus was very exuberant and there was only 5 degrees of motion. The arm had been treated in the straight position. At the operation the usual routine was followed

of dissecting away all the callus that interfered with motion and removing any bone that could possibly affect the usefulness of the limb. This is the poorest result I have had. His arm is now flexed at a right angle, but his motion is arrested by a bony point, apparently interfering with the passage of the radius over the capitellum. This prevents complete flexion. I have advised cutting down again and removing the obstruction.

Fig. 11.—This case of fracture of the neck of the radius was most skilfully treated and skiagraphed by Dr. Eugene R. Corson (*Annals of Surgery,* 1899), of Savannah, Ga. It will be seen at a glance that, unless the surgeon had an x ray plant at hand while examining a case of this kind, reposition would not be very probable. The interference with the motion of the joint would then be very great.

This series of pictures is by no means complete, but, if it has the effect of stimulating surgeons to a careful examination of all the cases of impaired motion in the elbow joint, I shall feel that my purpose has been accomplished.

The pictures here shown illustrate forcibly the fact that the bony lesions, displacements, and callus cause most of the disability. If that is so, then nothing is left for the future of the patient except a stiff arm unless an operation is performed. If an operation is undertaken, what will be the result? In my own series of cases I have not had a single case in which suppuration has penetrated the capsule and affected the motion. I do not mean to say that I have had absolutely aseptic results in every case, but I do say that when suppuration has occurred it has invariably been in the skin, and has remained in the skin, never penetrating the joint. As a result I have not had a single case, and I have now operated twenty-one times, in which motion has not been gained instead of lost.

I know of one case of operation by a friend of mine, a very skilful surgeon, and an exceedingly careful aseptarian, in which the joint did become infected, and as a result no motion was gained. The boy's arm, however, was held in a much better position than before the operation.

It is absolutely essential that no sepsis of the joint should supervene. If this can be prevented, and it should not occur if the surgeon carries out the proper precautions, there should invariably be a gain in motion.

A most surprising fact to me has been the demonstration of how little effect extensive injuries to the joint capsule have upon the after-result. The capsule may be cut and lacerated extensively during attempts to overcome deformity by operative measures, and yet a perfectly useful limb will result. So convinced am I of this fact that I no longer dread the effect of operative treatment of the elbow joint so long as no suppuration results. Given a primary union in the scar, and the fibrous ankylosis due to the adhesions will be effectually overcome by the patient without recourse to painful attempts at passive motion.

We must consider, then, that we have to deal with, first and principally, ankylosis due to interruption of the proper action of the joint by displaced fragments of bone; second, interruption of motion due to exuberant callus along lines of fracture or filling up the olecranon or coronoid fossa; third, fibrous ankylosis due to suppuration, effused blood, or inflammatory changes.

In the *Annals of Surgery,* Vol. xxv, 1897, page 701, Allis says: "Very many so-called simple fractures are as grave as the more dreaded compound fractures, and cannot possibly be scientifically treated by any than open measures. . . . I have seen six fractures of the elbow joint, all simple, that resulted in total loss of function of the forearm and hand, and one of them in the hands of one of Philadelphia's foremost hospital surgeons."

No surgeon would leave a fracture of the shaft of a long bone in mal-position at the present day; if he could not get it into position by manipulation, he would cut down and put it in position. There is no more reason why he should not do it in the elbow joint. I personally should not hesitate a moment about cutting down on a recent fracture about this joint if I found I could not readjust it so that the function of the joint should be preserved. We should not hesitate in a compound fracture, and nowadays there is no reason for hesitating in a simple fracture.

When it is recalled that the elbow is a simple joint, with small articular processes which can be readily reached, that it has a simple synovial membrane and an abundant vascular supply, together with such a powerful set of muscles that if they are not too much interfered with they will of themselves, unconsciously on the part of the patient, favor the regaining of motion, it seems strange that any one should debate the advisability of the operation.

I do not want to be misunderstood on this question, however; this is not an operation to be undertaken at any time and place and by any practitioner of medicine. Unless the operator has a thorough knowledge of the anatomy of the elbow joint and considerable experience in aseptic and operative technique he had better let the case alone.

In my own work I have usually used the same incision as is ordinarily employed for excision of the elbow, a single vertical incision at the back. Sometimes this is placed internal, sometimes external, to the triceps tendon, according to the portion of the joint I wish to reach. Once or twice I have found it necessary to use the H incision when the bony lesion was extensive. The triceps tendon is then pulled to one side and the deeper parts are separated by clean-cutting dissection until the joint is exposed. Of course, it is essential to look out for the ulnar nerve. The joint is then opened and the bony changes are brought into view. The chisel, bone forceps,

and bone scoop are employed to remove the bone, testing motion from time to time until it is certain that flexion is complete. It is very important then to wash out all bony débris from the joint and close the capsule carefully just as one closes the peritonæum. The other structures are then brought into position and sutured. The arm is dressed in the flexed position and retained in that position for a week, when all the dressings are removed, and the patient is encouraged to use the arm. Systematic massage is also useful at this stage.

The essential point in the whole operation is the removal of all bone or callus that in any way interferes with the proper motion of the joint. If both sides of the humerus are operated upon, as when the coronoid and olecranon fossæ are both involved, the arm must be brought down into full extension as soon as possible.

I am in the habit then of putting it up in full flexion, in two or three days extending it as far as possible without pain, and then each day continuing the change of position, with manipulation, until motion is easy and the arm falls readily into either flexion or extension.

A MODIFIED URETHRAL DILATOR-HANDLE.*

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Chronic gonorrhœa, post-gonorrhœal urethritis, and urethral strictures continue to be the bugbear of general practitioners, despite all that is being done to make these conditions understood and their treatment rational. There is no need of emphasizing this fact to specialists, to whom these cases are daily referred. In view of the frequency of chronic urethral disturbances and of the immensity of literature on the subject, it seems surprising that so many acute urethral diseases go over into chronicity and that then so many excellent, well-informed practitioners tacitly place them in the incurable category. In a measure this may be due to the large amount of detail work required in the treatment of these chronic conditions, and the inevitable absence of quick, brilliant results obtainable.

Fig. 1.—The patient lying on the table, dilator inserted; the patient can see the dial.

These elements have not deterred earnest workers from laboring arduously toward the desired end. One need but recall the writings of Kollmann, Wossidlo, and other men to evoke a vista of their numerous followers in the path which Oberlaender first hewed. I have endeavored elsewhere* to present a conspectus of the work of these able men, with such practical modifications thereof as increased experience developed.

Fig. 2.—The patient lying on the table, dilator inserted; operator bending over the patient's abdomen to see the dilator's dial.

Throughout, it is evident that anything which will simplify the work is likely to induce others to adopt the methods which prove successful in the hands of those who employ them.

The present effort is a small contribution to that end. The years devoted to such chronic urethral conditions as are amenable to treatment by the dilators which Oberlaender and Kollmann devised have led to but one regret. This regret is due to the fact that the name "dilators" has been given to these instruments. In appearance they certainly are dilators; their temporary effect, it is true, is primarily to dilate the urethra's diminished calibre. This dilatation, however, is only an incident to the treatment; its permanent effect, grossly stated, is to cause resorption of pathological infiltrates and thus permanently to set aside the cause and effects of the disease. Much as the misnomer with which these instruments were brought out is regrettable, I deplore that I cannot suggest a short,

*Presented before the Genito-urinary Section of the New York Academy of Medicine, February 20, 1901.

**The Irrigation Treatment of Gonorrhœa, its Complications and Sequelæ.* William Wood & Company, New York, 1900.

comprehensive designation which will better describe their action.

The fact remains, however, that the majority of chronic urethral conditions yield to the employment of

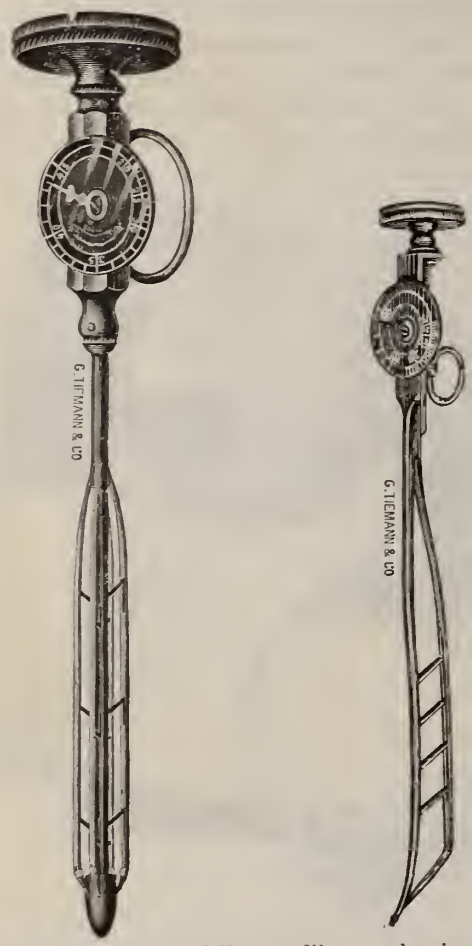

FIG. 3.—Oberlaender and Kollmann dilators, showing the position of the dial.

dilators. While no objection can be made to the efficacy of those of Oberlaender and Kollmann, it has long been evident to me that, without changing the principles of their action, their employment might be made more convenient. Each of these dilators has the dial on one side of the handle. As it is best, for many reasons, that the instrument be used while the patient is in the recumbent position; the dial necessarily faces the patient. The exception hereto is the Kollmann anterior dilator, which, being perfectly straight, allows the dial to face in any direction. With all the others the before-mentioned condition prevails. The principal objections hereto are:

1. The operator cannot control the amount of the dilatation, except by interrupting it, so as to bring his vision in line with the dial. This requires bending over the patient's abdomen. The importance of thus checking the work done at each *séance* is evident when considering the possibilities of danger from too rapid or excessive dilatation.

2. The shield and dial on the Oberlaender and Kollmann instruments do not offer the operator's left thumb and index finger a firm grasp of the instrument, while he gently holds the penis with the other fingers.

3. The average patient, observing his improvement under this treatment, is likely to apply a vicious twist to the screw, thinking that by hastening the dilatation he accelerates his cure. I regret that in this class are the physicians who come for treatment of their chronic urethral diseases.

The improvement in the handle of the instrument, made from my design by Messrs. Tiemann & Co., consists essentially in having the dial at the top of the instrument and two heavy metal projections for the easy grasp of the operator's left thumb and index finger.

The technique of the employment of this modification and its action in nowise differ from those of the Oberlaender and Kollmann dilators.

The advantages of this modification are:

1. While being guided by the amount of resistance for each increase of dilatation, the dial is continually under

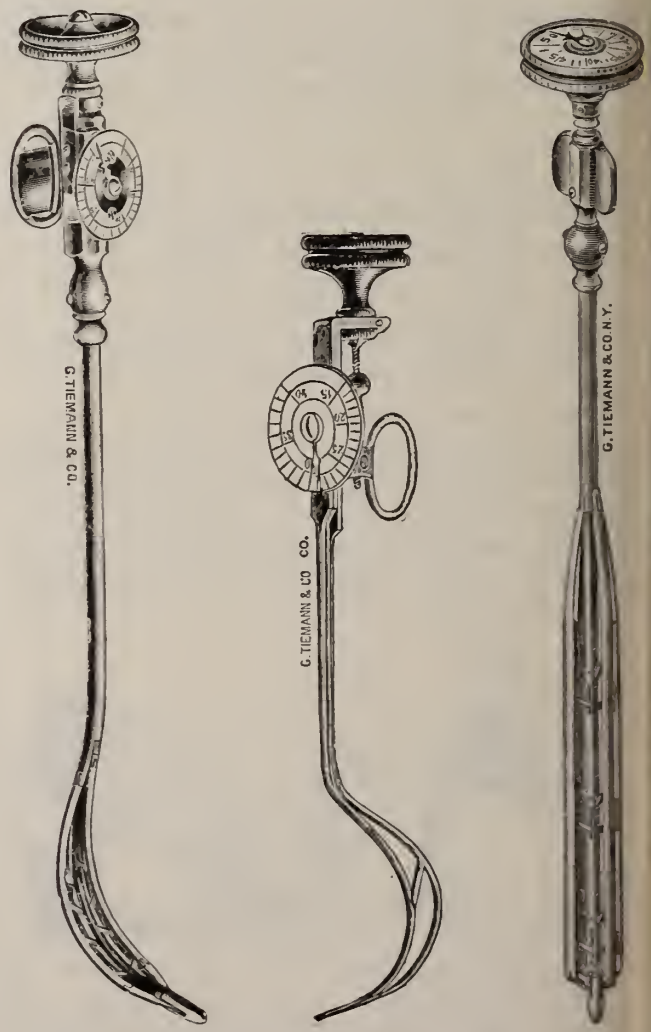

FIG. 4.—Valentine modification.

the operator's eye, positively guarding against any excess of dilatation and making any change of position unnecessary.

2. Having no dial or shield at its sides, this modified dilator is more easily introduced and more easily held in position during its employment.

3. The dial, being beyond the patient's range of vision, offers him no inducement unnecessarily and even dangerously to increase its calibre.

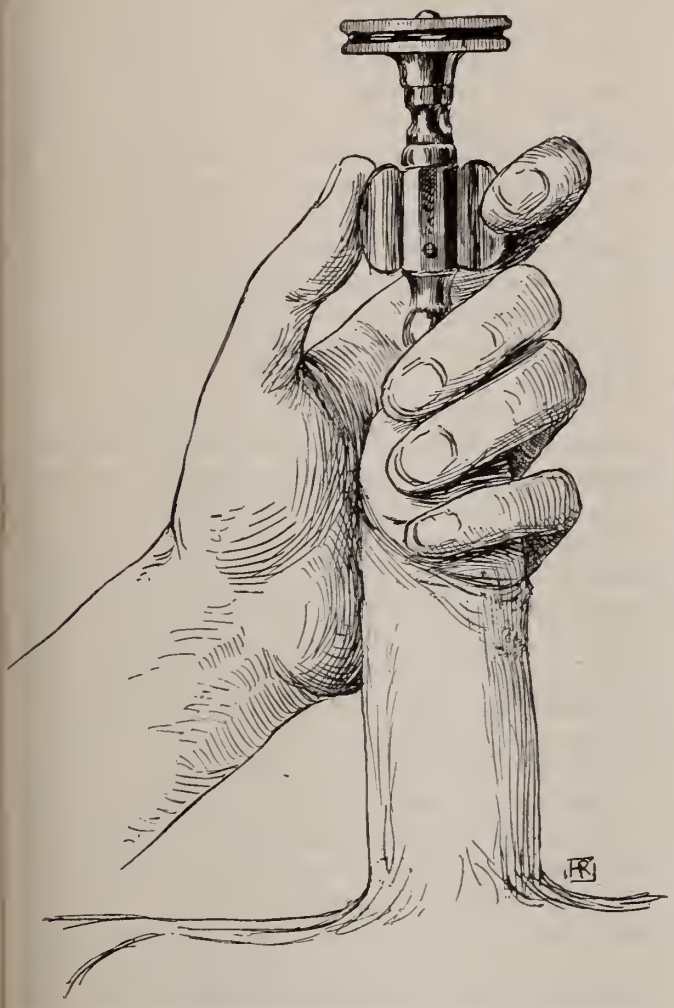

FIG. 5.—The manner of holding the penis with the Valentine modification of the dilator.

FIG. 6.—The patient lying on the table, dilator inserted; the operator dilates while the dial is in view.

4. The improved mechanism of this dilator-handle simplifies the construction of the instrument without increasing its cost.

31 West Sixty-first Street.

HYPERACIDITY (SUPERACIDITY, HYPERCHLORHYDRIA, SUPERACIDITAS CHLORHYDRICA); A CLINICAL STUDY.

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(Continued from page 943.)

Ætiology.—Up to within a late period, *hyperacidity* has been classed among the neuroses of the stomach, an irritation of the nervous system in general or of the nerve centres or the filaments distributed to or controlling the organ in particular being held to be the ætiological factor. Latterly, however, Riegel, while contending in the main for the same ætiology, admits that in a few instances an irritation of a local character, *i. e.*, direct irritation of the gastric mucous membrane, may lead to this condition.

My own experience, based upon the number of cases already stated, upon a careful scrutiny of their histories, and upon the results obtained in their treatment, compels me to a view directly the opposite to that of Riegel, namely, that, while in a few cases an irritation of the nervous system in general or in part may be the ætiological factor that has provoked the hyperchlorhydria, in the greater number more direct—more tangible—causes can be found to account therefor. These local factors I place, according to their importance, in the following order:

A. *Constipation.* This, contrary to the view generally held, I regard as a most important ætiological factor, and for the following reasons:

1. Careful inquiry into the histories of the patients

coming under my observation disclosed the fact that in all instances where there was any distinct recollection in the matter (a number in whom the malady had lasted for some years had entirely forgotten the particulars of its onset) the constipation antedated the hyperacidity for a varied length of time.

2. Free action of the bowels is always attended with great improvement. All these patients declared that they felt better and suffered but little, or not at all, from pain or burning or acidity of the stomach when the bowels acted freely.

It is to me a matter without doubt that whatever success has been obtained in treatment with the mineral waters rich in the various active salts of sodium is altogether due to their purgative action, and not, as has been maintained, to any mysterious chemical processes developed in the economy. The following history is very illustrative of this:

November 5, 1899.—H. S., a woman, fifty-one years old, a native of Poland, married and the mother of children, height 5 feet 5 inches, weight 186 pounds, consulted me for pendulous abdomen (Hängebauch), which she had had since her first pregnancy. The circumference of the belly at its most prominent point was 119 centimetres. About fifteen years before, while still in Europe, she began to have trouble with her stomach. She became constipated, and then followed pressure and burning in the stomach. She was advised to drink the waters of Marienbad.* She took them regularly for long periods, then would intermit, to resume again as she again become constipated. Ten years before consulting me she came to America, and shortly after her arrival her stomach trouble reappeared. She was treated, without much benefit, for two years, and was then advised to go to Marienbad. She took the trip, and was again soon relieved. She remained at these springs for quite a long time, and then returned to this country. At first she felt well, but gradually she became more constipated, and after a time she was again troubled with the pressure, the burning, and the sourness of the stomach. After a few years she made a third trip to Marienbad and was again relieved. She came back here, and three months later all her old symptoms had again returned, and she has been thus afflicted ever since.

3. A normal, regular activity of the bowels once secured, in these cases, by appropriate treatment, and the gastric phenomena disappear very rapidly.

4. A supervening constipation may, in certain persons not otherwise so affected, provoke an attack of transitory hyperacidity, as shown by burning in the stomach, pyrosis, and the ejection of an acrid fluid which numbs the teeth as it passes over them.

As to the mode of action of constipation, I explain it in this wise: Long-continued constipation (referring here only to that dependent upon atony of the intestines) leads to atony of the stomach, *i. e.*, its motor activity is impaired; the gastric muscle does not perform its function with its normal rapidity and force. This is readily understood if it is remembered that the impulse to gastric motion comes from the intestine. In consequence of this slowing of movement, the chyme is retained unduly long and becomes, in a measure, an irritant; its presence stimulates the secretory activity of the organ, more gastric juice than is requisite for the chymification of the quantity of food ingested is poured out, and the hydrochloric-acid element of the excess, remaining free, irritates the gastric mucous membrane and gives rise to the characteristic manifestations. Perhaps a gastric juice with hydrochloric-acid element stronger than normal is poured out. This process being repeated several times, a habit on the part of the stomach is formed (every part of the human being as well as the whole can take on a habit), and the morbid condition known as hyperacidity established.

B. *Alcoholic Liquors.** It is not at all necessary that they should be indulged in to excess; even a moderate use, long continued, may lead to hyperacidity. That an indulgence to excess in the strong liquors, such as brandies, whiskeys, etc., may produce a hyperacidity is possible; I believe, however, as a matter of observation on alcoholics, that in the majority of these cases a condition of chronic congestion, perhaps a subacute inflammatory condition with superirritability of the gastric mucous membrane, is established rather than excessive secretion, and that the symptoms are due to the former rather than the latter.

C. *Smoking.* Tobacco-smoking is considered by some as of ætiological importance. Though it is admitted that with some persons smoking has a stimulant effect upon the gastric mucous membrane and may thus cause the secretion of gastric juice, I do not believe that *per se* it plays much of a rôle in the production of hyperchlorhydria; it is only when its irritant effects are superadded to those of the alcoholic liquors that it can be considered to have any causal influence. This much, however, is beyond doubt, that once an irritable condition of the gastric mucous membrane is established, smoking is a very powerful factor in maintaining it—nay, in adding to it.

D. Food of very heavy character, very rich food, food that has become gamy or in which irritant substances have developed may occasionally excite a hyperchlorhydria of transitory or chronic form.

Another ætiological factor referred to by both Bouveret and Riegel is *the withdrawal,* for any reason whatsoever, *of its usual diet from a stomach accustomed to heavy food,* food rich in nitrogenous material, and the substitution therefor of a much simpler and much lighter diet.

Under these circumstances, I certainly should not consider the case as one of hyperacidity, taking the term to signify a morbid state. In fact, there is no hyperacidity here. The stomach is not at all at fault; it is prepared to do the work to which it has long been accustomed; it is the individual who is at fault, in that he does

*Kreuzbrunnen or Ferdinand'sbrunnen, rich in sulphate, bicarbonate, and chloride of sodium.

**a.* Brandies, whiskeys, gins. *b.* Wines, mainly tart Rhine wines. *c.* Exceptionally only, beers.

not supply to it material of the usual character. The stomach accustomed to the rich, heavy foods and providing for their digestion by the secretion of an abundant supply of gastric juice, containing all the proper elements thereof, cannot accommodate itself on the instant to the more abstemious diet, cannot at once inhibit the secretory function in the measure required by the changed character of the ingesta.

This is no more hyperacidity than is the want of stool in the starving constipation, though it is so classed, as I have pointed out elsewhere.*

Rapid eating, imperfect mastication, eating food too hot, or drinking fluids that are too cold, and highly spiced food are all said to be frequent factors in the production, through local irritation, of hyperacidity. So far as my own observation goes, none of these has played any rôle herein. The first two, which, as they always go together, are really one, are among the most frequent causes of indigestion and of subsequent gastric and intestinal atony; but the indigestion is of the character that is dependent upon a lowering of the hydrochloric-acid element of the gastric juice from its normal proportion—an insufficiency. The latter factors, with the exception of the last, which I have not encountered in any form, I have always found provoked a gastritis of a more or less acute character, never a hyperchlorhydria.

E. In a number of cases it is undoubtedly some disturbance of the nervous system that is the direct cause of the hyperchlorhydria. It may be either a disturbance of the nervous equilibrium, as we find it in hysteria and neurasthenia, or some form of cerebral irritation dependent upon prolonged worries, excessive cares, or emotional disturbances of various natures. Mental overwork is also said to lead to hyperacidity. In my experience it has generally been associated with a dyspepsia of an atonic character, a lowering of force, both secretory and motor.

As will be readily understood, the nervous phenomena are here decidedly prominent. In the hyperchlorhydria of such causation the constipation that attends some of these cases is occasionally of most obstinate character. As already stated, I hold that it is a result of the ætiological factor, and not merely a consequence of the hyperacidity. In proof thereof it will be found that the constipation is very much of the character of the ætiological factor. If the nervous derangement is of a light form that yields readily, or the mental worry or irritation is readily obviated, the constipation will likewise be of mild type and yield readily and quickly to treatment; if, however, the nervous trouble is of a graver form—has a stronger hold upon the patient—the constipation will also be of obstinate character and require long and persistent and varied treatment before an impression is made upon it.

*See Illoway, *Constipation in Adults and Children, with Special Reference to Habitual Constipation and its Most Successful Treatment by the Mechanical Methods.* The Macmillan Co., 1897.

The comparative frequency of these various ætiological factors may be judged more correctly, because expressed in figures, by a study of the following table, the summing up of causation in the twenty-three cases here referred to:

Constipation	11 cases
Drinking and smoking	6 "
Nervous disturbances of the various characters above referred to	5 "
Food of very heavy, and perhaps irritant, character	1 case

Not infrequently it is a combination of various of these ætiological factors, rather than a single one, that has led to the development of the ailment. Thus, we may have smoking, drinking, and constipation combined, or smoking and drinking and eating of heavy dishes, or smoking and cerebral irritation, or constipation and a tendency to neurasthenia or hysteria, etc. Usually one of these stands forth prominently and is of greater ætiological importance than the others; nevertheless, to achieve success in treatment, they all must be attended to, must be obviated or removed. As the old maxim has it, *sublata causa, tollitur effectus.*

Pathological Anatomy.—So far, with the rare exception of a slight erosion, both macroscopical and microscopical examination of the stomach, post-mortem, have shown no deviation from the normal. From clinical evidence, however, I am inclined to believe that a more or less irritated condition of the gastric mucous membrane exists, but that it disappears with the setting in of the fatal illness, when all that has tended to maintain it is set aside, and is therefore not apparent after death.

Diagnosis.—The diagnosis cannot be made upon any one symptom or any one group of symptoms. The finding in the examination of the stomach chemismus of a high total acidity, even with a large percentage of free hydrochloric acid, does not necessarily mean a hyperchlorhydria. As already stated, I have seen cases in which the quantity of free hydrochloric acid was as large as in any of the twenty-three cases forming the basis of this study, and still there was no hyperacidity, even as none of the other manifestations of this morbid condition was present.

The other features, already discussed in detail, that the stomach contents are said to present are as yet too much in question—the why and wherefore too little understood—to have any bearing on this point. This is apparently the view of Riegel, for, though the investigations with regard to them were made by his former assistant, a gentleman whom he otherwise frequently refers to by name, he does not mention them in this connection, in any way, in his latest work on *Diseases of the Stomach.**

Neither can gastralgia or pain or burning or acidity in the stomach be counted upon as a certain indication of this morbid condition. I have seen cases (and so undoubtedly have others) of gastralgia—in one instance the

*See *Bibliography.*

most severe I ever met with—wherein the hydrochloric-acid element of the gastric juice was either greatly deficient or wanting altogether. I have heard patients complain of severe pain in the stomach, and still examination of the chemismus disclosed an absolute absence of free hydrochloric acid. I have heard complaints about burning in the stomach (one patient said it seemed to her as if she had a fire within her), and upon examination hydrochloric acid was found altogether wanting, the burning depending upon the free development of sarcolactic and lactolactic acid, butyric acid, and other volatile acids. Likewise have I seen cases of acidity (of the stomach) in which this was due altogether to freely developed lactic and acetic or other acids.

It is only when we have all the symptoms together, the high total acidity, the large percentage of free hydrochloric acid with gastralgic paroxysms, with the pain described, with the burning, with the acidity, that we can make a diagnosis of hyperchlorhydria.

I consider the gastralgic paroxysm, the pain in the stomach, the burning in the stomach, the acidity thereof, as the stigmata of hyperacidity; for only when these are present (one or several) can we justly conclude that the percentage of free hydrochloric acid found is an abnormal one, that too much of it is poured into the stomach.

In cases with gastralgic paroxysms, and more particularly when the pain is located to the right of the median line, in the neighborhood of the gall-bladder, a distinctive diagnosis will have to be made as regards biliary colic (without icterus). However, no great difficulty need be encountered here if it is borne in mind that the pain, the gastralgic seizure, stands in close relation to the ingestion of food, as already described, while the attacks of biliary colic are altogether independent thereof. Furthermore, a very distinguishing feature is this: The patient with the gastralgia or pain of hyperacidity can always eat. The spasmodic seizure over, frequently even during the same, he can eat and he wants to eat and usually does eat a rather hearty meal. The sufferer from biliary colic has no appetite, does not want to eat, and cannot eat; a little thin fluid to moisten his parched mouth and throat and to revive him somewhat is all that he wants.

Complications.—The complications noted in the twenty-three cases were:

1. *Atony.* Some degree of atony of the gastric muscle was noted in six cases. It was determined mainly by the splashing sounds heard after the ingestion of fluids, as will be set forth in detail elsewhere.

2. *Gastroptosis* was noted in but one case.

Consequences, or sequelæ, observed.—*Erosions* were noted in but one case, and even in this instance there was no evidence thereof at the time the patient came under my observation, no flecks of blood, no fragments of mucous membrane. The diagnosis, in so far as this point is concerned, was based upon the statement of the patient that now and then, at more or less long intervals, he had noticed a fleck of blood in the regurgitated liquid.

Treatment.—Of the twenty-three cases forming the basis of this paper, eighteen were under observation a sufficient length of time for me to note the effects of the treatment; the five other cases were seen but once or twice (after the completion of the examination), and I have not learned whether in them any results were obtained or not.

The treatment that I direct, based upon the views as to the nature, the ætiology, and the pathology of hyperacidity herein enunciated, is rather a simple one, decidedly more a matter of omissions, and has always, so far as I have been able to observe, proved eminently successful. The two indications to be met are: A. the removal of the cause or causes. B. The cure of the ailment.

The measures employed to meet these indications have been the following:

A. The removal of the cause or causes.

1. *All alcoholic liquors, of whatsoever nature, are prohibited.* Even beer was subsequently included in the prohibition; for, though some of the patients alleged that they could take it without experiencing any after-effects therefrom, I became convinced, nevertheless, that in the majority of instances, and particularly if taken in any quantity, it helped to keep up the trouble.

2. All smoking of tobacco in whatever form (pipe, cigar, cigarette) is strictly interdicted.

3. All acid or acidulated drinks are forbidden.

4. All foods or condiments prepared with vinegar or lemon juice are forbidden.

5. All sharp condiments (pepper, black or red, ginger, the various sauces) are strictly prohibited.

These rules apply to all cases, without distinction as to original causation.

When patients are *constipated,* they are treated by the mechanical method, by massage, as described in detail in my book on *Constipation,* and with an appropriate dietary as there indicated, modified, however, to meet the exigencies of the special ailment here under consideration.

I never prescribe the alkaline saline waters or the bitter waters proper, for the reasons already indicated, namely, I do not believe in their supposed mysterious influence as regards the hyperacidity, and, as to the constipation, hold, as is common consensus, that they are directly injurious, tending to make it more profound, more obstinate, even as do other purgatives.

Where a disturbance of the nervous equilibrium (neurasthenia, hysteria, etc.) presents itself, appropriate measures and remedies (hydrotherapy, the valerianates, asafœtida, etc.) to right this are employed.

It must be added here that there seems to be much interdependence of the one trouble upon the other, and *vice versa.* With the relief from the distressing sensations in the stomach, the nervous system very quickly recovers its normal tone.

B. *The cure of the ailment.* Of the first importance as to this is a proper diet, for, properly constituted, I hold that it has a decidedly curative action. I direct my patient to take a good breakfast, a very fair lunch (noon), and a regular dinner (evening).* If he has any desire to eat before going to bed, and many have, I allow him a sandwich or a glass of milk with a cracker.

In these meals the preponderating element is always some one or more articles of the nitrogenous group; in fact, this is the meal, the other dishes being but adjuvants. I do not at all favor the views set forth by some, that the carbohydrates should constitute the main element of the meal. I can see no reason therein. The carbohydrates stimulate the secretion of gastric juice, as well as articles of the nitrogenous group, and this is clearly demonstrated without looking very far by the Ewald and Boas test breakfast, without having the capacity to take up the great part thereof, and thus a considerable quantity of the hydrochloric acid constituent of the gastric juice is left free in the stomach to irritate the gastric mucous membrane.

The articles of the nitrogenous group that I direct for the diet are milk, eggs, and meat (preferably beef and mutton). The meals are constituted thus:

Breakfast.—Milk, two hard-boiled eggs, cold, and cold bread and butter; or milk, steak or chops, and cold bread and butter.

When the patient is constipated, a dish of stewed fruit, prunes or prunes and figs, precedes the meal.

Tea and coffee are, as a rule, prohibited, for both excite gastric secretion, but cannot take it up. Milk can take up and bind an enormous quantity of the hydrochloric acid constituent, as has been shown by Leo, and as I have amply convinced myself by clinical investigation. Furthermore, it forms a sort of coating over the gastric mucous membrane, and this tends to ward off any irritating action the secreted juice might have thereon.

The only exceptions I make as to this are fat persons, to whom milk is not appropriate, and those who, from some innate idiosyncrasy, cannot take milk. For the former, weak tea or coffee with an addition of one third or one fourth milk; for the latter, milk with an addition of one third to one fourth tea or coffee is allowed.

Lunch.—Chops or steak, roast beef or roast mutton, bread, and water. If desired by the patient, a boiled potato or a small dish of stewed rice or of oatmeal (according to the solubility of the bowels) is allowed. If the patient has had meat for his breakfast, the lunch is made up of two hard-boiled eggs, cold, milk, and bread and butter.

Dinner.—A little soup, plain boiled fish (if desired), roast beef, roast mutton, roast chicken (only occasionally), a baked potato, a small dish of some vegetable, and a pudding (without any acid sauces) or a dish of stewed fruit. The meat to constitute the bulk of the meal. To persons accustomed to it (and who would otherwise miss it very much) a little black coffee (about two tablespoonfuls) is allowed at the end of the meal.

The sandwich, referred to above as allowed before going to bed, is a meat sandwich made of cold beef, cold mutton, cold chicken, or ham.

The rules for the preparation of the food are these:

1. All vegetables to be prepared after the plain American fashion; that is, they are first boiled in water and, when sufficiently soft, are taken out and sliced or hashed up, put into some meat broth, and allowed to come to a boil. No fats, no browned flour allowed therein.

2. All meats to be either broiled or roasted or stewed. All fried meats are prohibited.

3. All fried food, of whatever nature, is prohibited.

Rules as to eating:

1. All foods, when eaten, must be only moderately warm. All hot dishes, of whatever character, are absolutely prohibited. No hot bread or hot cakes of any kind allowed.

The meals, as thus constituted, I believe to have a curative action in this way:

1. If they are prepared and eaten according to the rules laid down here, all irritation of the stomach is avoided.

2. Constituted as they are, they can take up all the gastric juice secreted and bind the hydrochloric acid constituent thereof, preventing it thus from doing harm to the gastric mucous membrane.

3. Eaten abundantly, as the patient is encouraged to eat them, they tend to allay the excitation already established and thus to the cure of the trouble. This I conceive to be accomplished in this wise: Hyperacidity is the result of an over-excitation of some form of the secretory apparatus of the stomach. Now, if the organ is given an abundance of work, a certain degree of exhaustion of secretory capacity will naturally follow this, and with it an abatement of the over-excitation must in due time ensue.

I allow nothing in the nature of food between the meals. When patients can take such meals as have been here described, I am absolutely opposed to their taking any food, be it even of so light a character as a glass of kumyss or of plain milk, in the interval. I do not fear the emptying of the stomach; on the contrary, I court it in all cases. It must get through with the first meal before another is taken. It is a matter of clinical experience with me, and I have made it the rule of my practice that this organ must have proper intervals of rest if its functional integrity, particularly as regards its motor function, is to be properly maintained, and that all deprivation of such rest is followed by an atony of the muscular structures, and if continued will terminate ultimately in marked atonic distention. It certainly cannot get the needed rest if fresh food is ingested before that previously taken has been duly disposed of.

Before discharging the patient, I impress upon him that, to make the relief permanent, the prohibitions must

*This is the custom here.

be adhered to, and the dietary rules must be strictly followed by him for a long time—not less than a year.

Medication.—In uncomplicated cases I employ no further medication than this, if medication it can be called, namely: I direct the patient to take half a glass of natural Vichy water (French) at the hours already referred to in the Symptomatology, to wit, between 10 and 11 or at 11 in the morning and between 4 and 5 in the afternoon. When dinner is had late, and nothing more eaten thereafter, a third half a glass of Vichy is taken just before going to bed.

The purpose of this is to relieve the distressing sensations in the stomach as they manifest themselves at the times named, and to neutralize any acid that may have remained therein after the evening meal, so that all cause of irritation throughout the night may be removed. Till now it has invariably succeeded.

With strict adherence to the course of treatment here mapped out, the distressing sensations become ameliorated, become attenuated, come on at longer intervals, and finally disappear altogether. I have found that in almost all instances the afternoon paroxysms were the first to disappear, and then later on the mornings became free from distress.

The patients, I find, usually abandon the drinking of the Vichy, as the need therefor ceases, of their own accord, in the same order that the paroxysms leave off; at first the afternoon Vichy is abandoned, and later on the morning dose is discarded. When the Vichy is thus being left off, with or without direction from me, I have the patients, particularly those with a tendency to constipation, take the same quantity of plain water in its stead. It cools the stomach, facilitates the removal therefrom of the débris, and favors the solubility of the bowels.

When atony, with or without distention, or gastroptosis complicates the trouble, I prescribe, in addition to the treatment as already set forth, tincture of nux vomica. The rationale of its action is apparent and need not be discussed further. Frequently I combine with it Fowler's solution, on account of the inhibiting influence of the latter upon the development of gases. The medicine is directed to be taken two or three times daily, immediately after meals. I am certain that it is of the greatest benefit, and that it influences and hastens in a marked measure the success of the treatment.

(To be concluded.)

PENETRATING WOUNDS OF THE ABDOMEN.

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Aside from whatever injury may be inflicted upon the abdominal viscera, the mere fact that the abdominal covers have been penetrated and the cavity of the peritonæum invaded by a foreign body is of grave import. The classical and time-honored custom of immediately probing wounds of this class cannot be too highly condemned. Nor should the finger be employed. Treated rationally and intelligently, in the majority of these cases the patients can be saved.

Every wound of the abdominal wall should be regarded with suspicion. The amount of external oozing should be noted. If no oozing is evident, has the blood formed a hæmatoma in the tissues, or has it escaped into the peritoneal cavity? Determine all the facts obtainable in connection with the injury; in which direction the blow was given, the variety of weapon, the depth of penetration. Investigate every detail that may throw light upon the extent of the injury or point to the organ involved. While such contributory evidence as is outlined above is valuable, yet its significance should not be over-estimated.

Method of Examination.—The greatest precautions must be taken in every case, as those cases which apparently present fewest difficulties may, in the end, offer the gravest complications. It is of primary importance to remove the patient as speedily as possible to a place where every detail of asepsis and antisepsis can be observed. The operator should be one who is a master of abdominal technique. Above all, the wound should not be explored in any manner until everything is ready to proceed with a laparotomy if needful. Neither probe nor instrument of any kind should be allowed to touch the wound. Provisional suturing should not be done. Prolapsed viscera should not be handled, nor should they be returned. The only indications which are to be met at the scene of the accident are the stimulation of the patient if shock is present, the protection of the wound from further infection by the application of a snug-fitting, copious, sterile dressing, and the patient's rapid yet non-disturbing removal to a place which offers all advantages for his subsequent well-being. When such a place has been reached, the patient is carried at once to the operating-room unless his condition is one of such considerable shock that immediate operative interference is contraindicated. The necessary instruments are sterilized. Murphy buttons should be included, for one cannot tell whither the exploration will lead nor what lesions may be discovered in its course. It is enough that there is upon the surface of our patient's abdomen a small, red, gaping wound indicating a stab wound, or a dark spot with blackish, discolored edges indicating a bullet wound. An absolutely hopeless condition of the patient is the one thing which shall deter us from pursuing an investigation into the destruction of tissues of which the small tell-tale mark is the clue. If our exploration has been undertaken early, before the anæmia of hæmorrhage or the profound depression of peritoneal intoxication has become evident, we may hold out fair hope of a successful issue. There is one rule in the treatment of abdominal

injuries in civil life which should be a law—explore. The doctrine of immediate intervention should always be observed. This field of the surgeon's work offers a higher mortality than any other, and why? Because of the damnable conservatism displayed by the general practitioner and in many instances by the so-called surgeon. That the patients themselves are to blame in some cases is beyond dispute. We have all seen cases of grave abdominal injury in which, though an operation has been urged, the patients have delayed until too late to submit to superior judgment. These are extremely ignorant people who cannot be brought to realize the danger of their position. All we can do for such is to explain and advise, and if our efforts prove unavailing, retire from the field, conscious that we have done all that lay in our power. But in the case of our medical brother the situation is different. Here there is no excuse for ignorance or superstitious fear. Men who would not delay an instant in putting a typhoid patient on a suitable diet, or in clapping a tourniquet around a bleeding and mangled limb, will, in the case of a stab wound or bullet wound of the belly, give morphine and await developments. And then, when it is too late for human aid, they will call in their surgical brother. Some patients get well, because in every case penetration has not occurred into the peritoneal cavity and, if so, it has not caused serious injury. But who is the Cagliostro of modern times who can prognosticate with such precision? If such exist, let them obey their Hippocratic oath and give their secret to their fellow-practitioners, to the greater benefit of man. Explore every abdominal wound. The wound of the slender stiletto may well inflict more damage than the butcher's cleaver.

The skin is shaved and scrubbed from the nipple line to the middle third of the thigh. The scrubbing is done briskly, yet carefully, so that no spread of peritoneal infection or increase of hæmorrhage results. The cleansing is completed with oil of turpentine, alcohol, ether, and, finally, bichloride of mercury. The skin around the wound is painted with tincture of iodine to still further protect against infection. The wound itself is cleansed by swabbing with sponges wrung out of antiseptic solutions. Sterile sheets and towels cover the patient, except at the site of operation. The operator, nurses, and assistants are dressed and have their hands and arms prepared as for any laparotomy. Then, and not till then, is the wound explored. The edges of the wound are gently retracted and a silver probe is introduced. Delicately this probe is inserted until the depths of the wound are reached, or until its further passage is obstructed, or until it has beyond peradventure entered the peritoneal cavity. In both the former events the wound tract is laid open freely enough to permit of identification of each layer of aponeurosis and muscle through which the examining instrument has passed. It may be that the probe, in spite of the delicacy with which it has been introduced, has entered the wall of the wound tract at some point instead of following the latter. If so, the free laying open of the tract will develop this. Identify each layer and examine thoroughly. Finally, we reach the lowermost part of the wound. Here the greatest care must be exercised. The wound in the peritonæum, if present, may be very small. If the peritonæum at the bottom of the wound tract is normal in appearance, if there is no blackening or discoloration of its surface, if the intra-abdominal parts look normal as seen through the parietal peritonæum, if no aperture is present, and, finally, if these findings agree with the other evidence in the case, then one may redisinfect the wound and close it, layer by layer, suture the skin, and apply a copious gauze dressing and a snugly fitting binder. By so proceeding, the surgeon averts the danger of sepsis and of ventral hernia, which latter follows many of the incised wounds of the musculo-aponeurotic planes of the abdomen.

On the other hand, if, after thorough examination of the wound, you find the slightest evidence of the peritoneal cavity having been invaded, do not hesitate a moment to make an exploratory laparotomy. Absolutely no other treatment is permissible.

How different this law is from the precepts of a few years ago! Even now there are many from whose brain the cobwebs have not been swept and who sit beside their patient with the sublimest faith in Nature, waiting for the signs of hæmorrhage or of peritonitis. Then the principle of immediate intervention was unthought of. Hesitancy was the watchword of the hour. It was considered folly to enlarge the wound, death to explore the abdomen. Large doses of opium were given and ice was liberally indulged in. Wise precepts for those times perhaps, but hardly applicable now. Do not wait for confirming symptoms; do not wait for peritonitis to develop. This class of cases gives the most brilliant results in surgery if common sense is but followed in their treatment. Take small abdominal wounds, for example. These are usually the result of a stab by a bayonet, sword, or dagger. The indication could not be stronger. There should be no hesitancy in urging immediate intervention. There is profuse hæmorrhage from the wound, or the escape of gas, intestinal contents, bile, or urine, or a portion of omentum or a segment of gut lies herniated in the wound. There may be painful distention if some hours have elapsed. But if the case is seen early, there may be practically no symptoms save the local ones. Do not wait for distention to supervene or the pulse to become weak. In the absence of all symptoms of grave injury, make an exploratory laparotomy at the earliest possible moment. In previous years it was perhaps right to delay in these cases, for the principles which were necessary to their successful treatment were not then perfected. But no such excuse will be accepted to-day. That some patients recover is no proof in this regard, for theirs were cases in which no grave visceral lesion or infection was present. The amount of infection is always more or less a matter for conjecture.

No abdominal wound is to be considered insignificant.

It is impossible to distinguish between insignificant wounds and grave ones in the first few hours following the infliction of the injury. The law of immediate intervention is imperative.

Proceed methodically. Enlarge the skin wound, then the fascial and muscular layers to the peritonæum. Before opening this widely, again disinfect carefully. Perhaps some discharge, such as urine, fæcal matter, or bile, will indicate the situation of the wounded viscus. If such discharge is present, proceed very carefully. Do not disturb the relationship of the exposed viscera until you have thoroughly examined them ocularly. Then raise the omentum and proceed very carefully. If this fails to develop any injury, and if fluid, blood, or fæcal matter, or gas—anything to indicate injury—is present, then partially eviscerate. Examine each organ carefully. Employ plenty of warm towels. Proceed methodically and, above all, gently. If from twenty-four to forty-eight hours have elapsed since the injury, be particularly careful how adhesions are disturbed. If multiple wounds of the abdominal wall are present, or if the nature of the injury leads one to expect multiple visceral lesion, the exploratory laparotomy should be made in the median line. This is particularly true in the case of stout people, whose thick abdominal walls make it difficult to retract the wound edges in lateral laparotomies.

PARAMYOCLONUS MULTIPLEX.*

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PARAMYOCLONUS MULTIPLEX, or convulsive spasm, convulsive tremor, or muscular spasm (taking the term in its literal translation), is a spasm of several muscles of the face, neck, arms, and lower limbs as well as of the muscles of the trunk. The muscles of the hands and feet are not involved. The spasms, which are clonic, are usually symmetrical and at times more violent than at others; the contractions vary in violence and frequency, the latter being anywhere from five to fifty a minute. The external muscles are the ones most frequently involved, *i. e.*, the deltoid, biceps, triceps, and quadriceps extensors, the flexors of the thigh, the gluteal, the peronei, or the gastrocnemii. This kind of tremor, with its shifting and varying forms of contraction, does not always render a diagnosis easy.

Friedreich, in 1868, was the first writer to fully describe and separate this disease from other forms of spasm so closely resembling it, viz., hereditary chorea, electrical chorea, and saltatory spasm, or orchestra mania. Some writers tell us that the treatment of this disease, which they affirm is always successful, will assist us in making a diagnosis, but such has not been the happy experience of the writer, as one case in particular, which will be mentioned later, ended in death a short time after its incipiency, and in yet another case, which he will show you, the disease has existed for two years, but the patient is improving. In this latter case the differential diagnosis will be from another type of functional and organic nervous disorders. This disease is distinguished from chronic chorea inasmuch as in the muscle spasms, or myoclonus, the patient gives no history of hereditary or family taint, although the muscle movements and loss of inhibitory power resemble each other.

Electrical chorea is a disease of paludal origin, occurring in a country remote from ours. Our cases of myoclonus stand separate and alone. Saltatory spasm is a muscular clonic spasm of both lower limbs, and comes on when the patient attempts to stand or walk, giving a springing or involuntary jumping movement. This strange form of nervousness was first described by Bamberger in 1859. The spasm of myoclonus is more diffuse, involving muscles of the face, arms, and trunk as well as those of the lower limbs, and its character is not always clonic. It may be a quick tonic tremor or simply a slight quivering of the muscles, like flesh quivering, and may continue during sleep as well as in the waking moments, although the most violent forms of muscle spasms and choreic twitching absolutely cease during sleep.

The following case was seen by the writer in the practice of a neighboring physician: The patient, a man of about forty, was suffering from hæmorrhoids. He was advised to undergo an operation for their removal. He was physically strong—a vigorous and active laboring man of good habits. His kidneys were in a healthy condition and his heart's action was strong. The operation was quickly and skilfully performed, and the wound healed. After the operation he became depressed and frequently informed his friends that he did not think he would be well again, owing to the fact that he had been previously warned by his fellow-workmen that should he have any cutting operation performed upon him he would be very apt to die. This so preyed upon his mind that no persuasion on the part of his physician could relieve him from this impending dread, which in time proved only too true. On examination of the patient, a slight quivering of the muscles of the back was noticed, which developed into tonic and clonic spasms of all the muscles of the back of the trunk and lower limbs, especially of the glutæi and hamstring muscles. On removing the clothing and proceeding to examine the patient, these muscles were then seen in a violent convulsive spasm, but there was no loss of sensation in the muscles involved, and an examination of the parts operated upon showed nothing unusual. He had no difficulty in passing urine, and his bowels operated without the use of laxatives. He had premonitions of impending death and was sad and easily moved to tears. Treatment gave him scarcely any relief, and in about two weeks from the time of the operation he died. No autopsy was made, but a week before his death his heart became irregular and he suffered from insomnia and extreme restlessness during the day. Death was due to shock and exhaustion brought on by fright and worry.

It affords me great pleasure to present to you this

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evening a case of paramyoclonus multiplex, a rare and interesting disease, in a young woman, twenty-six years of age, born in Ireland, but for the past ten years a resident of this city. Since her advent here she has worked hard as a domestic, and during a part of the time, besides performing her daily housework, at night nursed a sick brother, who subsequently died of pulmonary tuberculosis. Her twofold duties impaired her health very much, combined with the loss of her brother, to whom she was greatly attached. Within a few months of his demise a sister became ill of the same form of lung disease, and she attended her until she broke down and began to have these clonic spasms, which involved first the muscles of the right side of the body, viz., the muscles of the right arm and leg. The spasms then passed over to the muscles of the left arm and left leg, then to the muscles of the neck and lower face. For a time the muscle spasm in the legs was much greater than at present, and both limbs were feeble and she could not walk without assistance. Bear in mind that the nature of these spasms is purely clonic, and that they are more marked now in her arms than in any other part of her body. The patient and her attendant state that when she is alone and not observed the spasms are not so great as when she is trying to perform some task in the presence of observers. You see, all her limbs are twitching, and, on any effort to use her hands, the spasms become violent. You see, she is emotional, as is also her sister. I might add that this disease has existed for over a year and a half.

These cases are unusual, only a small number having been reported. Hammond has seen several and says that the disease is equally common in both sexes. This kind of tremor more closely resembles the following forms than any of the forms previously mentioned, *i. e.*, disseminated sclerosis, paralysis agitans, and myotonia congenita, and yet it is neither of these forms, because in this case we have no intention tremor, as the arm is not at rest when not used, as in disseminated sclerosis. Neither has she the staccato, or measured, speech which patients with disseminated sclerosis have. Again, in this case you do not see the fine fibrillary motions of the muscles of the fingers, or the pill-rolling motions of the forefinger and thumb, which are indicative of paralysis agitans; nor has she the peculiar gait known as festination. Paralysis agitans is a disease of advanced life, for, as a rule, the patients are above the fifty years' mark; this young woman is not twenty-six years of age.

Myotonia congenita is a disease (as its name implies) due to an hereditary taint, and runs through families, two or three children in the same family often having this disease. It was first described by Thomsen, of Schleswig, in 1876, and is known as Thomsen's disease, he himself having been a sufferer from it. The spasms are always tonic and involve the muscles of the fingers, arms, and face. It is a disease found in young children, and is readily recognized, for a blow with the percussion hammer throws the muscles into violent spasms lasting several seconds; it is an incurable nervous disorder. In this patient's case before us, while she is far from being well, she is much improved, and the different reflexes, which were so highly exaggerated in the beginning, have now subsided, and she is much stronger than she has been at any time since her illness. Her condition was brought about by muscular over-exertion and mental worry. The prognosis, as a rule, is favorable, the patient making a good recovery after several months.

Treatment.—Tonics, rest, and fresh air are necessary, but in this individual case the prescribing of remedies has not been an easy task. She cannot tolerate cod-liver oil in any form, iron produces headache, strychnine causes intense irritability, and sodium bromide cannot be taken for any length of time, owing to its depressing effect on the heart. To overcome obstinate constipation, she takes a pill composed of aloin, compound extract of colocoynth, and belladonna. I urge her to try to be cheerful and hopeful and avoid as much as possible all depressing influences. Galvanism and my favorite remedy for all ills, *i. e.*, living out of doors in the sunshine and drinking large quantities of good spring water, have proved very efficient in her case, and her appetite has improved. She eats with a relish three times a day and sleeps well at night, and, to use her own words, feels better as each day passes by.

A CASE OF CEREBELLAR APOPLEXY, WITH AUTOPSY.*

By LEONARD WEBER, M. D.,

NEW YORK.

On September 10, 1900, I was called to see Mr. George H., a German, twenty-nine years old, single, salesman, living on the top floor of an old tenement on the west side of the city, among unsanitary surroundings. I found the man in bed, complaining of constant headache, front and back and top, constant dizziness, nausea, and vomiting, the latter increasing as soon as he raised his head or attempted to rise. With these symptoms he had been sick more or less for two months. The patient is a rather tall, pale, fairly well-built man with a scanty growth of hair and whiskers, his eyes dull and sunken deep in their sockets, face thin and pinched, skin clammy and cold, radial pulse full, throbbing, between 60 and 70 a minute. The systolic cardiac impulse could be both seen and felt in the normal place along the nipple line and also lower down, nearly as far as the scrobiculus, his abdomen was drawn decidedly in, with no tenderness anywhere, bowels constipated, urine of a specific gravity of 1.014 and showing a little albumin, more than a trace. The microscopical examination of the specimen sent the next day, as well as two subsequent ones, always showed a little albumin and a few hyaline and occasional epithelial and granular casts. There was no hereditary or acquired taint, no sign of syphilis, but the patient admits having had a gonorrhœa some years ago, from which he rapidly recovered, and further states that he has not

*Read before the New York Neurological Society, April 2, 1901.

been sick at all during the last two or three years, and has always been at his rather laborious business until he was taken with the above-mentioned symptoms, two months ago. These came on rather suddenly, and when he felt no better after two or three weeks of dispensary and home treatment he got himself admitted into a hospital, where he stayed two weeks and, feeling somewhat better, got his discharge and tried to go back to work. Though he was not much improved at that time, there was a period of remission of all original symptoms lasting about two weeks, but since September 1st he has not been able to leave his bed, his condition is wretched, and he cannot lift his head from the pillow without the occurrence of dizziness, nausea, and vomiting; the headache, present night and day, he feels pretty much all over the head, but more so in the back. He is perfectly sensible, sees, hears, and writes well, gives intelligent answers to all questions, and neither sensory nor motor disturbance of any kind can be made out. On taking him out of bed, he can stand and walk with his legs spread, and though exhibiting a slightly staggering gait, it is by no means the gait of a drunken man, but he begs most urgently to be put back to bed.

It was indeed not difficult at the first examination to exclude gastro-intestinal disease as the cause of the patient's illness, for all important symptoms pointed to a lesion in the central nervous system of a very grave character, such lesion probably located in the cerebellum; of the three pathological conditions to be thought of, tumor, hæmorrhage, or abscess in the cerebellar hemisphere, the first could be excluded on account of the absence of all pressure symptoms, etc.; the state of the urine, in conjunction with the hypertrophy of the left chamber of the heart, pointed to cerebellar apoplexy with considerable force, but in consideration of the rather lengthened period of the patient's illness an abscess might also be thought of.

Stating to the patient, and more pointedly so to his relatives, the grave character of his illness, I had him removed the next morning to St. Mark's Hospital. There, on examining him again from head to foot, no scars or discolorations on his skin were found, or any sensitive or tender spot about the thorax or abdomen. I might also mention that he had had neither cough nor expectoration. His abdomen was still more retracted than before, without tenderness, without hardness. All the cutaneous reflexes were increased, but there were neither pupillary nor retinal symptoms, nor other signs indicative of organic cerebral or spinal disease; what the patient vomited constituted a thin, watery liquid, sometimes yellow, more often yellowish-green to green. On being taken out of bed, he behaved the same as the day before, spreading his legs apart to steady himself, but he had not the staggering gait; all the three cardinal symptoms mentioned above became worse at once and unbearable. The presence of hæmorrhage would seem, after all, to be the correct diagnosis, though, on account of the period of eight or nine weeks having elapsed since the first symptoms of illness had set in, there might be progressive softening around the hæmorrhagic focus. The patient was given one sixth of a grain of morphine hypodermically and fed by rectal enemata, neither food nor drink being given by the mouth.

On the 14th the symptoms were rather worse all day long, and at 9 P. M. he fell asleep and slept for three hours; on waking, he complained again very much and expired suddenly at 2 A. M. on the 15th.

At the autopsy, which I made at 3 P. M. the same day, I found but slight rigor mortis, no suggillations or scars or pigmentations. On opening the body, the entire venous system was found filled, almost gorged, with blood; lungs normal; heart about one third larger and longer than normal, the walls of its left chamber having double the normal thickness, the walls of the right chamber not notably increased in thickness, all the valves sound; the aorta, examined at its orifice and as far as its descending portion, showed an apparently normal intima, but its calibre was larger than normal. The stomach, the duodenum, and also the mucous membranes of both, though rather thin were otherwise quite normal. The entire colon was distended with gas. The liver and pancreas were apparently normal. Both kidneys were somewhat enlarged, reddish-brown in color, firm, embedded in their fatty involucrum. Their capsules proper could be stripped off without much trouble; the cortical substance was harder to cut than normal and was the seat of disseminated interstitial nephritis in the early stage. The cerebral membranes, the gray and white matter of the brain, the crura cerebri, the pons, and the medulla showed nothing abnormal. On removing the tentorium cerebelli, the right cerebellar hemisphere was noted to be a little more prominent than the left, and from a slight rent located about midway the blood seemed to have recently flowed down over the medulla toward the fourth ventricle, forming also a few fresh coagula compressing the part. In taking out the small brain and medulla with great care the small rent opened more and a large cavity was at once exposed in the substance of the hemisphere. It was filled with large, soft, and dark-red fresh coagula and some smaller ones of older date. The commencement of the formation of a smooth wall around the cavity was distinctly noted; the left hemisphere and the vermicular body were found to be normal.

Cerebral apoplexy, induced by marked hypertrophy of the left chamber of the heart, with and without renal disease, is not of very rare occurrence, but the seat of the apoplexy and the clinical features of this case, in conjunction with the proofs obtained at the autopsy, are of sufficient interest to have the case placed on record.

25 WEST FORTY-SIXTH STREET.

Correspondence.

LETTER FROM BUFFALO.

The Pan-American Exposition.—The Emergency Hospital.—The Medical Staff.—The Infant Incubators.—The New York State Medical Association's Meeting.—A Strange Case of Double Consciousness.

BUFFALO, *June 1, 1901.*

THE PAN-AMERICAN EXPOSITION is open, that is all, for it is so far very incomplete. Nothing is ready. The booths in the Exposition buildings proper are not by any means nearly all occupied, only three or four of the State buildings at this time of writing are open, and even the construction of the majority is far from completed. The "streets" of the Exposition are, with few exceptions, not paved, and on rainy days, and there have been over ten consecutive ones, are ankle-deep in mud. The decoration of even the completed portions of the buildings is still in

progress. It seems as though it would be some weeks before the Exposition could be properly declared "at home to callers."

This is not the place, however, to descant upon the Exposition as an Exposition; suffice it to say that for excellence of design, beauty of color (for the buildings, unlike those of the preceding Expositions, are all to be chromatically adorned), and general æsthetics, it bids fair, when ultimately finished, to be second to none.

Of great interest to medical visitors will naturally be the Emergency Hospital at the West Amherst Gate. The hospital staff has been at work on a temporary basis since August last, when the construction began, but the new building has only been occupied during May. It is admirably designed and contains, besides operating and dressing rooms, pharmacy, offices, quarters, etc., about thirty beds. The beds stand higher from the ground than is usual, which is a source of great relief to a dresser, too often subjected to the penalty of a backache from bending for hours over a succession of patients. One bed on exhibition there is very ingenious. It consists of a canvas sheet stretched on a movable frame, and perforated for the use of a bedpan. Ordinarily, this canvas sheet lies in close contact upon the mattress. When required, a mechanical arrangement elevates the frame, canvas and all, bearing the patient, who is thus not compelled to be moved, and the bedpan is inserted between the raised canvas stretcher and the mattress. A mechanical arrangement at the foot, with the aid of this canvas, further allows the formation of an inclined plane with a minimum of disturbance.

Upward of 1,100 cases have been attended to by the hospital staff since August. Most of them, of course, have been minor accidents, but there have been also electric burns, fractures, and a few temporary medical cases. In any emergency, medical or surgical, that may occur on the grounds, the patient is promptly conveyed by ambulance to the hospital and receives attention according to the nature and gravity of the case; those that are likely to prove long cases are distributed by turns to the various hospitals of Buffalo, in due course.

The medical staff is as follows: Medical director, Dr. Roswell Park; deputy medical director, Dr. Kenerson; sanitary inspector, Dr. Wilson; internes, Dr. A. Zittel, Dr. Alexander Allen, and Dr. Edward Mann; matron, Miss Walters.

One interesting event was the birth of an Indian papoose in the grounds, at which one of the internes was present. The patient squatted on the ground in an upright position, while a squaw, standing behind, kept up an intermittent compression on the uterus in front. On examination, the interne found the os fully dilated. A few moments later, a single pain resulted in the expulsion of the child. In the present instance, some little difficulty, due to placental adhesion, occurred, which was dealt with by the interne. The next day, he saw the woman about, engaged upon her ordinary occupations.

An intensely interesting exhibit to physicians is the infant incubators. These are situated in a most carefully constructed and complete building near the Service building and Emergency Hospital, at the West Amherst entrance. The crudeness of the methods of attempting to rear premature or weakly infants, by wrapping them in wadding, sheepskin, or feathers, or by keeping the cot close by the fire, impelled Dr. Credé, some sixty years ago, to the invention of an incubator consisting of a metallic box with double sides, through which hot water was caused to flow. Dr. Tarnier, of Paris, in 1878, conceived the idea from the incubators for poultry installed by M. Odille Martin, at the *Jardin d'Acclimation,* at Paris, of applying similar apparatus to the rearing of prematurely born children, and the first incubators on this principle were used in the Paris Maternity Hospital in 1880. The results proved satisfactory, and led to the formation of a private institution in Berlin for the preservation of these unfortunate infants. Its success was great, and many healthy and fully developed children, both mentally and physically, now meet in annual reunion to give indisputable testimony to the fact. In 1897, a public exposition of the system was given in London, and the entries in the visitors' book, among which we noticed the names of such representative obstetricians as Clement Godson and others, amply testify to the satisfaction it aroused. Since that date, a permanent institution of the kind has existed successfully in London.

American physicians have now the opportunity of examining its working for themselves. Briefly, the construction is as follows: The incubator is a glass case in a metal frame, supported on metal legs. In it is suspended a cot of woven wire, adequately padded. Fresh air is admitted by a large tube from outside the room. This air, first passing through an antiseptic fluid and being filtered through cotton, enters at the bottom of the case and strikes an umbrella-like shield below the cot, and is thus deflected downward till it meets the warm current of air provided by a Bunsen's burner placed outside the case. Inside the incubator is a thermostat, which, by its contraction and expansion, automatically works a lever outside, lowering or raising a cover on the burner, and thus directing more heat inside the incubator, or letting it escape outside, according as the inner temperature falls below, or rises above, the required degree. A thermometer in front registers the degree existing. The foul air escapes from above through an air shaft. In a large sanitary room, well lighted, stand about a dozen of these incubators, occupied by premature or weakly infants, swathed in German fashion. These infants are sent by the local physicians, and handed over to the care of the institution. They are weighed, properly clothed, and placed in the incubator. They are generally under five pounds in weight on admission. A staff of wet nurses is kept on the establishment, all of them being medically examined and carefully selected. They live in the building and their diet and regimen are carefully regulated.

The infants are taken out of the incubator every two hours to be suckled, a trained nurse sitting by, to see that the child actually receives nourishment, and is not merely fruitlessly "put to the breast." Those that are too weakly to exercise suction are fed with the Gavage spoon until they become robust enough to feed themselves. At the back of the incubator room is a model nursery, where all that forms part of sanitary toilet for the infants is performed. A miniature elevator takes the infants to the upstairs quarters to be fed during the night. Here the nurses, the wet nurses, and the medical directors, Dr. Schenkheim and Dr. Coney, live. The temperature is kept equable throughout the entire building at a degree comfortable for adults, without oppressiveness, while in the incubators the little patients can have any required temperature all to themselves.

It is stated that out of the very large numbers of premature and weakly children that have been submitted to this artificial rearing, upwards of eighty-five per cent. have been saved, as compared with the normal 25 to 30 per cent. under ordinary conditions. The success of this method in Germany, France, and England should certainly lead American physicians to take this opportunity of studying it for themselves.

The New York State Medical Association held its seventeenth annual meeting here on May 31st, and had an attendance of about one hundred. Dr. William H. Thornton presided. At the morning meeting, the Mayor gave an address of welcome. The president, Dr. John A. Wyeth, and the secretary, Dr. Frederick Holme Wiggin, then addressed the meeting, and explained that as the association had now acquired a charter, a reorganization of all the branches, which, however, was a mere formality, was rendered necessary. In the afternoon the election of officers took place with the following result: President, Dr. Charles A. Wall, of Buffalo; vice-president, Dr. James W. Morris, of Jamestown; secretary, Dr. Bernard Cohen, of Buffalo; treasurer, Dr. W. Irving Thornton, of Buffalo. The members of the nominating committee of the State association are Dr. J. Z. Lusk, of Warsaw, and Dr. A. G. Bennett, of Buffalo. The next annual meeting is to take place on July 1, 1902, at Chautauqua. In the evening a dinner was given at the Buffalo Club. A special train is to carry the members, on June 3d, to St. Paul for the meeting of the American Medical Association.

Buffalo has had a strange case of double consciousness. A young man came to Buffalo on the evening of May 24th and took a room on Chippewa Street. On May 26th he approached the minister of the North Presbyterian Church, after evening service, and explained his condition, saying that he had forgotten who he was, where he came from, etc.

The superintendent of police was communicated with, and the police surgeon was summoned. In answer to the questions of the latter the young man was unable to say what his name was, where he lived, whether he was married, or indeed anything at all. He seemed to remember, however, most of what had occurred to him subsequently to his arrival in Buffalo. He was then returned to the police station. He made no objection to being searched, but nothing found revealed his name. The address of a married woman was found, however, but he denied any knowledge of who she was. Dr. William C. Krauss, Dr. Floyd S. Crego, and Dr. James W. Putnam were then summoned, and it was ultimately decided to hypnotize him, which was easily effected. When under the influence, he readily answered questions as to his identity, and informed the doctors that he came from Providence, was twenty-five years old, married, and the representative of an insurance company. He did not know that he was in Buffalo, and was bewildered as to how he got there. On being restored to full consciousness, he remembered deciding to come to the Exposition, but everything that had transpired subsequently appeared now to be a blank to him. He was then questioned as to the identity of the woman whose address had been found on him. He seemed surprised that it should be known, but answered readily that she was his married sister. She was then telegraphed to, and thus a mystery was cleared up.

Therapeutical Notes.

To Sweeten the Breath.—The *New York State Journal of Medicine* for June gives the following:

℞ Salicylic acid, } of each...15 grains;
Sodium bicarbonate, }
Rectified spirit. . . . . 1 drachm;
Spirit of peppermint.....10 drops.
M.

A teaspoonful in a small cupful of hot water, to be used as a mouth wash.

The Ammoniacal Blister.—The process of blistering with ammonia, which is very rapid, is thus described in the *Agenda-médical* for 1901: Pour from eight to ten drops of very strong ammonia water into a shallow watch-glass, cover the liquid with a piece of linen a little smaller than the glass, and apply to the skin. Sometimes a coin is used instead of the watch-glass.

Diuretic Wine of Squill.—According to the *Agenda-médical* for 1901, the *vinum scilliticum amarum* of the Charité Hospital is made after this formula:

℞ Asclepias root.	15	parts;
Angelica root.	15	"
Dried squill.	15	"
Huanuco cinchona bark.....	60	"
Lemon peel.	60	"
Winter's bark.	6	"
Absinthium leaves.	30	"
Melissa.	30	"
Juniper berries.	15	"
Mace.	15	"
Alcohol (60°).	200	"
White wine.	4,000	"

Macerate for ten days, and filter. The dose is three ounces, to be taken once only, in the morning.

For Tuberculous Laryngitis.—The *New York State Journal of Medicine* for April says that in the later stages of tuberculous laryngitis the following insufflation for the relief of pain, which is usually severe, and the restoration of the voice, may be given:

℞ Iodoform. . . . . 2 drachms;
Cocaine hydrochlorate. . . . . 1½ grains;
Morphine hydrochlorate. . . . . ½ a grain.
M.

A small amount to be insufflated by the patient with a bent glass tube, to relieve the pain.

Amyl Nitrite as a Remedy for Seasickness.—Martindale and Westcott (*Extra Pharmacopœia,* 1901) give a formula which amounts to the following:

℞ Amyl nitrite. . . . . 2 parts;
Alcohol (90 per cent.) . . . . . 16 "
Powdered tragacanth. . . . . 1 part;
Distilled water, enough to make. . . .240 parts.

Mix the amyl nitrite and the alcohol and add them to the tragacanth (contained in a dry phial), then add the water gradually and shake well. The dose is from one to two drachms. The frequency of its repetition is not specified.

Robin's Syrup of Glycerophosphates.—Martindale and Westcott (*Extra Pharmacopœia,* 1901) quote the following formula from the *Bulletin général de thérapeutique:*

℞ Calcium glycerophosphate. . . . . 6 parts;
Sodium glycerophosphate. . . . . 2 "
Potassium glycerophosphate. . . . . 2 "
Magnesium glycerophosphate. . . . . 2 "
Iron glycerophosphate. . . . . 1 part;
Tincture of ignatia amara. . . . . 2 parts;
Pepsin. . . . . 3 "
Diastase. . . . . 1 part;
Tincture of kola. . . . . .10 parts;
Syrup of cherries, enough to make
(by weight). . . . . .200 "
M.

From 1 to 4 drachms may be taken with each meal.

Catheter Oil.—Martindale and Westcott, in the tenth edition of their *Extra Pharmacopœia* (London, 1901), give the following formula:

℞ Phenol. . . . . .1 part;
Castor oil. . . . . .7 parts;
Almond oil. . . . . .8 "
M.

They add the following as the formula of the *oleum lubricans* employed in St. George's Hospital:

℞ Cocaine. . . . . .25 grains;
Oil of eucalyptus. . . . . .10 minims;
Castor oil, } each. . . . . ½ ounce.
Olive oil, }
M.

Cold and Heat in Treatment of Sprains.—Dr. J. W. Wainwright (*Syllabus of New Remedies and Therapeutic Measures,* Chicago, 1901) remarks that the modern treatment of sprains with cold and heat is so satisfactory and the theories for their employment are so rational that no better example can be chosen to illustrate their indications as therapeutic agents. The first acute inflammation is combated with an ice-bag. This, says the author, causes contraction of the blood-vessels, with immediate diminution of the supply of blood to the part, besides a decrease in the exudation and diapedesis, at the same time exerting some anæsthetic effect. When the acute inflammation has subsided, in the course of a few hours if the bag has been diligently refilled, there is more or less exudate in the tissues, causing stiffness, pain on motion, etc. Then dry hot air, at as high a temperature as from 250° to 400° F., will be found the best means of stimulating both the blood-vessels and the lymphatics and so hastening the dissolution and absorption of the products of the previous inflammation.

Calcium Chloride as a Hæmostatic.—M. Mathieu (*Nouveaux Remèdes,* April 24th), at a recent meeting of the Société de thérapeutique, recommended calcium chloride in daily quantities of forty-five grains, in many divided doses, administered in an aromatic water or in milk, in the intestinal hæmorrhages of typhoid. He had found this remedy of particular service in a recent epidemic. At the same time he practised extensive intestinal lavage to remove the blood that inundated the intestine and had a tendency to remain there.

At the same meeting M. Robin extolled the value of calcium chloride in hæmoptysis. The best daily dose was a drachm, divided, of course, but he recommended its administration in conjunction with some preparation of opium, in consequence of the liability of the drug to irritate the stomach, from its caustic nature.

The Treatment of Menorrhagia.—M. Lafond-Grelletz (*Gazette hebdomadaire des sciences médicales de Bordeaux,* March 17th; *Gazette hebdomadaire de médecine et de chirurgie,* April 28th) says that M. Dalché recommends ergotin after the following formula:

℞ Ergotin. . . . . .1½ grains;
Quinine sulphate. . . . . .⅓d of a grain;
Powdered digitalis. . . . . .⅙th of a grain;
Powdered coca. . . . . .q. s. for one pill.

From four to five to be taken daily.

While this formula is good, M. Lafond-Grelletz considers that possibly the tonics have as much to do with the result as the ergotin. When the menses are regularly profuse, M. Lafond-Grelletz employs calcium chloride, whose hæmostatic action has been demonstrated by Cornil and his pupils, Wright, P. Carnot, and Trémolières, etc. The following formula is given:

℞ Calcium chloride. . . . . .135 grains;
Syrup. . . . . 15 drachms;
Water. . . . . 45 "
M.

One or two tablespoonfuls daily. But, in the subjects of Bright's disease, calcium chloride is liable to determine toxic accidents, vomiting, and headache, and should therefore be avoided wherever there is reason to suspect nephritis. In this case it is best to substitute the use of a ten-per-cent. preparation of gelatin, from five to ten cubic centimetres being injected daily.

In general—1. Calcium chloride, acting as a hæmostatic, both locally and on the volume of the blood, diminishes the amount of loss during the periods, and these become regularly normal after a prolonged treatment. 2. In spite of its vascular action, which is always marked, it cannot be efficaciously employed for dysmenorrhœa, since it restrains neither the duration nor the intensity of the pain. 3. Its action is contraindicated in all persons with renal disease.

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THE ST. PAUL MEETING.

THE fifty-second annual meeting of the American Medical Association, held in St. Paul last week, was memorable from more than one point of view. Those of our readers who were not present will have deduced this from the president's address and from the action taken on the plan of reorganization. The reorganization, tantamount to a new constitution, will, as we have before remarked, make the general sessions far more amenable than before to parliamentary rules of procedure and better able to arrive speedily at a correct understanding of the merits of such questions as may come before the association. Many of the men who most thoroughly recognized all this before the meeting were fearful that, nevertheless, the scheme would fail of adoption this year, although sure to be sanctioned eventually. The result shows once more that we should never despair of a good cause.

The choice of a New York man as president for the ensuing year and of a place in the State of New York for holding the next meeting may doubtless be taken to foreshadow the reestablishment of the most cordial relations between the national body and the profession of the State. Now that the presidency has been conferred upon one of their number, the physicians of the State of New York should make no distinction in their own minds as to whether he represents the old or the new State organization, for it is certain that no thought of discrimination on that score governed the nominating committee. It is to be hoped, indeed, that there will soon be no factions, and that the two State organizations will be blended into one.

The next meeting will be comfortably bestowed, for the capacity of the Saratoga hotels is very great. But the entertainment of the members is to be thought of as well as their lodging. This the profession of the whole State must take upon itself. It would be wrong to leave the burden to be borne by Saratoga alone after the superb hospitality of the twin cities of St. Paul and Minneapolis. We think we can promise our colleagues in all parts of the country such an effort as the State of New York can make to approach the standard of that hospitality.

IS THERE A SPECIFIC GLANDULAR FEVER?

FOUR or five years ago the subject of so-called "glandular fever" was considered at a meeting of the New York Academy of Medicine. But few of those who received the announcement cards had any well-defined idea of what was meant by the term, although there were some who remembered that in 1889 Pfeiffer, of Wiesbaden, had applied it to a febrile condition accompanied by swelling of certain lymphatic glands, chiefly those of the neck. What little acceptance as an entity the disease met with seems to have been due to its prevalence among children and to the fact that the glandular swellings, sometimes ending in suppuration, were not traced to any of the recognized causes of lymphadenitis. This slight basis for accepting "glandular fever" as a disease *sui generis* seems to have been reduced to the vanishing point by two recent French articles, the one, by M. Marcel Labbé, published in the *Presse médicale* for April 17th, and the other, by M. Guinon, which we find in the May number of the *Revue mensuelle des maladies de l'enfance.*

M. Labbé calls "glandular fever" *la prétendue fièvre ganglionnaire,* and M. Guinon agrees with him thoroughly. The latter thus describes the affection: The attack is sudden, with rather sharp fever which may reach a temperature of from 102° to 104° F. The only local abnormity noticeable at first, and that in but few cases, is moderate reddening of the pharyngeal mucous membrane. At the end of two or three days, sometimes sooner, there is painful swelling of the glands at the angle of the jaw on one side; they are hard, tender, and of impaired mobility, and occasionally they show a tendency to run together. In some cases the swelling is limited to the group of glands at first affected; in others it extends to those of the neck. In some instances the skin becomes red, but suppuration is rare; nevertheless, there may remain an indolent swelling for ten days or two or three weeks. Pfeiffer even observed an extension of the disease to the glands of the thorax, as was manifested by a spasmodic cough, and to those of the mesen-

·ry, giving rise to abdominal pain and diarrhœa. In ldition to the typical cases, very different ones are ted, such as those of infectious nephritis.

Now, asks M. Guinon, what is there specific in all ıis? Adenopathies are frequent in children, and it is ıe glands of the neck that are generally involved, owing the frequency of lesions in the neighboring buccal, ısal, and pharyngeal mucous membranes. These sions are not always discoverable, but they may still :ist. When they are discovered, they often seem insig- ficant, but here as elsewhere in the body, in the glands the axilla and in those of the groin, lesions that ›pear trivial and even those that are undiscoverable do ve rise to well-marked changes in the neighboring mphatic glands. It may well be that in such cases e glandular inflammation is the cause of the fever, t the causes of the ganglionic affection are diverse; nsequently there is no such thing as a specific glandu- : fever. In other words, as M. Guinon puts it, there ıy be *a* glandular fever, but there is not *the* glandular ver.

THE HÆMOLYMPH GLANDS.

RATHER more than twenty years ago Lankester used e term hæmolymph as a collective name for the red d white blood-corpuscles and the lymph-corpuscles. nce that time there have been discovered certain ınds, distinguishable, although with difficulty, from linary lymphatic glands by their containing blood ıuses as well as lymph sinuses. These glands appear take part in the elaboration of both the blood and the nph, and they are called hæmolymph, or hæmal, ınds. They have recently been made the subject of ecial study by Dr. Aldred Scott Warthin, assistant ›fessor in pathology in the University of Michigan, o has published an interesting account of them in the *urnal of the Boston Society of Medical Sciences* for ›ril 23d.

These glands, according to Dr. Warthin, are of two tinct types, called by him, respectively, splenolymph nds and marrow lymph glands, but between the two ›ical forms, he remarks, there is every possible tran- on form. The splenolymph glands are the more fre- ent of the two varieties. In some instances their tis- : so resembles that of the spleen that they may be re- ·ded as accessory spleens. As a rule, they are softer n ordinary lymphatic glands, but frequently they ınot be distinguished from them macroscopically. e lymphadenoid tissue lies between trabeculæ that run into the gland from a very thick capsule of fibrous connective tissue. Immediately beneath this capsule there is a small blood sinus, branches of which accompany the trabeculæ, increasing in size toward the centre of the gland. The tissue between the sinuses resembles that of an ordinary lymphatic gland. The chief function of these glands appears to be that of hæmatolysis, and in the active glands the destruction of the red cells takes place to an extent far exceeding that in the spleen. The glands produce leucocytes, but they do not appear to elaborate red corpuscles. They are found principally in the neighborhood of the solar plexus and about the adrenal and renal vessels, occasionally also in the omentum, the mesentery, and the epiploica, as well as in the thymus and thyreoid regions.

The marrow lymph glands are of less frequent occurrence, and Dr. Warthin has found them only in the retroperitoneal region, always close to the large vessels, almost invariably behind the aorta or between it and the vena cava. They are flattened and very long and always lie parallel to the neighboring vessel. They are very soft and of a white or pinkish color. Under ordinary conditions the function of these glands is not so clear as that of the splenolymph glands, but they are evidently leucocyte-forming organs, and under certain pathological conditions they form red blood-cells. They become atrophied in old age. They occasionally contain cells of the type of bone-marrow giant cells, and it is suggested that in certain morbid conditions they may have a function compensatory for that of the marrow.

Like ordinary lymphatic glands, these hæmolymph glands show pathological changes in cases of inflammation, congestion, carcinomatous metastases, tuberculous disease, etc., and in a limited number of instances of pyæmia, various forms of anæmia, and leucæmia they have been found to show changes that must be looked upon as specific in character.

THE FIGHT AGAINST MOSQUITOES.

THE average young person probably harbors a hazy notion that whatever is good for his health is disagreeable. There are many instances, however, in which health and comfort are promoted by the same means. One of them, as we have only lately learned, is the prevention of mosquito-bites, and, in our opinion, the Division of Entomology of the United States Department of Agriculture has done the people a distinct benefit by issuing a circular (No. 13, second series) concerning mosquitoes and fleas. While the entomologist whose signa-

ture is appended to the circular, Mr. L. O. Howard, recognizes that the thorough screening of windows and the use of the bed net are the best means to employ against the access of mosquitoes in dwellings, he makes some very practical and useful suggestions as to the destruction of those mosquitoes which, in spite of these measures, do inflict their bites even in the best-regulated families. As some of the defensive means suggested may not be generally known, we will mention them briefly. The slow burning of cones made of moistened pyrethrum powder gives great relief from the attacks of mosquitoes in a room, but does not kill the insects, and is only a palliative. Mosquitoes found on the ceiling of a bedroom may be killed easily and quickly by placing under them a shallow tin vessel nailed to the end of a stick and moistened on the inside with kerosene. But the most satisfactory means of fighting mosquitoes is to destroy their larvæ or abolish their breeding-places by draining ponds and marshes, by stocking pools with fish, and by the use of kerosene on the surface of the water. Approximately, an ounce of the oil to every fifteen square feet of surface is sufficient, and generally the application need be made only once a month. Mr. Howard doubts, however, if it will prove feasible to treat extensive salt marshes in this way. Cesspools, cisterns, etc., should be treated in the same manner. If drinking-water is drawn from the bottom of a tank, as is commonly the case, there is no objection to coating the surface of the water with kerosene. In the matter of tanks, cisterns, cesspools, etc., there should be concerted action in a district, for a family may suffer from their neighbor's mosquitoes.

OUR SUBSCRIBERS' DISCUSSIONS.

THE time allowed for manuscripts sent in competition for the first prize, on the question "What is the best treatment of the stump of the umbilical cord?" expired on Monday, the 10th inst. We have received numerous answers, and several of them are well worthy of publication. The task of reading all that have been received and passing upon their merits will necessarily occupy some time, but we expect to accomplish it in time to announce the award in our next issue. Meantime we would remind our subscribers that the time for receiving answers to the second question will expire on July 10th. We would say to them also that we should be glad to receive suggestions from them as to topics for subsequent competitions.

THE PRICKING OF THE "UREINE" BUBBLE.

IN our issue for May 18th we gave Dr. Walter S. Haines and Dr. Charles S. Woods, of Chicago, credit for having shown the fallacy of the supposed discovery of an essential constituent of the urine termed "ureine." We have since been informed that A. F. Chace, B. S., A. B., and William J. Gies, Ph. D., of the Department of Physiological Chemistry of the College of Physicia and Surgeons, Columbia University, New York, was t first to make and publish (*Medical Record,* March 2 this demonstration, quite a month prior to the appe ance of the article by Dr. Haines and Dr. Woods. I therefore, is entitled to the credit of priority.

THE DETERMINATION OF DEATH BY X-RAYS.

THE subject of the definite determination of dea is one of great importance, and new tests are from ti to time submitted. The latest one suggested, as we lea from the *American X-Ray Journal* for April, whi quotes the passage without, however, stating its auth ity, is that of Professor Ottolenghi, of the University Siena. The professor is said to have "discovered th while it is easy to apply the rays to the lungs of a pers who is alive or in trance, it is extremely difficult, inde practically impossible, to apply them to the lungs of person actually dead." The reason is that some int vening obstacle prevents the rays from penetrating i the body. He has repeatedly made a test of this ki always with the same result. Professor Ottolen therefore suggests that, as this test can easily be made any physician, it should in future be employed in eases where there exists doubt of death.

It seems to us that the value of this test could easily settled by experiment and that its further inve gation is desirable.

A NEW PSYCHOLOGICAL JOURNAL.

WE have received the first number, for June, of *Journal of Mental Pathology,* a large octavo of sixty-f pages, edited by Louise G. Robinovitch, B. ès L., M. and published in New York. The numbers are to issued monthly, except in the months of August and S tember. The editorial board consists of Dr. V. Magn Dr. A. Joffroy, and Dr. F. Raymond, of Paris; Charles K. Mills, of Philadelphia; Dr. J. Morel, of B gium; Dr. C. H. Hughes, of St. Louis, and Dr. E. Re of Bordeaux, and on the title-page there is a long list contributors. The new journal presents a fine appe ance, and its contents are of unquestionable value.

THE LIBRARY OF THE MEDICAL SOCIETY OF T COUNTY OF KINGS.

WE learn that this library, housed for the past year its handsome new building in Bedford Avenue, Brookl embraces over 30,000 volumes, 15,000 pamphlets, some 500 current medical periodicals. The society appealing for contributions to a permanent library dowment fund and for gifts of medical books, journ transactions, etc. We hope it will succeed in add largely to its resources, and we believe that it will, for professional brethren who live in Brooklyn are noted their public spirit.

News Items.

Society Meetings for the Coming Week:

NDAY, *June 17th:* New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

ESDAY, *June 18th:* New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

DNESDAY, *June 19th:* Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

URSDAY, *June 20th:* New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

DAY, *June 21st:* New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynæcological Society.

TURDAY, *June 22d:* New York Medical and Surgical Society (private).

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, and plague were reported to the surgeon-general during the week ending June 1, 1901:

Smallpox—United States and Insular.

S Francisco, California	May 11-18	5 cases.	
cago, Illinois	May 18-25	7 cases.	
ton, Iowa	May 18-25	2 cases.	
w Orleans, Louisiana	May 18-25	7 cases.	
eveport, Louisiana	May 18-25	1 case.	
timore, Maryland	May 18-25	2 cases.	
ton, Massachussets	May 18-25	3 cases.	
chburg, Massachusetts	May 18-25	1 case.	
lboro, Massachusetts	May 18-25	1 case.	
w Bedford, Massachusetts	May 18-25	2 cases.	
roit, Michigan	May 18-25	67 cases.	
neapolis, Minnesota	May 18-25	9 cases.	
ona, Minnesota	May 11-18	1 case.	
aha, Nebraska	May 11-18	9 cases.	
chester, New Hampshire	May 18-25	5 cases.	
den, New Jersey	May 18-25	1 case.	
wark, New Jersey	May 18-25	2 cases.	1 death.
saic, New Jersey	May 18-25	1 case.	
w York, New York	May 18-25	134 cases.	13 deaths.
cinnati, Ohio	May 17-24	4 cases.	
veland, Ohio	May 18-25	39 cases.	1 death.
e, Pennsylvania	May 18-25	1 case.	
anon, Pennsylvania	May 18-25	8 cases.	
ladelphia, Pennsylvania	May 18-25	3 cases.	
lliamsport, Pennsylvania	May 18-25	1 case.	
nphis, Tennessee	May 18-25	6 cases.	2 deaths.
hville, Tennessee	May 18-25	2 cases.	
Lake City, Utah	May 11-18	5 cases.	
oma, Washington	May 12-19	1 case.	
ntington, West Virginia	Apr. 13-May 24	48 cases.	
en Bay, Wisconsin	May 19-26	6 cases.	
ila, Philippine Islands	Mar. 23 Apr, 13	35 cases.	
ce, Porto Rico	Apr. 27-May 4	5 cases.	

Smallpox—Foreign.

gue, Austria	Apr. 27-May 4	3 cases.	
de Janeiro, Brazil	Apr. 1-15		5 deaths.
werp, Belgium	Apr. 27-May 4	5 cases.	2 deaths.
g Kong, China	Apr. 6-13	6 cases.	6 deaths.
yaquil, Ecuador	Mar. 30-May 11		3 deaths.
o, Egypt	Apr. 15-May 6		4 deaths.
s, France	Apr. 27-May 4		5 deaths.
altar	May 6-12	2 cases.	
rpool, England	May 4-11	2 cases.	
don, England	May 4-11	1 case.	
dee, Scotland	Apr. 27-May 11	10 cases.	
gow, Scotland	May 3-11		4 deaths.
les, Italy	Apr. 30-May 12	296 cases.	57 deaths.
ico, Mexico	May 11-18	1 case.	
ada, Nicaragua	May 16. Present		
aya, Nicaragua	May 16. "		
aguas, Nicaragua	May 16. "		
cow, Russia	Apr. 21-27	9 cases.	2 deaths.
sa, Russia	Apr. 27-May 4	5 cases.	2 deaths.
Petersburg, Russia	Apr. 20-May 4	21 cases	4 deaths.
livostock, Russia	Oct. 1-31	1 case.	
Warsaw, Russia	Apr. 20-27	7 cases.	
Malaga, Spain	May 4-11		1 death.
Valancia, Spain	Apr. 27-May 11		2 deaths.
Singapore, Straits Settlements	Mar. 30-Apr. 13		3 deaths.
Montevideo, Uruguay	Mar. 16-23	6 cases.	

Yellow Fever.

Rio de Janeiro, Brazil	Apr. 1-15		31 deaths.
Panama, Colombia	May 6-20	7 cases.	
Havana, Cuba	May 11-18	3 cases.	

Plague—Insular.

Cebu, Philippine Islands	Apr. 4	1 case.	
Manila, Philippine Islands	Mar. 23-Apr. 13	76 cases.	64 deaths.

Plague—Foreign.

Formosa, Japan	Apr. 21-28	170 cases	111 deaths
Basra, Turkey	May 13	3 cases.	

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending June 8, 1901:

Smallpox—United States.

Los Angeles, California	May 18-25	1 case.	
San Francisco, California	May 18-25	5 cases.	
Washington, D. C.	May 25-June 1	1 case.	
Chicago, Illinois	May 25-June 1	7 cases.	
Ottumwa, Iowa	Apr. 27-June 1	16 cases.	
Leavenworth, Kansas	May 1-31	3 cases.	
Wichita, Kansas	May 18-June 1	42 cases.	
New Orleans, Louisiana	May 25-June 1	4 cases.	
Boston, Massachusetts	May 25-June 1	1 case.	
Fitchburg, Massachusetts	May 17-24	1 case.	
New Bedford, Massachusetts	May 25-June 1	1 case.	
Quincy, Massachusetts	May 25-June 1	1 case.	
Detroit, Michigan	May 25-June 1	57 cases.	
Grand Rapids, Michigan	May 25-June 1	2 cases.	
Minneapolis, Minnesota	May 18-June 4	15 cases.	
Winona, Minnesota	May 25-June 1	1 case.	
St. Louis, Missouri	May 19-26	27 cases.	
Nebraska City, Nebraska	Apr. 27-May 18.	6 cases.	
Omaha, Nebraska	May 17-June 1	25 cases.	
South Omaha, Nebraska	May 24-31	26 cases.	
Manchester, New Hampshire	May 25-June 1	7 cases.	
Jersey City, New Jersey	May 26-June 2	4 cases.	
Newark, New Jersey	May 25-June 1	2 cases.	
New York, New York	May 25-June 1	64 cases.	17 deaths.
Charlotte, North Carolina	May 1-31	11 cases.	
Cincinnati, Ohio	May 1-31	10 cases.	
Cleveland, Ohio	May 25-June 1	31 cases.	1 death.
Youngstown, Ohio	May 18-25	1 case.	
Lebanon, Pennsylvania	May 25-31	5 cases.	
Philadelphia, Pennsylvania	May 25-June 1	4 cases.	
Pittsburgh, Pennsylvania	May 18-June 1	7 cases.	
Providence, Rhode Island	May 25-June 1	1 case.	
Warwick, Rhode Island	May 23-30	1 case.	
Memphis, Tennessee	May 25-June 1	13 cases.	
Nashville, Tennessee	May 25-June 1	6 cases.	
Green Bay, West Virginia	May 26-June 2.	4 cases.	
Milwaukee, Wisconsin	May 25-June 1	2 cases.	
Salt Lake City, Utah	May 18-June 1	19 cases.	1 death.
Aberdeen, Washington	May 21	4 cases.	

Smallpox—Foreign.

Buenos Ayres, Argentina	Mar. 1-31	76 cases.	
Prague, Austria	May 11-18	5 cases.	
Antwerp, Belgium	May 6-11	7 cases.	2 deaths.
Colombo, Ceylon	April 20	1 case.	1 death.
Panama, Colombia	May 20-27	6 cases.	
Paris, France	May 11-18		15 deaths.
Glasgow, Scotland	May 11-18		3 deaths.
Nottingham, England	May 16	1 case apparently transmitted from Salt Lake City, Utah, by fomites.	
Naples, Italy	May 3-10	114 cases.	25 deaths.
Bombay, India	Apr. 23-May 7		12 deaths.
Calcutta, India	Apr. 20-May 4		125 deaths.
Karachi, India	Apr. 21-28	8 cases.	5 deaths.
Madras, India	Apr. 20-May 3		28 deaths.
Moscow, Russia	May 4-18	29 cases.	13 deaths.
Odessa, Russia	May 4-11	5 cases.	1 death.
Warsaw, Russia	Apr. 29-May 4		1 death.
Geneva, Switzerland	May 4-11	1 case.	

Yellow Fever.

Liberia, Costa Rica	May 25	Present.	

Cholera.

Bombay, India	Apr. 22-May 7		4 deaths.
Calcutta, India	Apr. 20-May 4		126 deaths.
Madras, India	Apr. 20-May 3		7 deaths.

Plague.

Cape Town, Africa	To April 27	377 cases.	160 deaths.
Bombay, India	Apr. 22-May 7		778 deaths.
Calcutta, India	Apr. 20-May 4		371 deaths.
Karachi, India	Apr. 21-28	273 cases.	233 deaths.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending June 8, 1901:

DISEASES.	Week end'g June 1		Week end'g June 8	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	25	2	30	5
Scarlet Fever	505	38	449	30
Cerebro-spinal meningitis	0	4	0	0
Measles	329	11	302	13
Diphtheria and croup	247	50	241	48
Small-pox	64	17	86	16
Tuberculosis	286	158	226	152

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Three Weeks ending June 8, 1901:

ARMSTRONG, E. V., Passed Assistant Surgeon. Detached from the *Vermont* and ordered to the Key West Naval Station for duty at Dry Tortugas.

BRISTER, J. M., Assistant Surgeon. Detached from the *Independence* and ordered to the Asiatic Station via the *Hancock.*

CORDERIO, F. J. B., Surgeon. Detached from the *Buffalo* and ordered home to await orders.

COSTIGAN, J. F., Passed Assistant Surgeon. Detached from the *Yorktown* and ordered home. His resignation to be accepted after his arrival.

GARTON, W. M., Assistant Surgeon. Detached from the Washington Navy Yard, June 1st, and ordered to the *Indiana.*

HAAS, H. H., Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the Norfolk Navy Yard.

IDEN, J. H., Assistant Surgeon. Ordered to duty at the Naval Hospital, Chelsea, Massachusetts.

LIPPITT, T. M., Assistant Surgeon. Ordered to the Washington Navy Yard, June 1st.

MCCLANAHAN, R. K., Assistant Surgeon. Ordered to the *Culgoa.*

PLUMMER, R. W., Assistant Surgeon. Detached from the *Nashville* and ordered to the *Princeton.*

RICHARDSON, R. R., Assistant Surgeon. Ordered to the Naval Hospital, New York.

SHIFFERT, H. O., Assistant Surgeon. Ordered to the *Nashville.*

THOMPSON, E., Assistant Surgeon. Detached from the *Petrel* and ordered to the *Solace.*

WILLIAMS, R. B., Assistant Surgeon. Detached from Dry Tortugas and ordered home to be ready for sea duty.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from May 25 to June 8, 1901:

ALLEN, IRA A., Captain and Assistant Surgeon. The leave of absence granted him is extended five days.

CHAMBERLAIN, WESTON P., First Lieutenant and Assistant Surgeon. The leave of absence granted him is extended twenty-three days.

COLLINS, CHRISTOPHER C., First Lieutenant and Assistant Surgeon, will proceed to Fort Bayard, N. M., for duty.

DOUGHERTY, JAMES C., Contract Surgeon, will proceed to Aibonito, Porto Rico, for duty, to relieve HARRY A. EBERLE, Contract Surgeon.

HARTSOCK, F. M., First Lieutenant and Assistant Surgeon, is granted leave of absence for one month.

KENDALL, WILLIAM P., Major and Surgeon, is granted leave of absence for fourteen days.

WARD, JOSIAH M., Acting Assistant Surgeon, having returned to duty, will return to his station, Carranglan, Province of Nueva Ecija.

WYETH, MARLBOROUGH C., Major and Surgeon, is granted leave of absence for three months.

Scarlet Fever.—An epidemic of scarlet fever is reported from Amsterdam, near La Crosse, Wis.

Typhoid.—Typhoid is reported to be raging with some virulence at Pittsburgh and certain districts of Philadelphia.

Foreign News Notes.—According to cable di patches, the Sultan of Turkey intends to present to tl Berlin Hospital a wing, the plans of which have bee sent to Emperor William for approval.

Appointment of Physician-in-General to the Brool lyn Post-office.—Dr. W. H. Clowminzer has been a pointed physician-in-general to the Brooklyn post-offi department, at a salary of $1,200 a year, to take office c July 1st.

An American Woman Appointed Superintendent Nurses in a Paris Hospital.—Miss Marie Louise Meie a nurse at the Grady Hospital, Atlanta, Ga., has bee appointed superintendent of nurses in the Hospital La neau du Chantel, in Paris. She will leave Atlanta t assume the duties of her new position in December.

Consumptive Immigrants not Admitted to th Country.—The order of the superintendent of immigra tion, received by the commissioner of immigration fc New York, that tuberculosis of the lungs is to be consic ered a dangerous contagious disease, is expected to resu in a large decrease in the number of immigrants admi ted to this country. Heretofore immigrants havin tuberculosis of the lungs have been admitted unless th disease was in an advanced stage.

Assistant Army Surgeons Honorably Discharged.— By direction of the President, the following named a sistant surgeons of the army have been honorably di charged as majors and surgeons in the volunteer arm only, to take effect on June 30th: Captain H. C. Fishe Captain E. L. Swift, Captain John S. Kulp, Captain I P. Reynolds, Captain M. W. Ireland, Captain Willia F. Lewis, Captain Paul Chillock, Captain A. N. Starl Captain P. C. Fauntleroy, Captain Charles Willcox, an Captain Henry A. Shaw, and First Lieutenant Georg W. Mathews.

Work of the Milk Commission of the Medical S ciety.—The chairman of the commission of the Medic Society of the County of New York reported on Jur 10th to the society on milk conditions in New York. year ago the society appointed the commission to inspe the milk supply. After a full investigation of existin conditions, the commission is now prepared to certify th milk of any dealer whose product comes up to its stan ard. Two dealers have already fulfilled the conditio laid down, and others will follow their example. "Th is the first step in the improvement of the milk supply i this city," said the chairman. "If the public will onl second the work of the commission, pure milk will b fore long be as common as impure milk is at present. To obtain a guarantee from the society's commission th dealer must prove, for one thing, that the acidity of th milk he wishes to sell is not higher than two per cent.

Dr. Remsen Elected President of the Johns Hopkin University.—At a meeting of the trustees of Johns Ho kins University, recently held at Baltimore, Md., I Remsen, Ph. D., LL. D., professor of chemistry in Johr Hopkins University since 1876, was elected president c the university, succeeding Dr. Daniel C. Gilman, wh resigned. Dr. Remsen is fifty-five years old. He grac uated from the College of New York, his native city, i 1865; took his degree of M. D. at the New York Colleg of Physicians and Surgeons and that of Ph. D. at th

University of Göttingen, in Germany. He also holds the degree of LL. D. from Columbia (1893) and from Princeton (1896). In 1872 he occupied the chair of chemistry in Williams College, and three years later entered Johns Hopkins University in the same capacity.

A Model of a Manila Hospital to be Exhibited at Washington, D. C.—Surgeon-General Sternberg has been advised of the shipment from Manila of an admirable model of Hospital No. 3. It will be placed in the Army Medical Museum, at Washington, D. C. The model is built on the scale of 1 to 250, upon a single square of narra wood, and shows all elevations, drainage, and sanitation. The model includes, besides Hospital No. 3, the hospital corps company of instruction and the hospital corps camp of casuals, which are adjacent and under the same command. The details are made from the original material of the buildings and walls which they represent. Every ward-room, office, tent, hydrant, tree, fence or ditch is reproduced in a miniature size. The gradation of the land surrounding and levels of drains are exact in proportion. It took two months to construct the model.

The Rockefeller Institute for Medical Research.—The generosity of Mr. John D. Rockefeller has established an institute, to be known as the Rockefeller Institute for Medical Research. The purpose of the foundation, as the name implies, is to furnish facilities for original investigation, particularly in such problems in medicine and hygiene as have a practical bearing upon the prevention and treatment of disease. The sum of $200,000 has been placed at the disposal of the board to begin the work, not as an endowment, but to be used in a series of years for current expenses. The home of the institute will be in New York, although, as will be evident from the make-up of the board of directors, medical men from neighboring cities will share in its management. The board, as at present constituted, is as follows: President, William H. Welch, M. D., Baltimore; vice-president, T. Mitchell Prudden, M. D., New York; secretary, L. Emmett Holt, M. D., New York; treasurer, C. A. Herter, M. D., New York; members, Theobald Smith, M. D., Boston; Simon Flexner, M. D., Philadelphia; H. M. Biggs, M. D., New York.

It is not intended to build at once, but with the funds placed at the disposal of the board, research work will be begun under its direction in several different places. The immediate aims of the board are twofold. First, to shape the lines of the work along which the institute may wisely develop, both in contributions to knowledge and in the application of existing knowledge to humane ends. It is felt that when this is done, such local habitation as the future of the institute shall require can be more wisely planned. The potential value of an institution of this kind, and under such auspices, to medical science and to the interests of humanity can hardly be over-estimated.

St. Louis Medical Society of Missouri.—At the last regular meeting, on Saturday, June 8th, Dr. W. G. Moore read a paper entitled Comparative Treatments of Typhoid Fever.

Medical Society of City Hospital Alumni, St. Louis.—At the last regular meeting, on Thursday, June 6th, Dr. Willard Bartlett read a paper entitled Retained Testicle, with the Surgical Features and Microscopic Findings in Three Cases, and Dr. J. G. Moore reported a case of appendicitis.

The Monroe County (N. Y.) Medical Society recently elected the following officers: President, Dr. Lewis W. Ross; vice-president, Dr. Charles W. Barber; secretary, Dr. William W. Brown, and treasurer, Dr. Clarence A. Greenleaf.

The Massachusetts Medico-legal Society.—At the annual meeting, which was held on Tuesday, June 11th, the following papers were read: The Medico-legal Examination of Blood Stains, by Professor Edward S. Wood, of Boston; The Establishment of Diplomas in Legal Medicine, by Dr. Wyatt Johnson, of Montreal; and The Erickson Murder, by Dr. F. H. Baker, of Worcester.

The Medical Association of the Greater City of New York.—At the last stated meeting, on Monday, June 10th, the order of exercises was as follows: Presentation of specimens, by Dr. A. A. Berg; The Growth of New Bone from the Periosteum, by Dr. J. H. Branth; Retinal Changes Following Cerebral Concussion, by Dr. L. A. W. Alleman; and A Case of Cerebral Concussion and Hystero-epilepsy, by Dr. W. B. Noyes.

The American Dermatological Association.—At its annual meeting, held in Chicago from May 29th to June 1st, the following officers were elected: President, Dr. George T. Jackson, of New York; vice-president, Dr. Joseph Leisler, of Chicago; secretary and treasurer, Dr. F. H. Montgomery, of Chicago; member at large of the council, Dr. H. G. Klotz, of New York. The next meeting will be held in Boston, from September 18 to 20, 1902.

The New York Academy of Medicine.—At the last stated meeting, on Thursday, June 6th, the order for the evening was as follows: Presentation of the portrait of Dr. William H. Thomson, by Dr. W. H. Polk; The Freezing-point of Urine, its Determination and the Inferences which may be Drawn from it, by Dr. J. H. Huddleston; and the Early Recognition and Management of Arterial Degeneration, by Dr. Louis F. Bishop.

The Women's Medical Association of New York.—At the annual meeting of the Women's Medical Association of New York, held at the Academy of Medicine, on May 15th, the following officers were elected for the ensuing year: President, Dr. Mary Putnam Jacobi; vice-presidents, Dr. Josephine Walter and Dr. Frances Merriam Myers; recording secretary, Dr. Marie L. Cleard; corresponding secretary, Dr. Mary D. Rushmore; treasurer, Dr. Caroline H. Le Fevre.

The Southern Illinois Medical Association at its annual meeting, which terminated on May 17th, elected officers as follows: President, Dr. O. A. Dean, of Campbell Hill; first vice-president, Dr. J. A. Helm, of Metropolis; second vice-president, Dr. M. D. Empson, of Hartford; secretary, Dr. O. B. Ormsby, of Murphysboro; assistant secretary, Dr. C. E. Risling, of Murphysboro; and treasurer, Dr. A. T. Telford, of Menard. The next meeting will take place at Carbondale in November.

A Department of Original Research at Bellevue Hospital Medical College.—An announcement of great importance to New York University was made on June

6th by Chancellor MacCracken at the annual commencement ceremonies concerning the Bellevue Hospital Medical College. A department of original research has been organized in the name of the university in the Carnegie Laboratory, and a quarterly magazine has been founded to publish to the world of science the results of the research.

The Association of American Medical Colleges held its business meeting at St. Paul, Minn., on June 3d. The election of officers resulted as follows: President, Dr. Victor C. Vaughan, University of Michigan; first vice-president, Dr. William M. Rodman, Philadelphia; second vice-president, Dr. H. Bert Ellis, Los Angeles; secretary, Dr. Bayard Holmes, Chicago; judicial council, Dr. Thomas Hawkins, Denver, Dr. E. C. Dudley, Chicago, and Dr. W. J. Means, Columbus, Ohio.

The association extended an invitation to the Southern Association of Medical Colleges to unite with the larger organization, and the invitation was accepted. The membership of the association is sixty-five colleges. The accession of the Southern association raises it to seventy-seven.

The Kansas College of Medicine and the University Medical College of Kansas City, which were under suspension for infractions of the rules, were reinstated. Charges preferred against the Hospital College of Medicine, of Louisville, were not sustained.

At the general meeting of the association, on June 3d, Dr. Parks Ritchie, of St. Paul, made an address of welcome.

Dr. Albert R. Baker, of the College of Physicians and Surgeons, of Cleveland, Ohio, compared medical facilities of to-day with those of ten years ago and discussed the requirements of the medical student.

Dr. V. C. Vaughan, of the University of Michigan, read a paper on What Preliminary Education Best Fits a Man for the Study of Medicine? Papers were also read on The Teaching of Anatomy in Medical Schools, by Dr. C. A. Hamann, of Cleveland; The Colleges that do not Give Medical Degrees, by Dean R. H. Whitehead, of the University of North Carolina; The Importance of Keeping Accurate Records of Students' Work and Issuing Specific Records, by Dr. John M. Dodson, of Chicago; Education in Hospital and Laboratory, by Dr. Ludwig Hektoen, of Chicago. An exhibition of pedagogic apparatus and methods closed the afternoon session. The delegates were guests at the State University in the forenoon.

The Harsen Prizes at the College of Physicians and Surgeons.—Trustees of the College of Physicians and Surgeons have established three Harsen prizes for proficiency at the final examinations in practical anatomy, clinical medicine, clinical surgery, and several other subjects. The prizes are $500, $300, and $200, respectively, for the three highest men. It has been the custom to award a diploma of "examination honors" to each of the ten men of the graduating class who pass the best examinations in trying for their doctor's degree. The ten men thus honored are entitled to take part in special competitive examinations, and the three most meritorious competitors receive the first, second, and third prizes, respectively. The winners this year were: First prize Charles Hendee Smith, of Hartland, Wis., graduate of Cornell; second prize, Philip Van Ingen, of New York, graduate of Yale; third prize, William Darrach, of New York, graduate of Yale. The seven other men, who hold "examination honor" certificates, are James Robert Judd, of Honolulu, Hawaii, a graduate of Yale; Leo Burger, of New York, graduate of the City College; Alfred Carlyle Prentice, of New York, graduate of Alfred University; Robert Willis Shearman, of New York, graduate of Columbia; John Howard Blue, of Montgomery, Ala., graduate of the University of Alabama; Joseph Dayton Condit, of Terre Haute, Ind., graduate of Wabash College, and James Percy McKelvy, of Braddock, Pa. This year's committee of award consists of Dr. James W. McLane, dean of the college; Dr. L. Bolton Bangs, '72, president of the Alumni Association, and a third resident alumnus.

Births, Marriages, and Deaths.

Born.

CUMMING.—At South Atlantic Quarantine, Blackbeard Island, Georgia, on Sunday, June 2d, to Dr. and Mrs. Hugh S. Cumming, a daughter.

Married.

CROSCUP—GOODWIN.—In Brooklyn, on Wednesday, June 5th, Dr. Homer C. Croscup and Miss Bertie Goodwin.

DUNN—MCILWAINE.—In Baltimore, on Tuesday, June 4th, Dr. William Wilcox Dunn, of Richmond, Virginia, and Miss Anne Read McIlwaine.

GROS—PATTON.—In Curwensville, Pennsylvania, on Friday, June 7th, Dr. Edmund L. Gros, of Paris, France, and Miss Honora P. Patton.

HUMMER—GUEST.—In Washington, on Wednesday, June 5th, Dr. Harry Reid Hummer and Miss Norena Guest.

JACKSON—SMALLEY.—In Burlington, Vermont, on Tuesday, June 4th, Dr. J. Holmes Jackson and Miss Caroline D. Smalley.

JOHNSON—FOLSOM.—In Star Prairie, Wisconsin, on Friday, May 27th, Dr. Joseph Johnson and Mrs. C. Folsom.

SCOTT—GARDNER.—In Waterloo, Iowa, on Wednesday, June 5th, Dr. C. H. Scott, of Breckenridge, Colorado, and Mrs. Mary Gardner.

SMITH—BROOKS.—In New York, on Wednesday, June 5th, Dr. Robert Newhall Smith and Miss Susan Pritchard Brooks.

SOTHORON—TAYLOR.—In King George, Maryland, on Tuesday, June 4th, Dr. Levin I. Sothoron, of Washington, and Miss Marguerite Taylor.

ZOBEL—GETZ.—In San Francisco, on Saturday, June 1st, Dr. Alfred Zobel and Miss Maybell Getz.

Died.

BLOCH.—In Denver, on Saturday, June 8th, Dr. A. J. Bloch, in the thirty-fourth year of his age.

BOND.—In London, England, on Thursday, June 6th, Dr. Thomas Bond, in the fifty-seventh year of his age.

DALY.—In Pittsburgh, on Sunday, June 9th, Dr. William Hudson Daly, United States Army, in the fifty-ninth year of his age.

GOTTSLEBEN.—In Mayville, Wisconsin, on Thursday, May 23d, Dr. R. A. Gottsleben, in the fiftieth year of his age.

HEALY.—In Plattsburgh, N. Y., on Saturday, June 8th, Dr. Maurice L. Healy, of New York, in the thirty-seventh year of his age.

MERENESS.—In Milwaukee, on Wednesday, May 29th, Dr. Dwight Mereness, in the forty-second year of his age.

OSBORNE.—In Salem, Massachusetts, on Saturday, May 25th, Dr. George S. Osborne, in the sixty-third year of his age.

ST. JOHN.—In Pericale, Luzon, Philippine Islands, on Wednesday, May 22d, Dr. Charles St. John.

SALE.—In Memphis, on Sunday, June 9th, Dr. E. Paul Sale.

SPRAGUE.—In Jersey City, on Wednesday, June 5th, Dr. Seth B. Sprague, in the sixty-first year of his age.

TERRIBERRY.—In Paterson, N. J., on Sunday, June 9th, Dr. Calvin Terriberry, in the fiftieth year of his age.

TESSON.—In Vancouver, Washington, on Saturday, June 8th, Dr. Lewis S. Tesson, Medical Director of the Department of the Columbia, in the fifty-ninth year of his age.

THIRKELL.—In Sodus, N. Y., on Wednesday, May 29th, Dr. William G. Thirkell, in the sixty-fourth year of his age.

WOODS.—In Boston, on Saturday, June 1st, Dr. William Woods, in the sixty-first year of his age.

Pith of Current Literature.

Medical News, June 1, 1901.

Some Factors Relating to the Ætiology of Prostatic Enlargement. By Dr. J. Bentley Squier.—The author points out that it is an antiquated idea to believe that prostatic hypertrophy is only a senile condition, and he shows that if the sexual history of *prostatiques* is carefully gone into, one will find that a surprising majority have abused their sexual apparatus to a greater or less extent and have kept up a constant hyperæmia of their prostate for years.

Gastric Ulcer and Muco-membranous Colitis at the Paris Congress. By Dr. James J. Walsh.

Streptococcus Bronchitis in Influenza. By Dr. F. Forchheimer.

Fourth-of-July Tetanus. By Dr. H. Gideon Wells.—The author refers to the fact that tetanus is endemic in Chicago, the specific organism being present in the dirt of the streets. An epidemic always occurs on the "Fourth," because then the bacilli are carried deeply into wounds in front of wads from blank cartridges, and are there under conditions favorable for multiplication.

The Use of Methylene-blue Injections in Pleurisy, with Effusion. By Dr. Charles H. Lewis.

The Appearance of the Soft Palate a Pathognomonic Symptom of Epidemic Influenza. By Dr. Louis Kolipinski.

June 8, 1901.

The President's Address. By Dr. Charles A. L. Reed.—(See *New York Medical Journal,* June 8th.)

Internal Medicine in the Nineteenth Century. By Dr. N. S. Davis, Jr.—(See *New York Medical Journal,* June 8th.)

The Value of Clinical Microscopy, Bacteriology, and Chemistry in Surgical Practice. By Dr. John A. Wyeth.—(See *New York Medical Journal,* June 8th.)

The Progress and Tendency of Hygiene and Sanitary Science in the Nineteenth Century. By Dr. George M. Kober.—(See *New York Medical Journal,* June 8th.)

Journal of the American Medical Association, June 1, 1901.

Movable Kidney—Its Cause and Treatment. By Dr. L. M. Harris.—The essential cause of movable kidney lies in a particular body form, the chief characteristics of which are a marked contraction of the lower end of the middle zone of the body, with a diminution in the capacity of this portion of the body cavity. The constricted outlet of the zone comes above the centre of the organ, and all acts which tend to adduct the lower ribs press the upper pole of the kidney and crowd it still further downward. These influences gradually produce a movable kidney. A distinctly movable kidney is never the immediate result of a single injury or of external trauma.

The Appendix Vermiformis and Cæcum—A Comparative Study. By Dr. B. Merrill Ricketts.

Zoology in the Medical School Curriculum. By Charles Wardell Stiles, Ph. D.—The author proposes that the subject of animal parasitism be treated in a special course, by a special man, preferably by a zoologist, or else by a physician with a special zoologic or helminthologic training.

Antipneumococcic Serum Treatment of Pneumonia, with Report of Cases. By Dr. G. E. Tyler.

How to Treat Muscular and Joint Sprains of Railway Employees. By Dr. Haldor Sneve.—Immobilization of muscles is not rest, and plaster casts should not be used unless it is impossible to maintain a proper position of the joint. Hydrotherapy is of great value. The counterirritation of static electricity in conjunction with massage is the best treatment for a strain. The ambulatory treatment of sprains in conjunction with massage is today the best.

Diagnosis and Symptomatology in the Appendicitis of Children. By Dr. Thomas H. Manley.

Is it Possible, by Proper Dietetics and Hygiene, to Exterminate Tuberculosis? By Dr. J. E. Kinney.

Variola and Varicella. By Dr. M. A. Austin.

Photographing the Eye-ground. By Dr. Shirls Jackson.

June 8, 1901.

The President's Address, Delivered at the Fifty-second Annual Meeting of the American Medical Association, Held at St. Paul, Minn., June 4, 5, 6, and 7, 1901. By Dr. Charles A. L. Reed.—(See *New York Medical Journal,* June 8th.)

Internal Medicine in the Nineteenth Century. By Dr. N. S. Davis, Jr.—(See *New York Medical Journal,* June 8th.)

The Value of Clinical Microscopy, Bacteriology, and Chemistry in Surgical Practice. By Dr. John A. Wyeth.—(See *New York Medical Journal,* June 8th.)

The Progress and Tendency of Hygiene and Sanitary Science in the Nineteenth Century. By Dr. George M. Kober.—(See *New York Medical Journal,* June 8th.)

American Medicine, June 1, 1901.

A Case of Antrum Infection and Sigmoid Sinus Thrombosis without Present Middle-ear Disease, Presenting the Symptoms of Facial Neuralgia and None of the Ordinary Symptoms of Disease in the Petrosa: Retropharyngeal Gravity — Abscess, General Sinus Thrombosis without much Impairment of Cerebration. Death after Three Months, Partial Autopsy, Presentation of Specimens. By Dr. Bayard Holmes.

Typhoid Fever and Pharyngeal Diphtheria. By Dr. Morris Manges.

Practical Thoughts on Pulmonary Tuberculosis. By Dr. Howard S. Anders.—The author mentions the use of aromatic oils, the oil of sandalwood, and the oil of erigeron. The first in ten-drop doses every three or four hours, or as needed, affords much relief for the cough in the earlier stages of the disease. Erigeron is of decided benefit in the hæmoptysis of tuberculosis, administered in five-minim capsules every two, three, or four hours.

The Recognition of Tabes Dorsalis. By Dr. Theodore Diller.—The following are the cardinal symptoms of tabes in the order of their importance: (1) Failure of knee-jerks; (2) Romberg symptoms; (3) Argyll Robertson pupil; (4) lightning pains; (5) loss of functions of the bladder or sexual organs.

Simplicity in Therapeutics. By Dr. Edwin Pyle.

The Radical Cure of Internal and External Piles by Excision. By Dr. John A. Hawkins.

Rigidity of the Spine [Spondylose Rhizomélique]. By Dr. Max H. Bochroch.

Some Notes on a Case of Cerebral Embolism. By Dr. Anna M. Littlefield.

Report of the General Hospital for the Treatment of Pulmonary Tuberculosis at Fort Bayard, N. M., for the Period Ended December 31, 1900. By Dr. D. M. Appel.

June 8, 1901.

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The Value of Clinical Microscopy, Bacteriology, and Chemistry in Surgical Practice. By Dr. John A. Wyeth.—(See *New York Medical Journal,* June 8th.)

The Progress and Tendency of Hygiene and Sanitary Science in the Nineteenth Century. By Dr. George M. Kober.—(See *New York Medical Journal,* June 8th.)

Internal Medicine in the Nineteenth Century. By Dr. N. S. Davis, Jr.—(See *New York Medical Journal,* June 8th.)

Philadelphia Medical Journal, June 1, 1901.

Two Successful Cases of Secondary Suture, One of the Posterior Interosseous Nerve and One of the Median and Ulnar Nerves. By Dr. W. W. Keen.

Pancreatitis. By A. W. Mayo Robson, F. R. C. S. (Leeds).

The Examination of the Blood in Relation to Surgery of Scientific, but often of no Practical Value, and may Misguide the Surgeon. By Dr. John B. Deaver.

Complicated Fractures, their Diagnosis and Treatment. By Dr. Thomas H. Manley.—The author makes a plea for practitioners treating more fractures at home. If you feel that you are incompetent, take a post-graduate course in this important branch of surgery.

Pityriasis Versicolor, with Special Reference to Allen's Iodine Test. By Dr. Jacob Sobel.

The Biceps Tendon Jerk in Locomotor Ataxia. By Dr. Moses Behrend.

June 8, 1901.

What I have Learned from One Hundred and Sixty-one Operations for the Relief of Senile Hypertrophy of the Prostate Gland. By Dr. Orville Horwitz.—The author speaks very strongly in favor of the operation of suprapubic cystotomy, and he believes that the high mortality sustained by some surgeons must be due to the fact that the patients were not properly prepared for the operation, that the technique was faulty, or that patients were selected whose physical condition was such that any surgical procedure would have been one of great danger.

Progress of Medicine in the United States during the Nineteenth Century. By Dr. Charles W. Dulles.

Membranous Enteritis Erroneously Treated for Phthisis; Presentation of Patient. By Dr. J. Preston Miller.

The Knee-jerks in Chorea. By Dr. Augustus A. Eshner.

Heredity as a Factor in Mental Deficiency. By Dr. T. Alexander MacNichol.

Medical Record, June 1, 1901.

The Diagnosis and Surgical Treatment of Prolapsed Kidney, with Demonstration of a Simple Method of Examination for its Detection. By Dr. Augustin H. Goelet.

The Climate of Long Island. By Dr. Le Grand N. Denslow.—The author recommends this climate in those cases of heart, lung, kidney, and rheumatic troubles in which rapid oxidation is desirable in a sunshiny, dry, slightly stimulating climate at a low level.

Superheated Air in the Therapeutics of Chronic Catarrhal Otitis Media. By Dr. George W. Hopkins.

Three Cæsarean Sections—Recovery. By Dr. J. F. Baldwin.

Ether as an Anæsthetic. By Dr. Edward Judson Wynkoop.—The author believes that the time is ripe for the profession of this city to support a man who makes it his business to give anæsthetics and to administer them properly. He advocates the use of ether as being the safest of anæsthetics, but he believes that this fact should not lessen our caution, and he asks for a more detailed study of this important subject in our schools and hospitals.

A Few Observations from the Lorenz Orthopædic Clinic. By Dr. Leonard W. Ely.

A Case of Membranous Angina, Due to Streptococci, Followed by Paralysis of the Soft Palate. By Dr. Moses Keschner.

June 8, 1901.

The President's Address, Delivered at the Fifty-second Annual Meeting of the American Medical Association, Held at St. Paul, Minn., June 4, 5, 6, and 7, 1901. By Dr. Charles A. L. Reed.—(See *New York Medical Journal,* June 8th.)

Internal Medicine in the Nineteenth Century. By Dr. N. S. Davis, Jr.—(See *New York Medical Journal,* June 8th.)

The Value of Clinical Microscopy, Bacteriology, and Chemistry in Surgical Practice. By Dr. John A. Wyeth.—(See *New York Medical Journal,* June 8th.)

The Progress and Tendency of Hygiene and Sanitary Science in the Nineteenth Century. By Dr. George M. Kober.—(See *New York Medical Journal,* June 8th.)

Boston Medical and Surgical Journal, May 30, 1901.

The Diagnosis and Surgical Treatment of Renal Tuberculosis. By Dr. F. Tilden Brown.—Too great pains cannot be taken to determine the location and extent of the disease before determining the treatment. In ward hospital cases the immediate operation appears to be the only alternative. For those who can afford climatic changes and rest, a careful preliminary examination of the existing condition of the urinary tracts should precede their travels, and the same examination, when at all indicated, should be repeated in order to keep posted regarding such an advance of the disease as to call for operation.

Asthma. By Dr. F. P. Emerson.

A Case of Trichinosis. By Dr. George G. Sears.

June 6, 1901.

The Value of Clinical Microscopy, Bacteriology, and Chemistry in Surgical Practice. By Dr. John A. Wyeth.—(See *New York Medical Journal,* June 8th.)

The Surgical Treatment of Gastric Ulcer, with Report of Cases. By Dr. F. B. Lund.—The author makes the following points in conclusion: 1. In perforation, immediate operation is absolutely indicated. 2. In cases in which the symptoms fail to yield after medical treat-

ment for a reasonable period, operation, consisting either of excision of the ulcer or gastro-enterostomy, should be performed, and this before the patient has become so exhausted as to render surgical intervention dangerous. 3. In hæmorrhage, where slight, frequently repeated bleeding promises to produce grave anæmia or exhaustion, similar early operation should be done. 4. Where a patient has suffered more than one copious hæmorrhage, operation should be performed, and the extent and nature of the procedure should be decided upon according to the power of the patient to withstand operative manipulations and the conditions found during the progress of the operation.

Idiopathic Abscess of the Kidney. By Dr. A. T. Cabot.

The Effects of Training; Second Paper. By Dr. Eugene A. Darling.—The author gives an interesting series of observations upon the members of the Harvard rowing and football squad during and after training. He found that no ill effects which could reasonably be attributed to training were to be discovered nine months after stopping the training.

Lancet, May 25, 1901.

The Operative Treatment of Abscess when Situated in the Brain. By C. A. Ballance, F. R. C. S.—After making some general remarks on the subject of brain abscess, illustrated by numerous poetical citations, the author describes the various steps of its operative treatment as follows:

1. *Sterilization of the skin.* Shave the scalp, scrub with ethereal soap and water, wash with sterilized water, rub with turpentine on a swab, and then with ether, concluding with strong carbolic or perchloride lotion.

2. *Anæsthesia.* The anæsthetic should be chloroform, warily given, for in cases of cerebellar abscess respiration is apt to cease.

3. *Incision of the scalp.* A flap is to be preferred to a crucial incision; it should be large, and cut with its base downward.

4. *Opening in the bone.* The opening should be free, and the trephine used should be five eighths of an inch in diameter. In temporosphenoidal abscess the site of application should be about seven eighths of an inch above the supramcatal spine. In cerebellar abscess the anterior edge of the trephine should touch the posterior border of the mastoid process. When the disc of bone has been removed, more bone should be cut away with small saws, forceps, or Cryer's drill.

5. *Incision of the dura mater.* Here, again, a flap is preferable to a crucial incision. Care must be taken not to wound the vessels of the cortex.

6. *Discovery and incision of the abscess.* The best instrument to use is a sharp-pointed, long, and narrow knife. The use of a trocar and cannula or a pus-seeker is unnecessary and contrary to sound surgical principles.

7. *The further treatment of the abscess.* If the cavity is not entirely enclosed by brain substance, it may be gently irrigated with a weak antiseptic solution, a drainage tube being inserted for the escape of the fluid. Normal saline solution is the best to use. Packing with gauze should not be used unless the cavity is very large.

8. *Closure of the wound and dressing.* An aperture is made in the base of the flap the size of the opening in the brain, and the edge of the flap is placed in position and sutured with fine silk-worm gut. Sterilized cyanide gauze is used as a dressing.

9. *After-treatment:* (*a*) The primæ viæ should be kept open by some preparation of mercury; (*b*) barley water and beef tea are often borne by the stomach when milk is rejected; (*c*) alcohol should be given in some form; (*d*) hernia cerebri is an evidence of sepsis.

10. *Recurrence of symptoms.* It is by no means uncommon to have a return of symptoms a few days after the evacuation of the abscess, due to the refilling of the old abscess, or to the formation of a new one in the same lobe.

The Pathology and Diseases of the Thyreoid Gland. By W. Edmunds, F. R. C. S.—In the third of the Erasmus Wilson lectures upon this subject, the author takes up the question of treatment. With respect to cases of sporadic goître without symptoms—that is to say, cases in which the presence of the goître is the only trouble—it seems now to be clearly established that the administration of thyreoid gland is the best treatment. The effects of this treatment are so good that it must be regarded as a specific remedy. Formerly goîtres were occasionally treated by excision, but the constitutional results following this operation were so serious that complete excision is now abandoned. Among these results were weakness of body and mind, deficient peripheral circulation, œdema, bulkiness of the face, dryness of the skin, falling out of the hair, and arrest of bodily and mental development. It is best to include under the term "Graves's disease" all cases of goître with symptoms not to be explained by pressure. The treatment of Graves's disease has been carried out on various lines. The most obvious treatment is rest; change of air and quietude are also obviously indicated. Of drugs, belladonna stands in the best repute; bromide of potassium, digitalis, quinine and iron are also given. Thyreoid extract gives different results in different cases; in some it benefits and in others it makes matters much worse. Pregnancy, when it occurs, is often of marked benefit. Graves's disease has been treated by operative methods. These are three—namely (1), operations on the cervical sympathetic, which are rarely of any service; (2) ligature of three of the four arteries to the thyreoid gland, an operation which has met with a measure of success, but there may be difficulty in reaching the arteries behind the enlarged thyreoid gland; and (3), excision. The danger in these latter cases seems to be of sudden death, yet this often occurs in cases that are not operated upon. The author suggests that such cases teach us, not that operations should not be performed, but that they should be performed earlier. The author has seen two cases of Graves's disease treated by excision; both patients recovered entirely.

The Surgical Treatment of Chronic Ulcer of the Stomach. By A. W. Mayo Robson, F. R. C. S.—The surgical treatment of intractable or relapsing gastric ulcer is in the greater number of cases the only satisfactory method of dealing with them, and operation should be resorted to at a much earlier period than has hitherto been the custom, and always before the patient has been reduced by pain or starvation. The author describes the various operations performed for chronic ulcer of the stomach, citing numerous illustrative cases. Preliminary cleansing of the stomach is in most cases quite unnecessary and inadvisable.

Exploratory gastrotomy is an operation occasionally called for: (1) In order to verify the diagnosis of ulcer, where there is much thickening of the stomach walls; (2) when the characteristic signs, such as puckering, etc., are absent from the external surface of the stomach; (3) in certain cases of gastrorrhagia, where the bleeding

vessel must be found and tied; and (4), it forms part of any operation for the excision of ulcer of the stomach. Such excision is, as a rule, unnecessary, but not always to be avoided. Pylorectomy is an operation which may be mentioned under the head of excision of ulcer.

Gastro-enterostomy, in the absence of special complications, is the operation to be relied on in the treatment of ulcer of the stomach. It secures physiological rest by means of drainage, relieves pyloric spasm, and diminishes gastric fermentation and dilatation. The author describes his own method of anastomosis—suture over a decalcified bone bobbin—and claims the following advantages therefor: 1. It secures the opening being of the exact size intended. 2. It secures an immediately patent channel between the two anastomosed viscera. 3. The bobbin protects the new line of union from pressure for from twenty-four to forty-eight hours. 4. It facilitates the application of the sutures. 5. No foreign material is left in the alimentary canal, as the bobbin rapidly dissolves in the gastric juices. 6. The method has been proved by ample experience to be rapid, efficient, easy, and safe.

Pyloroplasty has certain very definite limitations, but, where feasible, is a method of great utility which can be performed rapidly and with little exposure of viscera. It is only indicated in cases of spasmodic stenosis and in slight annular stenosis, being too dangerous in all other cases.

Pylorodiosis, or stretching of the pyloric sphincter, is a method of little practical value in the treatment of ulcer. The cases almost always relapse.

Analyses of Stools and Urine from Epileptic Patients under Treatment with "Brominol" Compared with Similar Specimens from Patients under Potassium Bromide. By W. H. Martindale, Ph. D.

Two Cases of Carcinoma Treated with Cacodylate of Sodium. By E. M. Payne, M. B.

Acute Colitis in Children. By Dr. E. Cautley.—The author reports a small but very definite outbreak of acute colitis, observed by him in London. Six out of thirty children were affected, and of these four died. At the post-mortem the whole of the large intestine was found to be inflamed and thickened, the inflammation also affecting the lower end of the ileum. Very little ulceration was to be noted. In each case the onset was sudden, with vomiting, diarrhœa, and pyrexia. The treatment must be directed to maintaining the strength of the patient and stopping the diarrhœa and vomiting. Warmth and rest in bed are essential. Irrigation is difficult to carry out, and seems to be of very little service.

June 1, 1901.

Acroparæsthesia, Erythromelalgia, Sclerodactylia, and other Angeioneurotic Disturbances. By Dr. T. D. Savill.—The author reports seven cases which illustrate fairly well some of the many different symptoms of angeioneurotic disorder. Acroparæsthesia, erythromelalgia, and some of the other many and varied vasomotor symptoms have certain features in common: 1. They are much more frequently met with in the female sex, something like ninety per cent. of these cases occur in women. 2. Vasomotor conditions appear to be due to some inherent and very often inherited tendency in the patient, for they recur again and again in one form or another during the life of a patient. Two epochs of life are specially prone to their development—namely, puberty and the climacteric. 3. The onset of the symptoms, whatever they may be, is always more or less sudden. 4. They are in all cases paroxysmal, *i. e.,* they occur in the form of attacks. 5. In the great majority of the patients flushes or flush-storms occur from time to time during the patient's life; should these be absent, there are generally other evidences of vasomotor instability. 6. Many cases, particularly of the vasodilator kind, are amenable to treatment by the bromides, which relieve them, at any rate, for a time. In conclusion, the author gives the following clinical classification of vasomotor disorders of the extremities:

A. *Vaso Dilatation*—(*a*) *Early Stage* (*Chronic*).—Attacks of redness (congestion) and tingling, burning, etc. (*congestive acroparæsthesia*). (*b*) *Late Stage* (*Chronic*). The symptoms are attended by swelling, which gradually becomes permanent (*erythromelalgia*). (*c*) If the process takes an *acute* course, the symptoms go on to gangrene, usually moist gangrene (*Raynaud's disease,* congestive or asphyxial type).

B. *Vasoconstriction*—(*a*) *Early Stage* (*Chronic*).—Attacks of pallor and bloodlessness (ischæmia), attended by numbness, tingling, "pins and needles," "dead fingers," etc. (*ischæmic acroparæsthesia*). (*b*) *Late Stage* (*Chronic*). The symptoms may be attended with thickening (sclerosis) of the skin and subcutaneous tissue (*sclerodactylia*). (*c*) If the process takes an *acute* course, dry gangrene probably results (*Reynaud's disease,* syncope type).

Arterial Hypertonus and Arteriosclerosis: Their Relations and Significance. By Dr. W. Russell.—The author holds that atheroma and arteriosclerosis are distinct affections. Atheroma is a primary affection of the tunica intima of the arteries, degeneration and destruction of the media being secondary. The author has made histological examinations of the blood-vessels in sixteen cases of arteriosclerosis, all of which were seen by him during life. His results may be stated as follows:

1. Atheroma and arteriosclerosis are two totally distinct clinical and pathological entities. 2. Atheroma is a localized and patchy affection of the arteries characterized by degenerative changes which have long been recognized. 3. Arteriosclerosis is a generalized affection of the arteries and is characterized by (*a*) thickening of the tunica media, this thickening being primarily a true hypertrophy, although it may ultimately show some degeneration; (*b*) thickening of the tunica intima from fibrous hyperplasia of the subendothelial connective tissue without atheromatous degeneration; and (*c*) in some instances fibrous thickening of the tunica adventitia. 4. The atrophic changes in the kidneys are in proportion to the sclerotic changes in the vessels. 5. The lumen of the arteries in the kidneys and of the radial arteries is markedly diminished. 6. The changes in the nutrient arteries of the brain and spinal cord correspond with those of the arteries inside the kidneys. 7. Arteriosclerosis may be associated with more or less atheroma in the same subject.

The author emphasizes the importance of the recognition of the state of contraction of the vessel wall. To the exaggerated tonicity so frequent in arteriosclerosis he gives the name of "hypertonus." Hypertonus carries with it, besides the alteration in blood pressure, a diminution in the blood-containing capacity of the vessels from a diminution in their lumen. It can be recognized or suspected by the educated finger. It occurs in normal arteries and in sclerosed arteries, in the young, middle-aged, and old. And most of the symptoms of arteriosclerosis are mainly attributable to the hyper-

tonus lowering the blood supply to organs which are already badly supplied by the sclerosed arteries. In the majority of cases it is produced by the introduction of poisons into the body or by self-intoxication. Recurring or continued hypertonus leads to hypertrophy of the muscular media of the arteries. The thickened intima is to be explained by the circulation in the blood of deleterious substances of various kinds. We thus get the completed picture of arteriosclerosis, but the evolution of the changes occupies a varying time in different persons.

The Bacteriology of Sporadic Cerebrospinal Meningitis. By W. Hunter, M. B., and A. W. Nuthall, F. R. C. S.—The authors have examined bacteriologically the cerebrospinal fluid obtained by lumbar puncture from ten cases of meningitis, nine in children and one in a young adult. Their conclusions are as follows: 1. In all the cases of meningitis examined a diplococcus was isolated from the cerebrospinal fluid. In nine cases the fluid was obtained by lumbar puncture during life. 2. This diplococcus had the same morphological and biological characteristics as Weichselbaum's *Diplococcus intracellularis meningitidis.* 3. In some cases the diplococcus was present in pure culture, in others associated with other micro-organisms, *e. g., Bacillus influenzæ* and *Bacillus tuberculosis.* 4. The clinical picture and the pathological changes found in these cases were those met with in so-called "posterior basal meningitis." 5. In all probability "posterior basal meningitis" is simply a sporadic manifestation of cerebrospinal meningitis and is produced by the same micro-organism—namely, the *Diplococcus intracellularis meningitidis.*

On the Operative Treatment of Corneal Astigmatism. By Dr. A. Breuer.

A Further Note on the Technique of the Quantitative Estimation of the Bactericidal Power of the Blood, and (Incidentally) on the Possible Application of such Estimations to the Standardization of Bacterial Vaccines. By Dr. A. E. Wright.—In this article the author makes his third communication upon this subject. He has introduced certain simplifications into his methods, the chief of these being a substitution of a glass spiral in the neck of his capillary culture tube for the cotton-wool plug previously employed. He has also simplified his method of determining the number of bacteria present in the typhoid culture employed, and describes the method in detail. Examples are given of a series of bactericidal determinations made precedent to anti-typhoid inoculation and in the negative phase which supervenes upon inoculation where relatively large doses of dead bacterial cultures are inoculated.

British Medical Journal, May 25, 1901.

Appendicitis and its Surgical Treatment. By Dr. J. C. Renton.—Inflammatory affections of the appendix vermiformis may be divided into three forms: 1. Catarrhal, with no distinct lump or swelling around the appendix. 2. Appendicitis with a swelling which may entirely disappear, either by absorption or by the formation of a local abscess which may require an operation or may burst into one of the viscera, such as the bowel or bladder, or more seriously into the free abdominal cavity. 3. Acute perforating appendicitis, which leads to general peritonitis and the formation of abscess in the general peritoneal cavity. The author briefly reviews the symptoms, prognosis, and indications for operation in these three forms of appendicitis. After a second catarrhal attack the operation for removal of the appendix, when possible, ought to be done after all acute symptoms have subsided and after the patient has been carefully prepared for it. In appendicitis with swelling always examine the rectum; if bulging is detected, the abscess should be opened at that point. Exploring such appendicical swellings with ordinary exploring needles is most unwise. Cases of acute perforating appendicitis should be put in the same category as ruptured gastric or typhoid ulcer and be operated upon the moment the symptoms point to acute perforation.

The Symptoms and Modern Methods of Diagnosis of Stone in the Bladder, Kidney, and Ureter. By Dr. P. J. Freyer.—The characteristic symptoms of stone in the bladder are four in number: (1) Increased frequency of micturition; (2) pain in connection with urination; (3) hæmaturia; (4) sudden stoppage of the flow of urine.

After dwelling briefly on these various symptoms and the other conditions which may give rise to them singly, the author goes on to describe the methods of diagnosis of stone in the bladder. The most important of these is by sounding. Before sounding, however, a rectal examination by the finger should be made to ascertain the state of the prostate gland, the existence of organic deposit in the base of the bladder, or of inflammatory thickening of the vesiculæ seminales. There is no more harmless procedure in surgery than sounding, if conducted with care and skill. Never use force, never give pain, and never draw blood if possible. The best sound is Mercier's simple, solid steel sound, with its short, well-curved beak and bulbous end. The best size for general use in adults is No. 6 of the English scale in the shaft, increasing to No. 10 in the bulb; for children No. 2 in the shaft and No. 5 at the bulb. Small stones may often be detected by means of the aspirator and cannulæ employed in Bigelow's operation. Finally it may be necessary to open the bladder either perineally or suprapubically.

In renal calculus the two characteristic symptoms are pain in the loin and hæmaturia. A typical, almost pathognomonic, characteristic of both is that they are brought on or increased by exercise, particularly horseback riding. The presence of mucus and pus in the urine are also important symptoms. The Röntgen rays are of service in some cases.

The symptoms of stone in the ureter are, as a rule, extremely obscure. The most important means of diagnosticating a calculus lying in the lower end of the ureter or projecting from its orifice is Leiter's electric cystoscope. The author cites three or four instances of its successful use.

Notes on Two Hundred and Six Operations for Stone. By W. F. Adams, M. R. C. S.—The author reports 206 cases of operation for stone, as shown in the following table:

Urethral calculi extracted through the meatus	4
" " with incision of the meatus	3
" " by external urethrotomy	2
Vesical calculi removed by lithotrity (male 153, female 8)	161
Vesical calculi, perineal lithotomy (3 median, 33 lateral)	36
Total cases	206

Three cases of lithotrity and three of lithotomy ended fatally. Total deaths, 6.

The contraindications for lithotrity are: I.—*In Boys.* 1. When there is marked cystitis, lithotomy drains the bladder and cures both diseases. 2. When there is much difficulty in passing instruments. 3. When the stone is too large or too hard for the necessarily small lithotrite. 4. When there are indications of advanced kidney disease or great debility, the shock of the cutting operation seems less severe, probably because it is briefer. II.—*In Men.* 1. When the instruments cannot be passed. 2. When the stone is too large or cannot be grasped.

A Method of Sterilizing Soft Catheters. By H. T. Herring, M. B.—The author describes an apparatus for the easy and rapid sterilization by steam of soft-rubber catheters and their lubricant. It consists of a series of metal tubes for containing the catheters, which tubes are attached to a metal flask containing water and liquid paraffin. On heating the flask the boiling water ascends into and sterilizes the tube and the catheter is coated with the sterile paraffin. The tubes are then plugged with sterile rubber corks and laid aside for use.

A Case of almost Universal Ankylosis. By Dr. T. K. Monro.—The author reports the case of a man who died at the age of forty-six years, who had been afflicted since his eighteenth year with almost universal arthritic anklosis. The disease in each joint began with pain, followed by swelling and fixation. The case appeared to correspond to the subacute type of the very rare disease known as "universal bony ankylosis or arthritis ossificans." Such cases constitute what are popularly known as ossified men.

Strangulation of Meckel's Diverticulum. By Dr. K. Campbell.—The author reports a case of intestinal obstruction in a man, aged over seventy years, due to strangulation of Meckel's diverticulum. No operation could be performed owing to the collapsed condition of the patient, and the lesion was only discovered at autopsy. The chief danger of these persistent diverticula is usually considered to be the risk of strangulation of the other abdominal contents, on account of the presence of a fibrous band within the abdominal cavity. The patient had lived a long and active life without any inconvenience arising from this irresponsible appendage.

Case of Cancer of the Larynx with a Long Course. By E. Donaldson, B. A., T. C. D.—The author reports a case of cancer of the larynx occurring in a woman, which was chiefly remarkable for its long duration, *viz.,* nine years and one month. For a long time a benign growth was diagnosticated, and the disease was allowed to run its course unmodified by the more radical methods of treatment. A warty laryngeal growth in an elderly person may present symptoms of a benign tumor for about eight years, and in the end turn out to be malignant.

Furunculosis of the External Auditory Canal Simulating Mastoid Periosteitis. By J. G. Connal, M. B.—The author calls attention to a type of auditory furunculosis with œdematous swelling over the mastoid process, simulating mastoid disease. He reports two such cases, in both of which the furuncles were opened in the external auditory canal, and the patients made uninterrupted recoveries. The cultures from both cases showed the presence of the *Staphylococcus pyogenes aureus.*

June 1, 1901.

Theories of Inheritance, with Special Reference to the Inheritance of Acquired Conditions in Man. By Dr. J. G. Adami.—(See *New York Medical Journal,* June 8th, page 925.)

The Pathogenesis of Tabes and Allied Conditions in the Cord. By C. Watson, M. B.—The author does not believe that tabes is a primary disease of the nervous system, but that the lesions in and around the vessels are of primary importance, the lesions of the neurones being determined by interference with the local blood supply. Further, there is good ground for the belief that the condition is dependent upon a chronic self-intoxication, the vascular lesions being to some extent general, but tending to be more advanced locally, and that the more advanced local changes determine a failure of nutrition in the adjacent nerve elements. If these views are correct, the condition should be curable in the early stages and the present tendency to separate tabes sharply from other diseases in which there is a well-marked lesion of the cord of an allied character is to be deprecated. In cases of recovery one of two things occurs: (1) The toxines disappear from the tissues or diminish sufficiently to lead to the disappearance of symptoms—in other words, a diminished absorption takes place; or (2), the resisting power of the animals increases, due to a gradually acquired immunity. The author maintains that the syphilitic origin of tabes is a mere *non sequitur,* from the fact that a syphilitic history can be traced in a large number of tabetic subjects. The broadest conclusion which we can deduce from that fact is that syphilis alters the physiological condition in such a way as to favor the attack and operation of the actual cause of tabes and allied conditions. In this respect its influence is similar to that of measles or scarlet fever in leading to the development of tuberculosis. The proper line of investigation is the discovery of the nature and source of the toxic substance at work. The alimentary tract furnishes the chief area of investigation, and in all probability it will be proved to be the original source of the toxæmia.

Case of Malignant Disease of the Lung, with Pseudo-tuberculosis. By Dr. H. B. Shaw.—The author reports the case of a man, aged twenty-seven years, who suffered from malignant disease of the left lung. At the autopsy there was found a sarcoma of the root of the left lung, producing stenosis of the bronchus and vessels, and associated with pneumonia of the lung, probably due to the septic organisms present. The lung condition so closely resembled that met with in tuberculosis, with the exception that the process was more marked at the base than at the apex, as to merit the application of the term pseudo-tuberculosis. The author reviews the literature of the association of tuberculosis and malignant disease of the lung, and finds that the number of cases of progressive tubercle of the lung occurring in association with any form of malignant growth of the lung is very small—that is, if the absolute evidence of the presence of tubercle bacilli in the tissues is relied on. In the case here reported repeated examinations for tubercle bacilli were uniformly negative.

Sequel to a Case of Pulmonary Hypertrophic Osteo-arthropathy: Necropsy. By E. F. Buzzard, M. B.—The author reports the autopsy findings in a case of pulmonary hypertrophic osteo-arthropathy, which had been under observation for some time. The main features of interest were as follows: A pus-containing cavity was found at the root of the right lung, which was in direct continuity with a passage that passed into the intervertebral space between the third and fourth dorsal vertebræ, where there was a marked curvature of the spine. The dura mater at that point was covered with thick granulations. There were no conclusive evidences of tubercle of the lungs. Dissection of the clubbed fingers showed the interphalangeal joints to be intact, and there

was very little actual enlargement of the terminal phalanx. The bulbous ends of the fingers contained subcutaneous fat in excess. The other organs were normal. The examination of the nervous system, by the best methods now at our disposal, did not reveal the presence of any nervous lesion to support the supposed neurotic factor in the causation of the deformities.

The Pulse Rate in Pulmonary Tuberculosis. By Dr. T. Campbell.—In attaching a significance to the pulse record in cases of pulmonary tuberculosis, allowance must be made for the possibility of over-exertion, excitability under examination, and the presence of mitral stenosis; but, with these reservations, some assistance will be obtained in making a pronouncement regarding the probable duration of life. Cases in which a tuberculous area has been cleared out by excavation, followed by a period of quiescence during which the cardiac pulsations may not exceed eighty-four per minute, are suitable for treatment in a sanatorium, as there is a likelihood that life can be considerably prolonged. But a pulse of 100 or more, accompanying an evening temperature of 101° F., and these two signs of grave import being persistently present in a case in which absolute rest has been enforced for some time, give little hope of treatment proving of any avail. As acceleration of the pulse is found at the onset of the pulmonary affection, so a gradual fall will be found to take place if a case is making progress toward recovery.

The Position in which the Regurgitant Aortic Murmur is most Clearly Audible at the Base of the Heart. By Dr. H. W. Syers.—The author calls attention to the fact that in at least ninety-five per cent. of the cases in which aortic reflex occurs the diastolic murmur is heard much more loudly at the second left interspace, close to the sternum, than in the position usually assigned to it —namely, the second right interspace. And the point at which the murmur is heard loudest of all is almost invariably the middle of the sternum, and it is frequently very loudly audible just above the xiphoid cartilage. Aortic regurgitant disease is the most likely to be overlooked of all valvular lesions, hence the importance of not limiting the examination to any one particular area.

The Development of Filaria Nocturna in Different Species of Mosquitoes. By G. C. Low, M. B.—The results of the author's observations on this subject may be summed up as follows: Some mosquitoes are inefficient hosts, the filaria embryos never migrating from the stomach; some are partially efficient, the embryos reaching the muscles, where they undergo a partial development and then become absorbed; while others are properly efficient, the time taken for complete metamorphosis varying with the temperature and other climatic influences of the place in which the experiments are conducted. Experiments to determine the intermediate host of *Filaria Demarquaii* have so far proved entirely negative.

Note on the Value of Experiments in the Question of Food Preservatives. By Dr. A. S. Grünbaum.—The author criticizes the report of Rosenheim and Tunnicliffe on this subject, who found that neither boric acid nor borax in any way affected the well-being of children, when added to their food as preservatives. The advisability of permitting or prohibiting the addition of preservatives to food does not depend entirely upon the fact of whether experiment shows them to be harmless or harmful. The fact that the commonly employed antiseptic preservatives are rapidly eliminated by the kidneys, either unchanged or only slightly changed, is the most conclusive evidence of their poisonous character. It throws an uncalled-for burden on the normal kidney, and, where the kidney is no longer normal, may be positively dangerous. The use of preservatives tends to dirtiness and fraud.

Presse médicale, May 11, 1901.

Spinal Cocainization.—M. Reclus takes issue with Tuffier as to the harmlessness of intra-arachnoid cocainization for purposes of anæsthesia. He records several cases from the literature of prolonged unconsciousness, of cyanosis, of syncope, and of collapse. He regards the action of cocaine injected in this way as uncertain and not always the same. [Although the article is polemic in its nature, it is worth perusal as showing the gravity and possible dangers of this method of inducing anæsthesia.]

Mucomembranous Enterocolitis.—M. Langenhagen gives an exhaustive review of the subject. The three cardinal points in the treatment are rigorous diet, methodical enteroclyses, and baths properly appplied. The diet should be nourishing and may embrace eggs, fried or boiled white fish, lentils, peas, beans, potatoes, and roasted meats. Boiled water should be used for the enemata, at a temperature of from 100° to 105° F., and should be allowed to run into the rectum without too great pressure. From six to ten quarts should be used by means of a rectal tube. The baths should be subsequently taken at Plombières or Châtel-Guyon.

Lyon médical, May 12, 1901.

Hernia as an Accident of Work.—M. Jean Boyer, in a forensic review of this subject, says that under certain circumstances a hernia may result as a sequel to the work in which the patient is engaged, but it should then devolve upon the interested person to prove this fact to the court and to the physician.

Elective Diapedesis of Eosinophilia. By M. C. Bonne.

Centralblatt für innere Medicin, May 18, 1901.

Immunity to Poisons.—Dr. Mario Carrara finds, as a result of his experiments, that the lethal dose of strychnine sulphate is the same in animals whose muscles and connective tissue are refractory to the drug, as guinea-pigs and chickens, as in susceptible animals like the rabbit. He concludes, therefore, that the muscles and muscle juices of the refractory animals do not account for their apparent immunity, which still remains a mystery.

Centralblatt für Chirurgie, May 18, 1901.

Magnesium for Absorbable Intestinal Buttons.—Dr. Erwin Paye says his further experiences have demonstrated the utility of magnesium, which is readily absorbable, not only for intestinal anastomosis, but for the control of parenchymatous hæmorrhage in internal organs, for joint surgery, for nerve sutures, and for the ligature of blood-vessels.

Deutsche Medizinal-Zeitung, May 16, 1901.

Asthma and its Treatment.—Dr. W. Brügelmann says that cases of nervous origin require sedative treatment or even hypnotism for their relief. Asthma of reflex origin demands treatment of the nose or throat, of the female genitals, massage, hydriatics, etc. Iodide of potassium and chloral are good in pharyngeal or nasal

cases, and atropine is exceedingly useful in allaying attacks. In every case an accurate diagnosis of the exact cause of the asthma must be made if a cure is looked for.

Wiener medicinische Blätter, May 16 and 23, 1901.

Diagnosis of Diabetes Mellitus.—Dr. J. Herrick says two symptoms demand particular attention, namely, impotence and psychic disturbances. The digestive tract gives characteristic symptoms, such as a dry mouth, stomatitis, gingivitis, falling out of the teeth. The stomach retains its functional activity under remarkable circumstances. Constipation is common, and vomiting and diarrhœa are bad prognostic signs. Furunculosis, eczema, dermatitis, or gangrene may appear in the skin. Arteriosclerosis and its complications may be present. Lipæmia is not uncommon. The paper closes with methods of testing for urinary sugar.

General Ætiology and Pathogenesis of Diabetes Mellitus. By Dr. Heinrich Stern. (*Continued article.*)

Riforma medica, April 26, 1901.

First Aid in Wounds of the Pancreas. By Dr. Giovanni Ninni.—Literature records but ten cases of wounds of the pancreas, the present case being the eleventh. The rarity of these wounds is due to the situation of the organ, but when they do occur they are grave because they are usually complicated by wounds of other organs. The patient whose case is here reported was a man, aged twenty-seven years, who was shot from the rear by the police in pursuing him—a fugitive from justice. The entrance wound was at the level of the second lumbar vertebra, near the spinal column, the wound of exit in the epigastric region, on the right side between the mammary and parasternal lines, a finger's breadth below the arch of the ribs. The patient was immediately brought to the hospital, where he arrived in a critical condition. His pulse was filiform, and he was scarcely conscious. The abdomen having been opened, the stomach and the liver were found intact, but there were six penetrating wounds in the small intestines and one at the hepatic angle of the colon. These were sutured by Czerny's method, and the toilet of the peritonæum was made. Bleeding was then discovered issuing from the posterior region of the cavity, between the colon and the stomach. The abdominal wound was then enlarged and the stomach and colon were raised. A wound of the pancreas, at the junction of the head and the neck, was then discovered and sutured. The patient recovered.

Vratch, April 14 (April 26, N. S.), 1901.

The New Institute for Massage at the University of Berlin. By Dr. I. V. Zabloudovsky.—This institute was opened in December, 1900. Its purposes are to teach massage in all its phases to students and physicians. Half-yearly courses are given, but there are also shorter courses of four weeks each, including lectures and practical exercises. At first the students practise the various movements on healthy, well-nourished persons who are specially paid for submitting to this massage at the designated hours. Then patients are assigned to the students, and they are required to administer the proper massage treatment as outlined by the lecturer. In this way the technique and the indication for the various forms of massage are taught. The institute also instructs nurses in massage, the course lasting several months, and being chiefly practical.

On the Mechanism of the Action of Pilocarpine on Glands. By Dr. L. B. Popelsky.—Injection of pilocarpine into the blood of cats did not produce an increase of the pancreatic secretion. If a solution of hydrochloric acid, 0.4 to 0.5 per cent., is injected into the duodenum of these animals after the pilocarpine has been injected into the blood, the amount of pancreatic juice secreted will be increased. In these experiments the author used cats in which the pancreas was not working before the injection of the pilocarpine, and it was necessary to test many cats every time before one could be found with this pancreatic deficiency. In these, the simple injection of acid into the duodenum did not produce any pancreatic secretion, the latter followed only upon the injection of pilocarpine into the blood, together with the introduction of hydrochloric acid into the duodenum. Injection of pilocarpine alone did not give rise to pancreatic secretion, although it stimulated the salivary and sweat glands almost immediately. The author at first thought that the reason why the pancreas was not equally stimulated was that the pancreatic secretion lacked fluid as a result of the increased elimination through the sweat and the saliva. He therefore injected salt solution into these cats, and found that there was no increase in the pancreatic secretion, and that the assumption had been false. If the cats were fed four or five hours before injecting the pilocarpine, there was an increased secretion of the pancreatic juice, because the gastric juice gradually penetrated into the duodenum and there acted like the artificially introduced hydrochloric acid, stimulating the pancreas to activity. The author concludes that pilocarpine stimulates the pancreas only then when the gland is stimulated from an outside source at the same time. This pilocarpine accomplishes by increasing the susceptibility of the gland cells to stimulants and not by paralyzing the inhibitory nerves of secretion which are found in the nerve bundles of the vagus.

On the Question of the Action of Currents of High Tension upon the Human Body. By Dr. S. A. Broustein.—The author points out how frequently accidents occur with "live" electric wires conducting currents of high tension, such as are used for street lighting, locomotion, etc. These accidents, he says, are especially frequent in the United States, and not quite so common in Russia, on account of the fact that less electricity is used in the latter country at present. He has studied the effects of these currents on the human body, and the cause of death in cases of accident with these wires. The appearances met with after such an accident remind one strongly of shock, or of concussion of the brain. Shock is, however, not identical with the action of electricity in these circumstances. In shock there is no loss of consciousness, the danger increases with the duration of the condition, and the prognosis is bad. On the other hand, in electrical injuries there is almost always loss of consciousness, the danger to life is greatest at the first moment and decreases with the duration of the condition, so that all deaths from electric currents cannot be attributed to shock. Again, the symptoms of brain concussion are distinct from those of electric trauma. (*To be continued.*)

Haffkine's Lymph and other Remedies against the Plague which Give Rise to Active Immunity. By Dr. A. F. Vigur.—A comparative study of Haffkine's serum and of Lustig's and Galeotti's antitoxine. (*To be continued.*)

Kumyss Treatment and some Kumyss Settlements in Ufa.—P. V. Zosarievsky describes the advantages and disadvantages of various places in the Ufa province, where patients are sent to take the "kumyss cure."

Proceedings of Societies.

AMERICAN MEDICAL ASSOCIATION.

Fifty-second Annual Meeting, Held in St. Paul, on Tuesday, Wednesday, Thursday, and Friday, June 4, 5, 6, and 7, 1901.

The President, Dr. CHARLES A. L. REED, of Ohio, in the Chair.

General Session.

(Continued from page 1008.)

The Report of the Preliminary Committee on Reorganization.—Dr. J. N. McCormack, of Bowling Green, Ky., the chairman, presented a preliminary report which, after considerable discussion, was referred to a joint committee composed of the General Executive Committee

DR. FRANK B. WYNN,
Secretary of the Section in Pathology and Bacteriology.

and the enlarged Committee of Reorganization, which was made up of representatives from all the States.

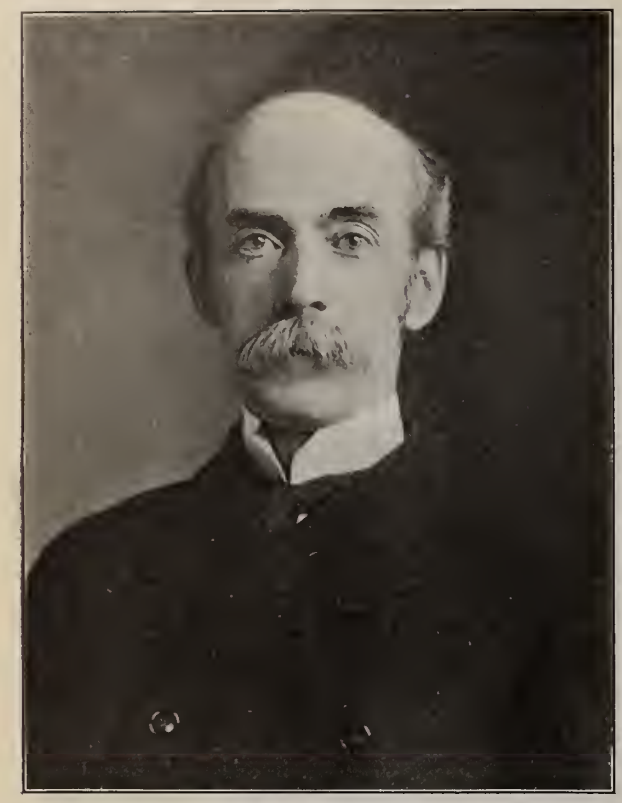
The Report of the General Executive Committee.—Dr. S. L. Duncan Bulkley, of New York, called attention to the recommendation of the committee that the total number of papers presented at each of the various sections be limited to thirty-five. A motion was made and carried that hereafter the title of any paper which was unaccompanied by a brief abstract of the paper be omitted from the programme.

The Report of the Committee on National Legislation.—Dr. H. L. E. Johnson, of Washington, D. C., the chairman of this committee, reported that Senate bill No. 34, commonly known as the "Antivivisection bill," had been defeated in the Senate committee, and that it would probably be impossible to pass it.

His Excellency, Governor Van Sant, of Minnesota, who had been unable to be present at the opening session of the association, gave the delegates a welcome which

DR. WILLIAM BRITT BURNS,
Secretary of the Section in the Practice of Medicine.

DR. R. R. CAMPBELL,
Secretary of the Section in Cutaneous Medicine and Surgery.



DR. J. A. LIPPINCOTT,
Chairman of the Section in Ophthalmology.

was none the less cordial for being twenty-four hours late.

The Army Canteen.—Dr. L. L. Seaman, of New York, introduced a resolution asking the association to petition Congress to reestablish the army canteen. The resolution caused considerable discussion. Some of the members argued that such action was not within the province of the association. It was finally referred to the committee on national legislation.

The Oration in Surgery was delivered by Dr. John A. Wyeth, of New York. (See page 984.)

The Report of the Committee on Reorganization.—The report of the joint committee on reorganization was presented by Dr. H. O. Walker, of Michigan, and was adopted after very little discussion. The new constitution provides for a House of Delegates, consisting of (1) delegates elected by permanently organized State and Territorial medical societies in affiliation with the American Medical Association; (2) two delegates elected by each of the component sections of the association; (3) one delegate each from the medical departments of the United States Army, the United States Navy, and the United States Marine-Hospital Service. The total membership of the House of Delegates shall not exceed 150. (*To be continued.*)

Section in Diseases of Children.

SYMPOSIUM ON TYPHOID FEVER IN CHILDREN.

(Continued from page 1016.)

The Dietetic Treatment of Typhoid Fever. By Dr. Louis Fischer.—In exhaustion: When the body loses large amounts of serum, the volume of the blood is so diminished, and the skin appears so parched and loses its normal elasticity, large quantities of water are indicated, and will be very grateful to the patient during the febrile stage. This deficiency of liquid may be supplied by injections of normal saline solution. The white of egg may be put into the water, and it is surprising to know how much albumin may be got into the body by this means. Whey is one of the favorite foods; it may be flavored with lemon juice or peppermint to make it more palatable. Barley water, rice water, farina water, and almond milk are all nutritious foods and easily digested and absorbed.

If toxæmia is profound, the author uses large injections of saline solution by hypodermoclysis, which should be given under the strictest antiseptic precautions. The lymphatics during the febrile stage are usually so greedy that they will absorb several quarts of this solution. The injections of normal saline solution should be repeated every six, twelve, or twenty-four hours, depending on necessity. If the stomach is very irritable and vomiting is an urgent symptom, the stomach should be given rest and rectal feeding resorted to. The rectum should be thoroughly flushed with a normal saline solution, and one ounce of thoroughly peptonized milk, to which one ounce of starch water is added, should be injected at intervals of every four hours. It is important to remember, too, that the raw white of eggs can be added to the saline solution and injected subcutaneously. Acidulated waters and carbonated waters seem to inhibit bacterial action as well as to be a grateful drink to the feverish patient. The successful management of typhoid fever depends, not upon the administration of drugs, excepting eliminatives, but solely on supporting the vitality of the child by giving it liquid foods, as above enumerated, and thus sustaining the heart.

The Treatment of Typhoid Fever, with Special Ref-

DR. E. C. ELLETT,
Secretary of the Section in Ophthalmology.

DR. HENRY P. NEWMAN,
Chairman of the Section in Obstetrics and Diseases of Women.

erence to the Intrarectal Injection of Normal Salt Solution. By Dr. E. Stuver.—Typhoid fever is an infectious disease caused by the entrance of the Koch-Eberth bacillus into the human body. The fæces is the principal medium by which it is conveyed to streams and other sources of water supply. In late years it has been demonstrated that the urine is also a source of great danger unless properly disinfected. In Gwyn's case they were found in the voided urine five years after the attack of typhoid. It is generally considered that the pathological lesions and general systemic manifestations of the disease, as well as the complications arising during its course, or following it as sequelæ, are not caused by the bacilli themselves, but result from the action of the toxines generated by them. These toxines penetrate every organ, tissue, and cell in the body, poisoning the brain and causing mental perversions, delirium, and other nervous derangements; poisoning the heart and producing muscular weakness, degeneration, and failure; and poisoning every cell in the body, thereby lowering vital resistance and deranging the secretory and excretory functions. The treatment should seek the cause of the trouble. First, inhibit or destroy the pathogenic microorganisms and neutralize or eliminate their poisonous toxines; secondly, strengthen the phagocytes and cells of the body and conserve the bodily forces. The patient should be put to bed at once and kept quiet, mentally and physically. The hygienic surroundings should be the very best, and the eliminative treatment, according to the author, holds a very prominent place. Calomel is given with sodium bicarbonate for the first few days until free catharsis is produced. The calomel is also a good diuretic and antiseptic, and not only inhibits the activity of the bacilli, but eliminates, and also arouses and strengthens, the lethargic phagocytes to action. The author employs the Woodbridge method of treatment. In addition, he recommends a mixture containing carbolic acid and tincture of iodine, of each one third minim. He has also found good results from copper arsenite. The good effect of the antiseptic treatment is not a figment of the imagination, as some eminent men would have us believe, and the disease can be aborted, notwithstanding the medical nihilists who say that it cannot. If it is good treatment and hastens the healing process to drain and cleanse a wound on the surface of the body, why is it not equally good treatment to resort to similar measures in treating the infected, congested, and ulcerated bowel? The washing out of the alimentary canal lessens the number of the bacilli, decreases the amount of the accumulated toxines, and places the bowels in a vastly improved condition.

When the bowels act too freely, which only occurs in from ten to fifteen per cent. of cases, equal parts of the sulphocarbolates of zinc, lime, and soda have given good results. So soon as cardiac weakness makes its appearance, it is combated with a tablet containing nitroglycerin and the tinctures of digitalis, belladonna, and strophanthus. It has been generally believed that fever leads to fatty degeneration of the heart if the temperature is allowed to remain high for any length of time. Several years ago the coal-tar derivatives were extensively used. Happily, at the present time, safer and more rational views obtain, and these remedies, as well as the narcotics, are being relegated to a well-merited oblivion. The use of alcohol is pernicious, and its paralyzing influence reaches every organ, tissue, and cell of the body. It clogs the dialyzing membranes, interferes with the normal osmotic processes, retarding both assimilation and elimination, and the wonder is how it ever came to be so extensively used. It has always done harm. It irritates the heart, produces delirium, lessens excretion, and has a general bad effect. The cold bath is an ap-

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proved method of treating temperature and has many earnest advocates, so earnest, I have often thought, that they have failed to see the good in other methods of treatment. There is no question as to the good effects of the cold bath, but it is asserted, on the other hand, by Curtin and others, that the tendency to intestinal hæmorrhage is considerably increased by driving the blood from the skin, and thus congesting the internal organs.

Cold water *per rectum* has been advocated, but the use of the normal salt solution for this purpose is original. The injections are made with an ordinary fountain syringe. Sometimes they are not retained and come away, bringing some fæces with them, thus clearing out the bowel. When they are retained, however, the water passes out through the kidneys and the skin. Dr. William H. Thompson has ascertained that the use of normal salt solutions causes a marked increase in the amount of urine excreted and of the urea contained in it. If the

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temperature is high, the solution is used cold, even ice-cold. Nervous irritability is reduced along with the fall of the temperature, toxines are eliminated from the system, and it prevents instead of causing internal congestion. Tympanitic distention, headaches, dicrotic pulse and other evidences of profound toxæmia all disappear promptly. In the author's series of thirty-six cases treated with injections of normal salt solutions there was only one death. When the temperature was low, not exceeding 102° F., two ounces to a pint, according to the age and retaining capacity, was injected into the bowel every three or four hours. When it rose above this point, the injections were given every two hours. The patients sweated profusely and the kidneys acted freely. In none of the cases with high temperature was there delirium or abdominal tympanites, and the patients slept the whole

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night through as peacefully as babies, even when the temperature was registering as much as 105.3° F. the next morning. In addition to the injections, plenty of cool water must be given to drink. It is to be seen that our

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proper function is to use our efforts, not to reduce symptomatic fever, but to eliminate the toxines which cause the intestinal ulceration, the delirium and general toxæmia, and the various lesions and symptoms of the disease.

The diet is of the greatest importance. It should, I think, be liquid so long as there is an elevated temperature. The diet should be more liberal than was formerly given and the starvation process is opposed. As the proteids furnish an excellent culture medium for the bacilli the meats, meat broths, meat juices, etc., should not be given. Good fresh buttermilk is preferable to almost anything else. Sweet milk and cream may be given and lime water added will sometimes make it more tolerable and more easily borne, as well as more palatable to the patient. Whey, soft-boiled eggs, toast-water, barley-water, and fruit-juices and albumen-water have constituted the diet during the febrile stage. Care should be exercised during the convalescent stage to guard in every way against over-indulgence and imprudence in the diet.

Case of Multiple Gangrene Associated with Cholangeitis Complicating Typhoid Fever. By Dr. I. A. Abt.—A female child, aged twenty-one months, came under observation on the fourth day of its illness. The father is at present ill in a hospital with typhoid fever. Examination on admission shows the tongue coated, the abdomen tympanitic, the spleen palpable and enlarged. The Widal reaction was positive, temperature 103° F., and there was slight œdema of the extremities. About ten days after admission furuncles appeared on the scalp and over the shoulder blade of the left side. After the child had been ill about two weeks, an eruption appeared on the back, neck, and extremities. At first, papules appeared; these became pustules and, in a very short time, areas of gangrene. Summing up the features of the skin the following are interesting points in the order of occurrence: Red macules, papules, flaccid vesicles, and blebs. There were also pustulated or crusted papules, umbilicated vesicles, and ulcers with a dirty grayish moist slough. The ulcers have steep margins, are mostly oval in shape, and vary from the size of a split pea to that of a penny. The whole eruption impresses one as a multiple embolic process in the vascular system of the upper corium, leading to gangrene of the type called infectious multiple gangrene. The autopsy showed the gangrenous areas in the skin, which have been already described. The pericardial sac contained fluid. The myocardium was pale and flabby. The lungs were œdematous. The spleen was enlarged and showed the presence of infarcts. The kidneys examination was negative. The liver was large, light brownish in color, and distinctly soft. Over the entire surface there were a large number of whitish areas about the size of a pin. These were surrounded with a red border and were scattered irregularly throughout the organ. Microscopically, these areas are seen to be due to a necrosis of the parenchyma adjacent to the interlobular vessels. A study of these sections from the liver shows an inflammation of the bile passages, an angeiocholitis. The liver also shows the presence of an adenoma. The author then proceeds with a critical review of the literature of multiple gangrene and typhoid fever.

The Treatment of Temperature by Drugs. By Dr. Edwin Rosenthal.—Collective statistics of typhoid fever in children have placed the mortality rate at or near five per cent. The thermometer retains the first place as a diagnostic implement. In young children, the febrile progress is often only from eight to fourteen days; the average course under ten years is 19.3 days. After the age of ten, this course is much like that of adults. Typhoid fever is perhaps the only disease in which the

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temperature runs higher in older than in younger children. If the fever is high and long continued, it will do much harm by its influence on the nervous system. If the temperature suddenly drops, it is of the same significance as in the adult—a case of hæmorrhage. If the fever continues longer than the average time, it is significant of a complication. A thorough knowledge of the febrile movement, its cause, and its dangers is as necessary as one of the drugs to be used. In the choice of remedies, one must use a surprising amount of common-sense judgment. The bad influence of too much drug treatment cannot be questioned. It is a misleading delusion to say that we can avoid it. Careful investigation proves that no special specific virtues can be designated; for this reason I cannot find one drug which has stood the test of time with an impartial judgment. While all the ordinary coal-tar derivatives have been thoroughly tried, none of them are allowable; and while they may influence the fever, that is, reduce its height, no particular virtue can be claimed for them. The same conclusion may be reached with regard to the Woodbridge treatment, which has proved to be a failure so far as limiting the disease is concerned. These so-called specific remedies, perhaps, have little or no influence. Quinine also proves perfectly inert; it does not influence the fever, and sometimes does more harm than good; in children it should never be used, though it has never shown that influence which the coal-tar products always exhibit. One must have a distinct understanding of the meaning of the fever in typhoid. The chief question is, not what drugs to use, but when is it necessary to interfere? It is conceded that the fever is but a protective reaction of Nature. A long-continued hyperpyrexia will produce tissue degeneration; that it will do it sooner in adults than in children is a well-known fact. Lacking the ideal way of interference, antitoxic serum, Brandt's hydrotherapy is the next best thing. Other antipyretics, included in the line of drugs, which have been mentioned above, have only been mentioned to be condemned, since they possess no specific virtue.

Discussion.—Dr. Victor C. Vaughan drew attention to the fact of typhoid fever occurring less frequently in children than in adults, and explained this fact by the child's not getting around and drinking water from so many sources as an adult; for this reason, also, typhoid infection occurred less frequently in women than in men. It had also been said that typhoid fever occurred less frequently in pregnant women; cases of typhoid seemed to be less severe when the infection was a mixed one, for when there was a mixed infection with the colon bacillus an irritative diarrhœa was set up, which caused the intestinal canal to be regularly drained of its poisonous contents. Mixed infections were more likely to occur in the case of children; just why typhoid fever was milder in children was a question for which there was no positive explanation. The death rate seemed very hard to get at. In hospital practice it had been found to be eight or nine per cent.; but in a series of twenty thousand cases which were selected the death rate was between sixteen and seventeen per cent. In children, perhaps, the reason for a lower death rate might possibly be found in the better elimination through the skin, kidneys, and other organs of toxic products. It was high time to stop experimenting with drug antipyretics. If these dangerous drugs were to be used, let us make our experiments on animals and not on human beings. The only way to reduce temperature was by the cold bath. The occurrence of multiple gangrene was an exceedingly interesting matter, and had been found in malaria, smallpox, etc., as well as in typhoid. The fact of being able to diagnosticate these things by a positive discovery of the bacillus gave us now a clearer insight into the disease.

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Dr. Clifton Scott referred to the view held by some that cold baths caused internal congestion, but had not found it so in his experience.

Dr. Charles Douglass found the medicinal treatment of typhoid fever very unsatisfactory; temperature might be controlled entirely by the baths and proper regard to the diet. The diet should always be kept down to the point where there was perfect digestion, then both less baths and less medicine are necessary. He did not agree with the popular idea with regard to the use of calomel in small doses; his experience was that cases which were allowed to preserve quiet bowels continued to a steady recovery; the temperature went steadily down without purgation if proper care was used in the diet. Feeding should be such as to make the stools normal in character and free from any bad odor. Odor, color, and consistency of the stools were the things to guide in the feeding. Anything might be given to the patient that he could properly digest; milk, broths, the white of eggs, and starch water might all be given if the quantity was regulated in accordance with the conditions present. Abdominal complications and tympanites gave no trouble where this was looked after, and patients might frequently go from one to seven days without a movement from the bowels, and no bad effects follow. Calomel or other forms of purgation were not necessary if the diet was steadily cut down, when the bowels usually took care of themselves.

Dr. F. Wood thought we frequently fed our typhoid patients too much; less food, less medicine and more water gave better results than over-feeding; it was very important to provide perfect quiet for these cases; they should not be allowed to become restless, to talk too much, or be bothered, or urged to eat at all unless they wanted to eat. Oftentimes injudicious use of milk would cause tympanites. If hæmorrhage occurred, perfect quiet should be maintained by the use of morphine. Quiet was more important in this complication than any medicine.

Dr. Head pointed out the great value of the leucocyte count as an aid to the diagnosis between meningitis and some of those forms that came on like appendicitis.

(To be continued.)

Book Notices.

A Text-book on Practical Obstetrics. By Egbert H. Grandin, M. D., Gynæcologist to the Columbus Hospital, etc. With the Collaboration of George W. Jarman, M. D., Instructor in Gynæcology in the Medical Department of Columbia University, etc. Third Edition, Revised and Enlarged. Illustrated with 52 Full-page Photographic Plates and 105 Illustrations in the Text. Pp. xiv-511. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1901. [Price, $4.]

The third edition of this work appears in one volume instead of in two, as formerly. Several emendations have been made and the chapter on the anatomy of the female generative organs has been revised and enlarged. As its title implies, the work is essentially a practical one, and it is no doubt largely due to this element that the book has had the success which it has enjoyed. The clear text and the excellence of illustration render the work specially valuable to the student and to the general practitioner. We have before spoken of the first illustration on Plate xxxiv as worthy of being replaced by one in which the resuscitating doctor shall appear, at least, to be less apprehensive of the outcome of his efforts. In all other respects the good words spoken in behalf of former editions of this work remain true.

Bibliographie générale des travaux parus sur lait et sur l'allaitement jusqu'en 1899. Par le Dr. Henri de Rothschild, Lauréat de la Faculté de Médecine. Avec une préface de M. E. Duclaux, Directeur de l'Institut Pasteur. Pp. xii-584. Paris: Octave Doin, 1901.

In this large volume the author has collected all literary references to milk and the artificial feeding of infants published since 1889. All modern languages are represented and the references run deep into the thousands. To those interested in the subject, the book will form an invaluable reference work.

Human Placentation. An Account of the Changes in the Uterine Mucosa and in the Attached Fœtal Structures during Pregnancy. By J. Clarence Webster, B. A., M. D. (Edin.), F. R. C. P. E., F. R. S. E., Professor of Obstetrics and Gynæcology in Rush Medical College, etc. Pp. 126. With 233 Illustrations. Chicago: W. T. Keener & Company, 1901.

In this monograph Dr. Webster has done a good service. In the first place, it is a thorough study of the development of the human placenta from the first month of pregnancy up to its departure from the uterus at full term. Secondly, it gives, in concise form, the phylogeny of placentation; and, most important of all, the studies on the syncitium will tend to throw some light upon the still vexed question of malignant deciduoma. Fatty degeneration in a normal placenta is held to be not proved. Infarcts of the after-birth are clearly, but briefly, described. The absorption of the decidua is carefully studied, and the various appendices of the placenta are minutely figured in their development and evolution. To those who are interested in embryology, no less than to those who care for physiology and pathology, Dr. Webster's book, despite the slight lapses in bookmaking, will prove indispensable. The thirty plates accompanying the text are admirably executed.

Miscellany.

Somnolency in Liver Disease.—The *Canadian Journal of Medicine and Surgery* for April says that ever since Murchison's investigations, observers have noted the possibility of somnolency arising *ab hepate læso;* but this origin is considered rare and of little moment, except in extreme cases, such as coma or narcolysis. Gilbert and Castaigne, however, have reported to the Paris Society of Biology, on October 27, 1900, that simple somnolency is one of the commonest symptoms of some forms of cholæmia, particularly angeiocholitis and hypertrophic biliary cirrhosis. This somnolency is not due to hepatic insufficiency, as has been generally held, these observers having proved the contrary by a study of the chemistry of the biliary secretions of their patients. They think that the somnolence is due to a biliary intoxication, acting on a predisposed nervous system.

The Origin of Eczema.—Dr. C. F. Marshall (*Treatment,* March) sums up an article on this subject with the following conclusion:

"It appears to me that we can only come to one rational conclusion, after the consideration of the above

evidence, viz., that eczema is not of parasitic origin, but is due to disordered metabolism, giving rise to irritating substances in the blood, probably uric acid, or one of the substances into which it becomes decomposed. The parasitic theory does not explain the frequently universal and rapid appearance of acute general eczema so well as the autotoxic theory. Again, acute general eczema often subsides in a remarkably rapid way under soothing remedies which contain no parasiticides. Tommasoli's view appears to be the most rational which has appeared lately, and stands out as an oasis in the vast desert of parasitic literature, which would appear to regard the skin as something quite distinct from the rest of the human body."

Medicine in Thibet.—Dr. Susie Carson Rijnhart, in her book, *With the Thibetans in Tent and Temple,* says that there is no medical art worthy to be called such in Thibet. She writes:

"For headache, large sticking plasters are applied to the patient's head and forehead; for rheumatism, often a needle is buried in the arm or shoulder; a tooth is extracted by tying a rope to it and jerking it out, sometimes bringing out a part of the jaw at the same time; a sufferer with stomach-ache may be subjected to a good pounding, or to the application of a piece of wick soaked in burning butter grease, or, if medicine is to be taken internally, it will consist probably of a piece of paper on which a prayer is written, rolled up in the form of a pellet, and, if this fails to produce the desired effect, another pellet is administered composed of the bones of some pious priest."

The Physical Evils of Eating Alone.—Under the heading, The Indigestion of Loneliness, the *Lancet* for May 25th makes the following cogent remarks, which probably apply with even greater force in this country than in England. The *Lancet* says:

"At a time like the present, when the marrying age of the average man of the middle classes is being more and more postponed, the physical ills of bachelordom come increasingly under the notice of the medical man. It is not good for man or woman to live alone. Indeed, it has been well said that for solitude to be successful a man must be either angel or devil. This refers, perhaps, mainly to the moral aspects of isolation, and with these we have now no concern. There are certain physical ills, however, which are not the least among the disadvantages of loneliness. Of these there is many a clerk in London, many a young barrister, rising, perhaps, but not yet far enough risen, many a business man or journalist, who will say that one of the most trying features of his unmarried life is to have to eat alone. And a premature dyspepsia is the only thing ever takes him to his medical man. There are some few happily disposed individuals who can dine alone and not eat too fast, nor too much nor too little. With the majority it is different. The average man puts his novel or his paper before him and thinks that he will lengthen out the meal with due deliberation by reading a little with, and more between, the courses. He will just employ his mind enough to help, and too little to interfere with, digestion. In fact, he will provide that gentle mental accompaniment which with happier people conversation gives to a meal. This is your solitary's excellent idea. In reality he becomes engrossed in what he is reading till suddenly finding his chop cold he demolishes it in a few mouthfuls; or else he finds that he is hungry and paying no attention to the book, which he flings aside, he rushes through his food as fast as possible, to plunge into his armchair and literature afterward. In either case the lonely man must digest at a disadvantage. For due and easy nutrition food should be slowly taken and the mind should not be intensely exercised during the process. Every one knows that violent bodily exercise is bad just after a meal, and mental exertion is equally so. Wise people do not even argue during or just after dinner, and observation of after-dinner speeches will convince any one that most speakers neither endure themselves nor excite in their hearers any severe intellectual effort. In fact, the experience of countless generations, from the Red Indian of the woods to the white-shirted diners of a modern party, has perpetuated the lesson that a man should not eat alone, nor think much at this time, but should talk and be talked to while he feeds. Most people do not think much when they talk, and talking is a natural accompaniment of eating and drinking. How does it fare with the many solitary women of to-day? No better, we know, than with the men, but differently. Alone or not, a man may generally be trusted at any rate to take food enough. (We suppose, of course, that he can get it.) With a woman it is different. She is more emotional, more imaginative, and less inclined to realize the gross necessities of existence. Therefore the woman doomed to dine alone as often as not does not dine at all. She gets dyspepsia because her digestion has not sufficient practice; a man gets it because his functions practise it too often in the wrong way. Worst of all, perhaps, is the case of the solitary cook. In the myriads of small flats in London there are thousands of women 'doing' for their solitary masters or mistresses. These women, whose main occupation is to prepare food for others, find it impossible to enjoy, or even to take, food themselves. As confectioners are said to give their apprentices a free run of the stock of the shop for the first few days, knowing that it will effectually cure appetite afterward, so the women who are always occupied with buying and preparing food grow unable to use it for themselves. These people suffer from dyspepsia, which is cured if somebody else manages their kitchen for a week, allowing them to take meals without preparing them. It needs no moralist to declare the evils of solitariness. Man and woman is a gregarious animal. Physically and intellectually we improve with companionship. Certainly it is not good to eat and to drink alone. It is a sad fact of our big cities that they hold hundreds of men and women who in the day are too busy and at night too lonely to feed with profit, much less with any pleasure."

St. Paul's Prescription for the Physicians.—The *St. Paul Pioneer Press* for June 4th has a cartoon showing an anything but ascetic St. Paul, with a nimbus of modern construction worked by an incandescent light, presenting to "the M. D.'s" a large bottle of medicine labeled "Welcome," with the words, "Take three big doses of this every day, in water or something else." St. Paul did more than prescribe; it provided the medicine as well as the "something else" to take it in—the excipient—and, what is more, saw that it was taken.

Heroic Measures Needed.—*Punch* for May 8th gives the following: *Doctor*—"Well, you got those leeches I sent for your husband, Mrs. Giles?" *Mrs. Giles*—"Yes, zur; but what on earth be th' good o' sending the little things for a girt big chap like he? I jes' took an' clapped a ferret on 'un!"

Special Articles.

SYPHILITIC FEVER, WITH A REPORT OF THREE CASES.

(From the Service of Professor William Osler.)

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WHILE its protean characters are universally recognized, physicians do not sufficiently appreciate the fact that syphilis is often responsible for many cases of obscure fever, which clear up only when proper antisyphilitic treatment has been instituted. Even when the fever is associated with a recognizable syphilitic lesion it is often attributed not to the syphilitic infection, but to some other cause, and treated accordingly. The cases, however, which most frequently give rise to an error in diagnosis are those in which at the time there is no outward manifestation of the disease, and where the primary syphilitic infection, with possibly secondary or tertiary symptoms, has occurred so long before that its bearing on the fever is lost sight of. Many cases of syphilitic fever, being unrecognized, are treated as one or other of the acute infectious diseases. The treatment being ineffectual, a more careful physical examination of the patient reveals, possibly, a slight thickening of the clavicles or tibiæ or some evidence suggestive of visceral syphilis. Suspicions are then aroused that the fever may be of specific origin and antisyphilitic treatment is begun with a prompt return of the temperature to normal. That this late syphilitic fever is not sufficiently recognized is shown by the fact that few of the writers on syphilis refer to it. Rarely is it mentioned in text-books, though both Osler (1) and Musser (2) emphasize the importance of bearing it in mind in fevers of obscure origin. The purpose of this paper is to draw attention to this interesting symptom and to report a few cases of syphilitic fever which have been admitted to Dr. Osler's wards in the Johns Hopkins Hospital.

Syphilitic fever may occur at various periods during the course of the infection.

1. It may occur, in very rare instances, so long as three or four weeks before the onset of the secondary skin eruption. This early fever is puzzling and is likely to be attributed to some other cause until the eruption makes its appearance.

2. It may precede or be coincident with the appearance of the secondary eruption. This is the so-called "fever of invasion," and it is a very common and important symptom of secondary syphilis.

3. The fever may occur at any time during the course of the secondary or tertiary stages. The late occurrence of the fever is a most interesting feature. In Case III, for instance, it occurred twenty-nine years after the disease was contracted.

The "fever of invasion" is rarely absent at the onset of the secondary symptoms. It is sometimes wanting, however. It usually precedes the appearance of the secondary eruption by a week or ten days. Rarely does it antedate the eruption by more than two weeks. Practically all authorities now agree that this fever is a symptom of the invasion of the system by the organism believed to be the cause of syphilis or by its toxic products. At an earlier date some observers were inclined to attribute it to some coincident infection. At the onset of the fever there is often a transitory erythema of the skin which disappears, to be followed by the true syphilitic roseola a few days later. Lang (3) states that the fever of invasion is seldom ushered in by a chill. It is usually accompanied by headache, malaise, general depression, and rheumatoid pains throughout the body, which are most annoying in the afternoon. The height of the fever varies greatly in different cases. It may only be moderate, not reaching above 101° F. On the other hand, the daily elevation may be much higher, the afternoon temperature reaching as high as 104° F. to 105° F. Lang quotes Stoll as authority for the statement that the fever of invasion in syphilis is usually of a definite remittent type, and states that all syphilologists who have studied this symptom of syphilis agree on this point. All cases do not conform to this rule, however. The fever of invasion, as well as the syphilitic fever associated with the late manifestations of the disease, may present any one of the following three clinical types of fever:

1. A mild continuous pyrexia, where the temperature ranges in the neighborhood of 101° F. Osler states that this type is not uncommon in the fever which ushers in the constitutional symptoms.

2. A remittent type of fever, with morning drops toward normal and evening exacerbations. This, as already stated, is considered the usual character of the fever of invasion.

3. A definite intermittent fever. This is the most remarkable form of all and is the type which is most likely to lead to error in diagnosis.

Syphilitic fever, although usually a secondary manifestation, may occur late in the disease. The febrile diseases for which such a fever is only too often mistaken are malarial fever, typhoid fever, tuberculosis, and sepsis. Where general pains and joint-pains accompany the fever, the diagnosis of rheumatism may be made.

The following case was one of unusual interest and illustrates how puzzling some of the cases of syphilitic fever may be during the period of the fever of invasion:

CASE I (Hospital No. 32480).—*Syphilitic fever of remittent and intermittent type, commencing at least twenty-seven days before the appearance of the secondary eruption. Fever ushered in by a chill, followed by sweating.*

L. B., a woman, married, aged thirty-four years, was admitted to the gynæcological department of the Johns Hopkins Hospital on September 28, 1900, complaining

of abdominal pain. The family and personal histories then obtained were unimportant.

The abdominal pain of which the patient complained on admission began three weeks before she entered the hospital. The night before admission she had a shaking chill, followed by a profuse sweat. The patient was examined by Dr. G. B. Miller, who found a pelvic abscess, with evidences of a double salpingitis. On September 29th and 30th the temperature ranged between 98.7° F. and 101° F. This fever may quite possibly have been due to the local pelvic inflammation. On October 1st the pelvic abscess was evacuated *per vaginam* by Dr. Miller. The temperature failed to drop, and on October 4th it rose to 104.2° F. (see Chart I). On this date there was a slight erythema of the skin of the body. As it was thought possible that one of the acute exanthemata was developing, the patient was transferred to the isolation ward. The erythema proved transitory, however, and had disappeared by the following day. This febrile paroxysm, on October 3d and 4th, was ushered in by a definite chill and accompanied by profuse sweating. The temperature fell very slowly and had not reached normal before another febrile attack occurred on October 6th, the temperature rising in the evening to 105.5° F., falling rapidly and reaching normal at midday on October 7th. Subsequently, there was a third exacerbation of temperature, commencing on October 9th and lasting until October 11th, the temperature reaching 104.2° F. on October 10th. On October 14th a fourth febrile attack occurred, the temperature rising to 103° F. From this time on, the temperature gradually fell, but there were still slight elevations of temperature in the evening.

The case naturally occasioned a great deal of worry. It was thought that there might still be a focus of suppuration in the pelvis. Pelvic examination showed the local condition to be perfectly satisfactory, and no pus focus could be found. The heart and lungs were normal. There were no rose-spots. The leucocytes were frequently counted and were practically normal throughout, the highest count at any time being 10,000. The spleen was distinctly palpable, and it was thought possible that the case might be one of atypical typhoid fever. The Widal tests proved negative. The character of the fever suggested strongly an æstivo-autumnal malarial infection, but repeated examinations of the blood failed to show any malarial parasites.

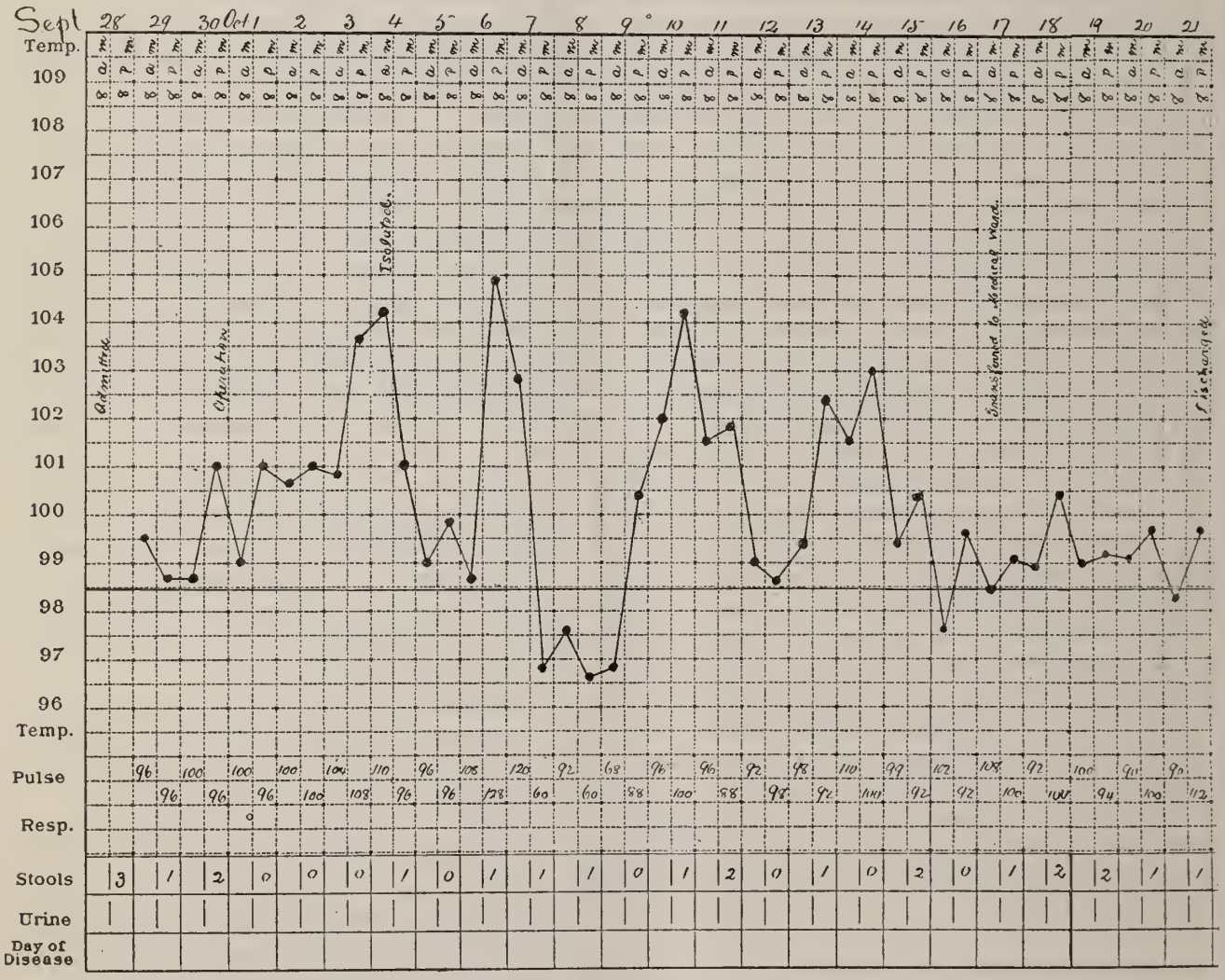

Chart I.—Case 1, L. B., Syphilitic Fever.

On October 17th the patient was transferred to the medical service of the hospital, there being no further indication for isolation and it having been decided that the fever was not due to any pelvic complication. The physical examination of the patient, however, failed to throw any light on the obscure fever from which the pa-

tient had suffered. The patient was feeling much better in every way and, as the temperature was elevated only about one degree each day, she was discharged on October 21st, apparently practically well. There was no evidence of any skin eruption when the patient left the hospital. The provisional diagnosis was "intermittent fever of doubtful origin."

The subsequent history of the case was of great interest and clearly explained the cause of the obscure fever. On October 30th the patient returned with a definite macular and papular secondary syphilitic eruption, the diagnosis being confirmed by Dr. Gilchrist. On November 4th, when she again returned for observation, the face, shoulders and arms presented a definite macular eruption, and over the front and back of the chest there were scattered papules and an occasional pustule. There was general enlargement of the superficial lymph glands, the epitrochlear glands being the size of hickory-nuts.

Inquiry was now made into the venereal history of the patient's husband. He admitted exposure to infection on July 4, 1900. On August 11th he came to the Johns Hopkins Hospital Dispensary for treatment, and the records show that he then had a hard chancre on his penis. On August 27th he returned with a macular syphilitic eruption, and again, on September 15th, he was treated for a gonorrhœal urethral discharge.

On questioning the patient, she could give no history of the onset of the primary sore, nor were there any evidences of a chancre made out at the time of the operation, although it was not specially looked for.

The points of interest in this case are: (1) The impossibility of establishing a diagnosis until the secondary skin eruption became manifest; (2) the occurrence of chills and sweating and the close resemblance of the fever to that of æstivo-autumnal malaria; (3) the absence of any definite relationship between the fever and eruption which did not appear until practically four weeks after the onset of the fever; (4) the subsidence of the temperature to nearly normal a considerable time before the appearance of the skin eruption and without antisyphilitic treatment.

A case very similar to the above has been reported by Burney Yeo (4). The patient had a fever ranging as high as 104° F. to 105° F., with daily oscillations of from 5 to 6 degrees. An interesting feature of his case was that the fever began between twenty-five and thirty days after exposure, and between three and four weeks before the appearance of the secondary eruption.

Case II (Hospital No. 10581).—*Syphilitic fever of a remittent and intermittent type which for weeks was suspected of being typhoid fever and treated as such. Diagnosis established by the discovery of periosteal thickening over the clavicles and by cessation of the fever after the beginning of treatment with potassium iodide.*

N. R., a man, married, aged thirty-nine years, was admitted to Dr. Osler's service in the Johns Hopkins Hospital on August 8, 1894, complaining of pains all over the body. The family history was unimportant, with the exception that his father had died of pulmonary tuberculosis. The patient had always been a healthy man. He had had gonorrhœa, but denied ever having had lues. He used alcohol in moderation.

The patient had been ill and unable to work for three weeks previous to admission. During this period he had felt feverish at times. Nausea, vomiting, and diarrhœa were complained of during the week previous to his entering the hospital. He had not had headache or epis-

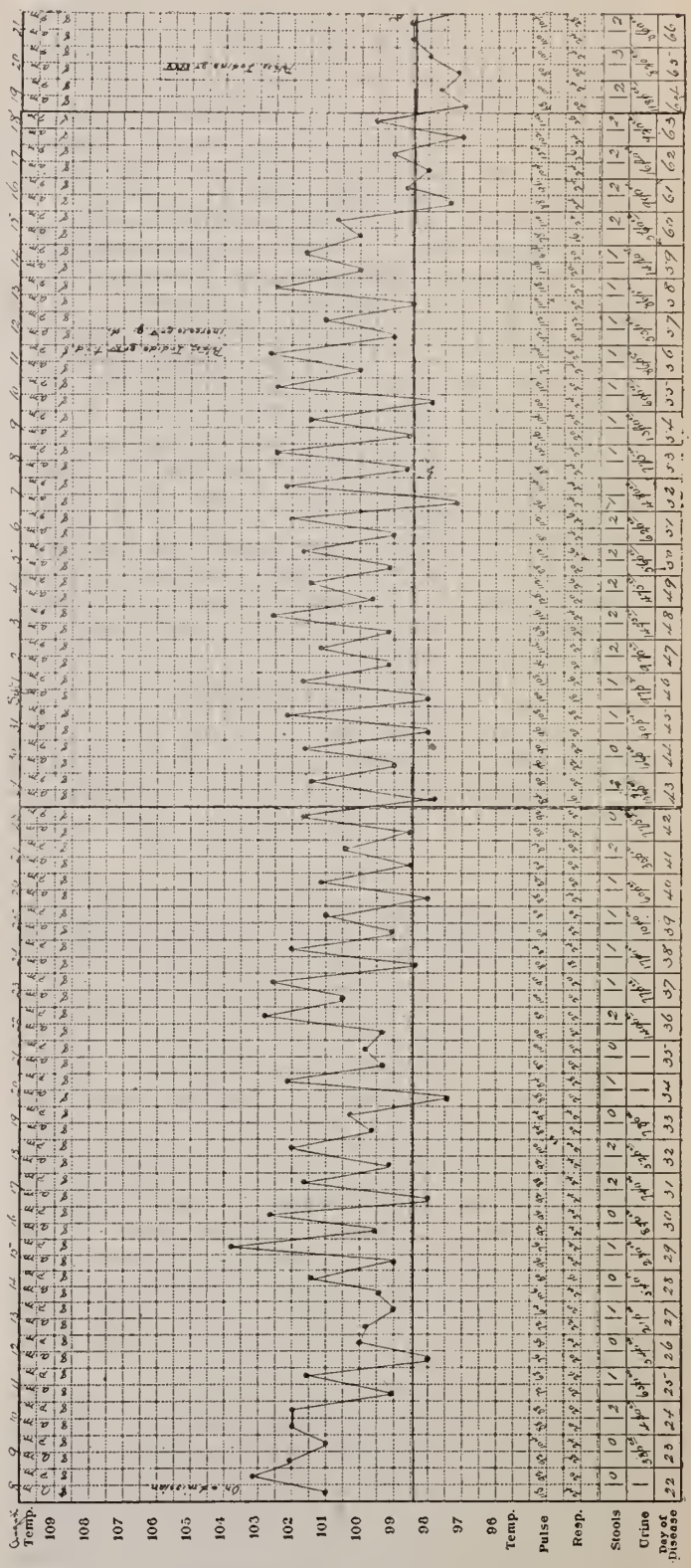

Chart II.—Case 2, N. R.

taxis, but had complained of aching pains in the back and extremities and of general weakness. There had been a steady loss in weight, but the patient had not been confined to bed previous to admission.

The physical examination of the patient failed to reveal anything to account for his fever and other symptoms. There was a corneal opacity of the right eye, which, however, was believed to be due to perforating corneal ulcer occurring during childhood. The examination of the thoracic organs was negative. There were no typhoid rose-spots. The liver was not enlarged, but the spleen was palpable four centimetres below the costal margin. The superficial glands were not enlarged. There were several pigmented scars on the right shin, but there were no nodes on either tibia. The blood examination was negative for malarial parasites. The urine was normal and did not show the diazo reaction.

As already stated, the patient apparently had irregular fever for three weeks previous to admission. On the day he entered the hospital his temperature rose to 103.4° F. at 8 P. M. The pulse and respirations at the same hour were 92 and 20 to the minute. A two-hour temperature record was taken and, from August 8th to September 12th, there was persistent fever. At times the temperature ran a fairly continuous type, but usually was remittent or intermittent in character, the evening exacerbations reaching as high as 102° F. to 103° F. Chart II, which records the 8 A. M. and 8 P. M. temperatures, gives a fair idea of the character of fever in this case, but fails to show the highest and lowest temperatures on certain days. Owing to the fact that the patient was admitted to the hospital at a season when typhoid fever was prevailing, and, taking into consideration the character of the fever and the enlargement of the spleen, it was strongly suspected that the case was one of typhoid fever, and the patient was given cold sponges. The diagnosis was always in doubt, however. At no time did rose-spots appear, and the urine never gave the diazo reaction. The case occurred before the Widal reaction came into use.

On September 12th Dr. Thayer made the following note: "Both clavicles toward their sternal ends are remarkably thickened and bowed. They feel remarkably as if the thickening were due to an old periosteitis. Both ulnæ and tibiæ are free from nodes. There is a distinct scar on the glans penis, and the patient says that he had a sore on the prepuce."

It was thus suspected for the first time that the fever might be of syphilitic origin. Accordingly, on September 12th, potassium iodide in fifteen-grain doses three times a day, was begun, the amount being gradually increased from day to day. The effect on the temperature was most striking. On September 13th there was practically no change, the temperature reaching 102.4° F. at 8 P. M. From this day on it steadily fell, reaching normal on September 16th, four days after the potassium iodide was started. It remained normal during the rest of his stay in the hospital. He was discharged from the hospital on October 3d, feeling perfectly well.

The day the patient left the hospital Dr. Osler made the following note: "This case is of exceptional interest in connection with the fever of lues. Although he had no rash, no visceral lesion, only chronic periosteitis of the clavicles, which are now symmetrically enlarged, the history of lues, the presence of the periosteitis, and the drop in the temperature after specific treatment was started, seem to justify the suspicion if not conclusion that this case is one of luetic fever."

This case illustrates very well how closely some cases of syphilitic fever resemble typhoid fever, both in the clinical symptoms, and to a less degree in the character of the temperature. It also shows the importance of carefully examining the condition of the long bones in fevers of doubtful origin, for in this patient the cause of the fever was determined by the discovery of periosteal thickening of the clavicles. Prentiss (5) published a similar case of syphilitic fever with remittent temperature, in which typhoid fever was first considered. The presence of a pharyngitis and the development of a suggestive-looking ulcer over the right tibit led to the suspicion that the patient was probably suffering from syphilis. Treatment with potassium iodide and mercury was followed by an immediate return of the temperature to normal.

CASE III (Hospital No. 5796).—*Syphilitic fever, characterized by intermittent chills with fever, and treated first as a case of malaria. Fever occurred twenty-nine years after the primary infection and yielded readily to antisyphilitic treatment.*

W. W., single, man, a physician, aged fifty-seven years, was admitted to the Johns Hopkins Hospital in Dr. Osler's service on August 24, 1892, complaining of having suffered from chills and fever. He had had typhoid fever at fourteen, and diphtheria at twenty-eight years of age. In 1864, at the age of twenty-eight years, he contracted syphilis and developed definite secondary symptoms. Later, he had deep ulcers on his body which were apparently tertiary lesions. These persisted for three years, but eventually yielded to mercury and potassium iodide. In 1882, while in good health, a sore developed in the popliteal space and another in the hairy scalp. He again took specific treatment and the lesions cleared up.

About June 15, 1892, several sores appeared on his body, which, from the description given, were apparently rupial in character. About two weeks before admission to the hospital some tenderness and swelling developed over the sternum and in the left shoulder-joint. About the end of July the patient began to have definite recurring attacks of chills and fever, the temperature rising to from 102° F. to 104° F. The physician in attendance thought that the chills were of malarial origin and gave quinine in daily doses of twenty grains, without any effect on the fever. A few days before the patient entered the hospital Dr. Osler saw him in consultation. A definite history of recurring chills was obtained, but the examination of the blood showed no malarial parasites. The fever was regarded as probably of luetic origin, and potassium iodide in increasing doses was begun. When the patient entered the hospital a few days later, on August 24th, the chills had ceased, but he was still having evening elevations of temperature to 101° F. Under the iodide the temperature gradually fell, and by September 14th reached normal and did not become elevated afterward. The patient remained in the hospital until November 2, 1892, on which date he was discharged, feeling perfectly well.

The case just related illustrates the error so often made of mistaking syphilitic fever for malaria. The late occurrence of the fever, namely twenty-nine years after the syphilis was contracted, is of great interest. This is a longer period after infection than in any case of which I have been able to find records in the literature. A remarkable case of syphilitic fever is reported by Sid-

ney Phillips (6). His patient, a woman, had regular intermittent chills, fever and sweating occurring every other day over a period of eight months. Early in the illness the paroxysms occurred daily, but later presented a typical tertian intermittent type, and the fever was practically identical with that of tertian malaria. Quinine was given a thorough trial, without any effect on the temperature. The fever began to fall very soon after the beginning of the administration of iodide of potassium and reached normal in a few days. In this case the fever occurred nine years after the syphilis was contracted.

Syphilitic fever is mistaken for tuberculosis even more frequently than for malaria. The patients may present themselves complaining of fever, sweating at night, loss of weight, general malaise, and possibly some pain in the chest. The examination of the lungs may show a few râles, which renders the case very suspicious. In other instances the diagnosis is made without any signs in the lungs or elsewhere in the body pointing to tuberculosis. Janeway (7) has drawn especial attention to the prevalence of this error in diagnosis. He points out that the mistake is not made alone by physicians of little experience, but often by those of well-established reputation. In a most interesting paper he cites six cases of syphilitic fever which had been interpreted and treated as tuberculosis. The cases had subsequently come under his personal observation. Four of these had been sent to health resorts for phthisical patients without benefit. Careful examination and inquiry into the history of each case led to a diagnosis of syphilis, with prompt disappearance of the fever and restoration of the health of the patient after the commencement of specific treatment. Morgan (8) reported a case of syphilitic fever of intermittent type, in which acute miliary tuberculosis was for a considerable time suspected. The absence of tubercle bacilli from the sputum and the existence of a luetic history led to the administration of potassium iodide, with prompt recovery from the symptoms and cessation of the fever.

Other cases of syphilitic fever could be cited, but the three cases reported above suffice to draw attention to the main points of interest in the consideration of this interesting symptom of lues.

The following points may be emphasized in connection with syphilitic fever:

1. In all cases of fever of obscure origin the possibility of it being syphilitic should be borne in mind.

2. Experience has shown that physicians of reputation, as well as those of limited experience, are prone to mistake the condition for one of the acute specific fevers.

3. The affections for which syphilitic fever is most often mistaken are malaria, typhoid fever, tuberculosis, sepsis, and occasionally rheumatic fever.

4. The fever may occur as early as four weeks previous to the appearance of the secondary skin eruption, or, what is of greater importance, late in the disease after tertiary manifestations have existed probably for years. In Case III it occurred twenty-nine years after the primary lesion.

5. The fever may be continuous, remittent, or intermittent. The remittent type is regarded as the most frequent form in the fever of invasion. The fever is often associated with chills and sweating.

6. Careful examination of the long bones and viscera for evidences of tertiary lues should be made in all cases of fever of obscure origin.

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Original Communications.

THE EVOLUTION OF THE OPHTHALMOSCOPE AND WHAT IT HAS DONE FOR MEDICINE.*

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In casting about for a theme for the annual address which is expected of your presiding officer, it occurred to me that as this year, 1901, is the fiftieth anniversary of the invention of the ophthalmoscope, it would not be amiss to give you to-day a brief account of this event, fraught, as it was, with such momentous consequences to ophthalmology, and to describe the steps by which the ophthalmoscope, as we now know it, has been gradually evolved from the primitive instrument with which Helmholtz first succeeded in seeing the back-ground of the living eye.

As has so often happened with important discoveries and inventions, Helmholtz's contrivance of an *Augenspiegel* with which to inspect the interior of the eye, first described in a monograph published in Berlin, in December, 1851 (1), seems to have been but the logical outcome of a series of interesting observations made by a number of investigators in the field of physiological optics. But, oddly enough, the problem which these in-

*An address delivered before the Medical and Chirurgical Faculty of Maryland at the opening of its one hundred and third annual session, held in Baltimore, April 23, 24, and 25, 1901.

vestigators, with the exception of Cumming, were endeavoring to solve, and which Helmholtz himself had in mind, was not the discovery of a means by which the back-ground of the eye could be inspected and pathological changes situated there recognized, but a solution of the question why, under usual conditions, the pupil of the eye appears black and seems to emit no light, while, under certain unusual conditions, it does emit light and assumes a reddish appearance.

The luminosity of the eyes of certain animals had long been a subject of study, and many erroneous theories had been advanced to account for it; but not until Prévost, of Geneva, about 1810, pointed out that in an absolutely dark room the luminosity disappears, was it understood that this phenomenon was due simply to the reflection, from the tapetum, of light which had entered the eye through the pupil. Rudolphi made a further step toward a right understanding of the matter when he showed that, in order to perceive these reflected rays, it was necessary to look into the eye in a certain determinate direction.

Behr, in 1839, as a result of his study of a case of total irideremia, or absence of the iris (in which condition, as is well known, the pupil often presents a reddish appearance), announced that to obtain this effect the observer must look into the irideremic eye in a direction parallel to the rays of light incident upon it. Long before this, the fact that in certain pathological conditions of the interior of the eye, such as intra-ocular growths and detachment of the retina, the pupil appears grayish instead of black, had attracted attention.

Still more important, however, and bearing more directly upon Helmholtz's invention, were the investigations and observations of William Cumming and Ernst Wilhelm Brücke. At about the same time, and without knowledge of the other's labors (2), each of these investigators had succeeded, and by similar methods, in obtaining a reflex from the back-ground of the normal human eye.

Cumming, at the time a student in the London Hospital, presented his observations in a paper read before the Royal Medical and Chirurgical Society of London, June 23, 1846, and published in the *Transactions* of the society for that year (3). The title of his paper is On a Luminous Appearance of the Human Eye, and its Application to the Detection of Disease of the Retina and Posterior Part of the Eye.

The luminous appearance or reflection was obtained by placing the person whose eye was to be examined in a dark room, at a distance of ten or twelve feet from a gas or other bright light. A screen being so placed as to cut off the lateral rays, the more direct ones were permitted to fall upon the face and eye of the observed, while the gaze was directed a little to the side of the light. The eye of the observer being now brought as near as possible to the direct line between the light and the eye to be viewed, caught certain of the rays reflected from the back-ground of the latter, and the pupil assumed a red appearance. A similar result, Cumming pointed out, could be obtained by a beam of daylight admitted through a nearly closed shutter. He noted, with interest, that sometimes, in consequence of a slight movement of the observed eye, the red color of the pupil changed to a silver tint, an effect, doubtless, due to the fact that at this moment his eye caught the rays reflected from the white surface of the optic disk. He at first supposed that the light which gave the luminous appearance to the pupil was reflected from the retina; but later became convinced—Mr. Bowman having first suggested this to him—that it was the chorioid which caused the reflection. Feeling that he had established the principle that in normal eyes a luminosity of the pupil could always be obtained by the method he had devised, he maintained that where this could not be done an abnormal or pathological condition of the interior of the eye existed; and in support of this contention he related several cases examined by him at the Royal London Ophthalmic Hospital, one of which, from the description given, was, in all probability, a case of lateral detachment of the retina. When, further, he attempted by the help of his discovery to recast the subject of what was then known as "cat's-eye amaurosis," it is not surprising that he should have got the subject, as well as himself, in something of a muddle.

The observations of Brücke, who was professor of physiology in Vienna, were published in Müller's *Archiv für Anatomie und Physiologie,* in 1847. Besides obtaining a reflex from the fundus of the eye by a method similar to that employed by Cumming, Brücke secured, doubtless, a still better illumination of the pupil by placing a tube through the flame of a candle and looking through this directly into an eye upon which the light from the candle was permitted to fall. He also described a significant observation of his friend, Dr. von Erlach, who, being myopic and wearing concave glasses, had remarked upon several occasions that the light reflected from his glasses caused the pupils of a person standing in front of him to emit an unusual glow. The peculiar significance of this observation of von Erlach's, which Brücke's paper brought to the attention of Helmholtz, becomes more evident when we call to mind that the reflecting surface in Helmholtz's ophthalmoscope was not a silvered mirror, but a plate of plain glass set at a favorable angle.

And here, because a better opportunity will not present itself, we shall stop to describe an event of much interest in the history of ophthalmoscopy, though it had no bearing upon Helmholtz's invention and exerted absolutely no influence upon the subsequent evolution of the ophthalmoscope.

In 1847, four years before Helmholtz announced his invention, Mr. Charles Babbage, F. R. S., an English mathematician and inventor, by scraping off a little of the silvering from the back of a plain mirror, which he

set obliquely in a suitable tube, so that light falling upon it from an opening in the side of the tube should be reflected into the eye, contrived an ophthalmoscope which was much more like the instrument of to-day than was that of Helmholtz, and which unquestionably afforded a better illumination of the eye. But, unfortunately—as the writer of the article upon The Ophthalmoscope in *Chambers's Encyclopædia* remarks—the ophthalmic surgeon to whom he showed it did not recognize its importance, and he laid it aside without making it generally known. The "ophthalmic surgeon" alluded to was Mr. Wharton Jones, who, though he failed so egregiously to appreciate the value of Babbage's contrivance, deserves the credit, at least, of having put the facts with reference to it upon record, in a paper upon the ophthalmoscope published in October, 1854, in the *British and Foreign Medico-chirurgical Review,* and of having thus secured to Babbage the credit, undoubtedly due him, of being the inventor of the first ophthalmoscope.

Charles Babbage, or "Mr. Babbage," as he was called in Wharton Jones's paper, and has been called by nearly every writer upon the ophthalmoscope since—except Perrin, who, in his article upon Ophthalmoscopie, in the *Dictionnaire encyclopédique des sciences médicales,* styles him B-a-b-b-a-y-e—seems to have been born under an unlucky star, and the want of success of his ophthalmoscopic venture was not his only, nor was it, perhaps, his greatest, bit of ill luck. Though a mathematician of decided ability, he failed to secure several professorial positions to which, in turn, he aspired; spent much of his own fortune and still more of the English government's money in prolonged, but only partially successful, endeavors to construct a calculating machine (which, in its unfinished state, may be seen to-day in the South Kensington Museum); was unsuccessful in an endeavor to enter Parliament; got himself into "hot water" by publishing an attack upon the management of the Royal Society; wrote a learned disquisition—which, fortunately, he never published—*On the Art of Opening Locks,* and then promptly proposed a plan for defeating his own methods, which was afterward patented; and, finally, in his declining years, gained great notoriety because of his "fierce hostility" to organ-grinders, in spite of whom—as his biographer in *Chambers's Encyclopædia* naively remarks—he lived till October 18, 1871, which, as he was born in 1791, was not wholly a bad record; though we have a lurking suspicion that the poor man really longed for an early demise, and in this regard, as had happened to him in so many other directions, went wide of the mark.

Professor Ames, of the physical department of the Johns Hopkins University, who, with the assistance of one of his students, Mr. James Barnes (4), has recently had occasion to review the life of Babbage, tells me that in not one of the biographical sketches of Charles Babbage, of which there are many in existence, is there the slightest reference to his having invented an ophthalmoscope. Such scant credit, indeed, is he given for this invention, that not a little research was necessary to enable me to assure myself that Wharton Jones's "Mr. Babbage" and the Charles Babbage of calculating-machine fame and the vindictive enemy of organ-grinders, were one and the same.

And now, having reached its consideration in chronological order, let us turn our attention to the ophthalmoscope of Helmholtz. And what shall we say of it? That it was the legitimate parent of all later ophthalmoscopes; that it was the first instrument with which the back-ground of the living eye was seen *distinctly;* that Helmholtz was absolutely the first to suggest the indirect method of ophthalmoscopy; and that it was he who directed the world's attention to the subject, are facts which are not open to dispute. But, having willingly accorded him this large measure of credit, I believe I do his memory no injustice in asserting *that what was essential in his ophthalmoscope was not wholly original, and that what was original was not only distinctly not essential, but was the outcome of a misconception—a fortunate misconception, as it turned out—upon his part.* Furthermore, it is a fact that within a few months of the announcement of his invention, the method of illuminating the eye which he suggested was, to a great extent, put aside for a simpler and more efficient method, which, indeed, was essentially that of the ill-starred "Mr. Babbage."

It has already been intimated—and this, indeed, is but the commonly accepted view—that the reflecting surface of Helmholtz's ophthalmoscope, consisting at first of a single plate of plain, unsilvered glass, and later of several such plates in close apposition, was simply the practical application of von Erlach's observation, as recorded by Brücke. The other, and *original,* feature of his ophthalmoscope was the insertion of a concave lens between the glass plates and the eye of the observer. This lens Helmholtz was led to employ, because he reasoned that the eye under examination would focus for the image of the nearby flame reflected into it by the glass plates, and hence that the light returning from its fundus would leave the cornea in converging rays, which must needs be rendered parallel or divergent in order to afford clear vision to the observing eye.

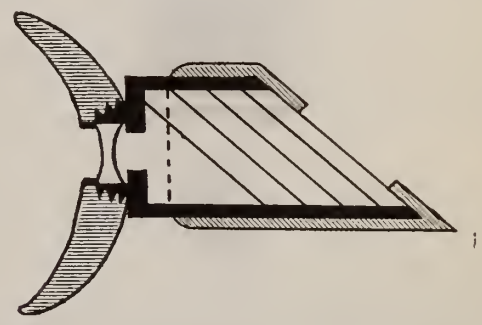

FIG. 1.—Helmholtz's ophthalmoscope, as represented in his original paper.

Now, as a matter of fact, an eye under examination with the ophthalmoscope, and this is especially true of the direct method, shows but little inclination to employ its focussing power; so that, unless it is myopic, the light does not commonly emerge from it in converging rays. But, on the other hand, in the direct method of examination (the method chiefly relied upon by Helmholtz) the beginner in the use of the ophthalmoscope finds it extremely difficult to relax *his* accommodation, or, in other words, to focus for other than divergent rays of light, and he is, therefore, greatly helped in obtaining a clear view of the fundus of the eye by looking through a concave lens.

And so it came about that the concave lens of Helmholtz's instrument, although, as I have said, it was not an essential feature of a successful ophthalmoscope, and was employed by him to meet an unreal difficulty, was, nevertheless, of the greatest assistance to him and his earlier pupils, who were all, necessarily, neophytes in ophthalmoscopy, and who doubtless had the same trouble in controlling their accommodation that is experienced by the beginner of to-day.

How great *were* the difficulties at first experienced by Helmholtz he has himself set forth. In an address delivered many years later, after describing the first model of his ophthalmoscope as having been constructed of pasteboard and of eye lenses and cover glasses, such as are used in microscopic work, he says: "It was at first so difficult to use, that I doubt if I should have persevered

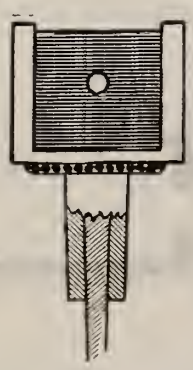

FIG. 2.—Early model of Epkens's ophthalmoscope (after Gould).

unless I had felt that it must succeed; but in eight days I had the great joy of being the first who saw before him a living human retina" (5).

The suggestion of the indirect method of ophthalmoscopy, or the employment of the inverted image (which is commonly attributed to Ruete), was made by Helmholtz in his first published account of his invention (6). He was not at this time favorably impressed by it, however, and did not commend it. Nevertheless, he did employ it later in what was known as his "simplest ophthalmoscope," which was nothing more than the method of illuminating the pupil by direct light, discovered by Cumming and Brücke, supplemented by the placing of a convex lens before the observed eye.

At the time of his invention of the ophthalmoscope, Helmholtz was professor of physiology at Königsberg, and he subsequently held the same position at Bonn and later at Heidelberg; and still later, in 1871, he became professor of physics in Berlin. He was especially interested in problems connected with the physiology of sight and of hearing, and, as an outcome of this, we have, besides his invention of the ophthalmoscope, his masterly treatise upon *Physiological Optics,* his great work on *Die Lehre von den Tonempfindungen,* his exposition of the mechanism of the ossicles of the ear, and his theory, commonly accepted, of the accommodation of the eye. He was born at Potsdam, on August 31, 1821, and, full of honors, died on September 8, 1894, having just passed his seventy-third birthday.

It was Epkens, an instrument maker of Amsterdam, who, within a few months of the appearance of Helmholtz's original publication, constructed an ophthalmoscope, to which allusion has already been made, in which a plane mirror, with the silvering removed from a small oval space in its centre, was substituted for the glass plates used by Helmholtz. The value of this modification was at once appreciated by Donders, who described the instrument, and commended it, in a paper published in the *Nederlandsch Lancet.* In the meantime, Rekoss, a "Mechaniker" of Königsberg, had improved upon the original model of Helmholtz's instrument by adding two revolving disks, each of which carried a series of lenses. The disks—which, in accordance with Helmholtz's idea, contained only *concave* lenses, varying in strength from 6″ to 13″ focal length (7)—were so arranged that by their revolution the several lenses, singly or in pairs, could be brought before the observer's eye. The Rekoss disks, as this contrivance was thereafter called, were presently adapted to Epkens's ophthalmoscope as well, and, indeed, in more or less modified form, they soon were, and are to-day, in very general use in the better kinds of ophthalmoscopes.

The next distinct advance in the evolution of the ophthalmoscope was made when Professor Ruete, of Göttingen, in 1852, for the better illumination of the eye, suggested the employment of a *concave* mirror in place of the plane mirror of Epkens. This was really the first ophthalmoscope that was adapted to the examination of the inverted image; and it is to Ruete that the credit is undoubtedly due of being the first to *appreciate the value* of this method; for, although Helmholtz had already described it, he did not, as has been mentioned, speak of it with favor, doubtless because the feeble illumination afforded by his ophthalmoscope was so ill-suited to it.

It is of interest to note, at this point, that, although the subsequent evolution of the ophthalmoscope was almost wholly the work of ophthalmologists, they took no part in the scientific observations which led to its invention, and had no hand in the invention itself or in the improvements made in it up to the time of Ruete. Whether the unwonted energy which, thereafter, they

displayed in this direction was due to a laudable desire to "even things up"—if I may be allowed the expression—I am unable to say; but certain it is that a veritable epidemic of ophthalmoscope-building now overran Europe. It was, perhaps, most virulent in Germany, but it spread from there to Austria, to Holland, to France, and to England, and a sporadic case (as to the genuineness of which there is, however, some doubt) (8) occurred even in far-off Greece. As the outcome of this, ophthalmoscopes of all sorts were constructed, many of them being cumbersome and complicated to a degree, and not a few of them resembling more nearly telescopes than the ophthalmoscopes of to-day. Unwieldy affairs, called fixed ophthalmoscopes, were much in vogue, and a deal of ingenuity was expended in the contrivance of binocular ophthalmoscopes, auto-ophthalmoscopes, and ophthalmoscopes for purposes of demonstration. Moreover, the almost forgotten observation of Méry, who, nearly a hundred and fifty years before, as he accidentally held a cat under water, saw the vessels of the retina and the color of the fundus of the eye, was called to mind, and, acting upon the hint which this observation afforded, suitably shaped cups, with one or more glass sides, intended to hold a small quantity of water in contact with the open eye and thus afford a view of its back-ground, were contrived—one by Czermak, another by Arlt, and still another by Coccius—and were modestly called orthoscopes; not, I take it, because their authors considered them the only right sort of "scopes," but because they afforded a direct view into the eye.

Of all these older ophthalmoscopes, as Gould remarks in his article upon Ophthalmoscopy in Norris and Oliver's *System of Diseases of the Eye,* only one—the small ophthalmoscope of Liebreich—survives to-day in the form in which it was first invented; the others have for us an interest which is simply historical. In the "lichtschwache Spiegel" of Jaeger's ophthalmoscope, which was in common use in Vienna when I was a student there, in 1871, and with which some of my earlier experience in studying the fundus of the eye was gained, the unsilvered mirror of Helmholtz's original instrument, probably, had its longest survival.

In the original description of his ophthalmoscope, Helmholtz not only predicted that, by its aid, nearly all that dissection had shown in the dead eye would be recognized in the living, but he pointed out, besides, that it afforded a means of determining, objectively, the optical condition, or refraction, of the eye. One of the first ophthalmologists to appreciate the significance of this suggestion and to employ the ophthalmoscope as an optometer, was, as Donders tells us (9), Edward Jaeger, of Vienna, who published a paper upon the subject in the early part of 1856 (10); and he was followed, somewhat later, by Stellwag, and, still later, by Mauthner. The earlier ophthalmoscopes, however, were ill-adapted to exact optometric work, not only because they were provided with too small a number of eye-lenses, but because these lenses were placed at too great a distance from the mirror and hence from the observed eye.

The elimination of these shortcomings, the adaptation of the ophthalmoscope to accurate optometry, constitutes the next decided step in its evolution. And here, for the first time, American ophthalmologists come definitely to the fore. To the late Dr. Edward G. Loring, of New York, a larger measure of credit is unquestionably due than to any other one man for bringing the optometric or refraction ophthalmoscope to its present state of perfection, although he himself declared that it was Mauthner who deserved this honor (11).

Dr. Loring's description of his first ophthalmoscope was read before the American Ophthalmological Society in July, 1869, and was published in the *Transactions* of the society for that year, as well as in the *American Journal of the Medical Sciences* for April, 1870. In its construction, his aim was to obtain a greater number of eye-lenses, to have these lenses large in proportion to the size of the central perforation in the mirror, and to place them as close as practicable to the posterior surface of the mirror. He accomplished what he had in view by setting the lenses, twenty-three in number, in three revolving, detachable metal disks, which were fitted close to the eye-hole of the mirror, and by having the mirror itself ground exceedingly thin and the metal backing beveled away around the central opening, so that as little impediment as possible should be offered to the rays of light returning from the observed eye. He was fortunate in his selection of an optician (Mr. H. W. Hunter, of New York) to carry out his views, and the result was that in delicacy and perfection of construction his ophthalmoscope—and this is equally true of his later models, also made by Hunter—far surpassed any of the instruments which had previously, and indeed any which have since, been manufactured in Europe.

In 1877, Dr. O. F. Wadsworth, of Boston, made, as Loring himself expresses it, "an ingenious and what promises to be a useful addition to my ophthalmoscope" (12). The addition consisted of a small circular revolving mirror, having a diameter of only fifteen millimetres, which was set at an angle of twenty degrees to the disk carrying the lenses. It was designed for the more accurate determination of errors of refraction by the upright image. This it accomplished through the tilting of the mirror, which enabled the observer to look directly, and not obliquely, through the eye-lenses, while the small size of the mirror permitted the lenses, notwithstanding the tilting, to be kept close to the central opening, an advantage which none of the older ophthalmoscopes with tilting mirrors possessed. This contrivance of Wadsworth's, however, was open to the serious objection that it necessitated the employment of two mirrors, since the small mirror did not give sufficient illumination for the indirect examination. Impressed with the importance of the principle involved in Wadsworth's suggestion, Loring at once set about contriving a mirror

which would accomplish the end Wadsworth had in view, and which would also be adapted to the indirect examination; and it was not long before he succeeded in doing this in a most admirable manner. By cutting away the lateral portions of the circular mirror previously employed, he produced the rectangular, swinging mirror which is now so generally used, and which is hardly likely ever to be put aside, since it fulfills its purpose so perfectly.

In the following year (1878) Loring, who previously had done away with the three detachable disks of his first instrument and substituted a single disk carrying twenty-four lenses set in two concentric circles, and had also adopted the metric system for numbering the lenses, put what may be called the finishing touch to his ophthalmoscope, and made it the admirable instrument which it is to-day, by rearranging the lenses in the disk and adding a revolving quadrant, carrying four additional lenses (13). By this ingenious arrangement, the lenses in the quadrant being combined, when required, with those in the disk, he obtained a series of sixty-five glasses, varying in strength from a .50 dioptre to + 23. and — 24. dioptres, a series sufficiently complete for all practical purposes.

Dr. Edward G. Loring, who was born in Boston in 1837, and for a while, in 1865, practised his profession in Baltimore, whence he moved to New York, was a man of marked ability, and it was said of him, shortly after his death, and justly, I believe, that by his writings upon ophthalmological subjects and by his perfection of the ophthalmoscope, he had done more than any other one man to place American ophthalmology abreast with that of the world (14). Besides being a frequent contributor to current medical literature, he was the author of a *Text-book on Ophthalmoscopy,* upon the revision of the last volume of which he was engaged at the time of his death, which occurred very suddenly, probably as the result of an embolism of the coronary artery, on April 23, 1888. His death, when he had but reached his fifty-second year, and was, mentally, as vigorous as he had ever been, was a distinct loss to modern ophthalmology.

Among others who have turned their hand to the construction of ophthalmoscopes especially adapted to optometry, may be mentioned de Wecker, Knapp, Strawbridge, Noyes, Couper, Morton, Hawes, Randall, and Jackson. The ophthalmoscope devised by Mr. Morton, of Moorfields Hospital, London, is, perhaps, the strongest rival of Loring's instrument; but, in my judgment, is not its equal, though it has undoubted merits. The lenses of Morton's ophthalmoscope, of which there are twenty-nine, are enclosed in an endless groove, and are propelled by a driving wheel. In addition to these, there are four lenses set in a revolving disk, which may be combined with those in the groove. It is provided with three tilting mirrors of the type suggested by Wadsworth. These are set in an arrangement similar to the nose-piece of a microscope, which revolves upon a central pivot, bringing the mirror desired into the proper position for use. One of the mirrors is plane and is intended for retinoscopy; another, which is concave, with a focal length of ten inches, is for the inverted image, and the third, a small concave mirror of three inches focus, is meant for the direct examination. The first two named are set, back to back, in one mounting and are reversible. It is not so wieldy an instrument as Loring's, being considerably heavier; and, as commonly made, the distance between the lenses and the sight-hole of the mirror is inconveniently great.

And now, fearing that I have already exhausted your patience with wearisome details concerning inverted and upright images, tilting mirrors, and revolving disks—which, however, could not very well be omitted—I shall hurry to a conclusion, making only a few brief observations upon what the ophthalmoscope has done for medicine, the second part of my theme.

As has happened in like circumstances before, and as probably will happen to the end of time, when the ophthalmoscope was first brought to the world's attention by Helmholtz, much skepticism was shown as to its real value, and not a little reluctance displayed on the part of ophthalmologists, especially those of the older school, in adopting it as an essential part of their armamentarium. Perhaps I cannot better illustrate this point than by quoting a few paragraphs from a Short Account of the Ophthalmoscope, by Addinel Hewson, in the American edition of *Mackenzie on the Eye,* published, under his editorship, in Philadelphia in 1855. After giving a description of Helmholtz's ophthalmoscope, he expresses himself as follows: "A great deal more, however, has been expected of, and claimed for, the instrument than it is capable of accomplishing in the present state of its construction.

"In the first place, the great concentration of light which it produces in the eye [*sic*] renders its employment highly injurious, even for a few minutes of time in the incipient stages of disease. In cases where it can be endured, its employment for any length of time sufficient to detect all the changes which have taken place produces an excited and unnatural condition of the structures which are the subject of investigation, and might readily lead the observer astray in his diagnosis."

However, as is shown by the following quotation from Jabez Hogg's *Ophthalmoscopic Surgery,* published in London, in 1863, in spite of skepticism and pessimistic prognostications, the new instrument grew in favor rapidly, and soon came to be appreciated at its true worth. "It is indeed curious," says Mr. Hogg, "to mark how men of established reputation, who, as a rule, are averse to novelty, and unfriendly to innovation, have, one after the other, . . . surrendered their alleged objections and become the strongest advocates for the use of the ophthalmoscope, when its revelations were found to be too obviously sound to admit of being disputed. . . ."

Among the first to appreciate the true import of

Helmholtz's invention, and to acquire facility in its use, were von Graefe—to whom Helmholtz sent one of his earlier instruments—Liebreich, who was an assistant of Helmholtz's at the time the ophthalmoscope was invented; Donders and Jaeger, as has already been mentioned; Desmarres and Sichel, in France, and Bowman and Hulke, in England. Dr. E. Williams, of Cincinnati, who, in an article published in the *Medical Times and Gazette* (London), in 1854 (15), spoke of the ophthalmoscope in terms of high commendation, was the first, according to St. John Roosa, to introduce the new instrument to the knowledge of the medical profession in this country (16). He also states that he was the first to bring it to the attention of the profession in England, but in this he is evidently mistaken (17).

The names which I have enumerated one is not surprised to find connected with the early history of ophthalmoscopy; but there are others mentioned in this connection of which this cannot be said. For example, one hardly expects to be told, as Clifford Allbutt tells us in the introduction to his work on *The Ophthalmoscope,* that "Mr. Spencer Wells was among the first in England [in an article published in the *Medical Times* for September 10, 1853] to insist upon the great value of the ophthalmoscope in diseases of the eye." And, coming nearer home, we find, in a *Report of the Committee upon Surgery,* presented to this Faculty but a few months later, on June 7, 1854, by Dr. Christopher Johnston, a comprehensive and interesting account of the ophthalmoscope of Helmholtz and of several of the other early instruments. Two ophthalmoscopic drawings, by Dr. Johnston, accompanied the report, which goes on to describe how "all observers are unanimous in their expressions of delight as regards the spectacle afforded by the inner eye." And, with still more interest, we read further on that "one of your committee [Dr. Johnston] also has experimented with Helmholtz's speculum (18), in Berlin with von Graefe, in Paris with Desmarres, and in Baltimore with Professor George W. Miltenberger" (19). This description of the ophthalmoscope by Dr. Johnston was certainly one of the earliest published in this country, and it seems highly probable that the very first colored drawings of the background of the eye published in America were those which he prepared, and which, as I have said, appeared in our own *Transactions,* in 1854. The report also makes it evident that our honored confrère, Dr. Miltenberger (20), must have turned his attention to the ophthalmoscope at about the same time that Mr. Spencer Wells was pointing out its merits to the medical profession of England.

To the question, What has the ophthalmoscope done for ophthalmology? perhaps a more comprehensive answer cannot be given than to say *it has done all that Helmholtz promised it would do.* His prediction was, that it would show alterations in the retina just as the unaided eye sees them in the cornea and iris; that it would enable us to detect congestion of the retinal vessels and inflammatory exudations upon or in the retina or between it and the chorioid; that it would permit us to recognize more easily and certainly the presence and degree of opacities of the crystalline lens; that by its aid we should be able to detect the existence and measure the amount of short-sightedness and far-sightedness; and that, in short, nearly all that dissection had shown in the dead eye it would enable us to recognize in the living one. A more striking example of prevision than is afforded by these prophetic assertions of Helmholtz it would be difficult to find.

To comprehend fully the veritable revolution which the invention of the ophthalmoscope brought about in ophthalmology, one needs but to glance over the "table of contents" of any of the standard works upon diseases of the eye published prior to this period, and more especially to note, under the heading "amaurosis," the varieties and sub-varieties of this affection which are enumerated, the causes assigned for it, and the remedial measures suggested to combat it. The aphorism of Walther, "Amaurosis sei jener Zustand wo der Kranke nichts sieht, und auch der Arzt nichts," is too apposite not to be cited in this connection, though it has been quoted so often as to have become a veritable "Joe Miller."

Ophthalmology, deprived to-day of the ophthalmoscope, might be likened, perhaps, to a ship without a rudder; but, if a wind could *be* so ill as to carry away, at once, compass and sextant and rudder as well, such a ship, so bereft, it seems to me, would afford a still more apt comparison.

But ophthalmology is not the only department of medicine that is beholden to the ophthalmoscope. The specialist in diseases of the eye had hardly learned to appreciate its value, before his brethren interested in affections of the brain and nervous system began to realize how great a boon it was to them as well. Von Graefe and Sichel were among the first to recognize and point out the close relationship existing between optic neuritis and intracranial diseases. Hughlings Jackson, in London, and Clifford Allbutt, in Leeds, profiting by their suggestions, were the first to approach the subject from the standpoint of the neurologist, and they may well be called the fathers of medical ophthalmoscopy. And right well have their labors been supplemented by another English worker in this same field, Dr. W. R. Gowers, whose *Manual of Medical Ophthalmoscopy,* like Clifford Allbutt's treatise *On the Use of the Ophthalmoscope in Diseases of the Nervous System and of the Kidneys,* is too well known to need more than passing mention.

A long list of maladies, other than those of the brain and nervous system, in which intra-ocular changes, more or less characteristic and hence of diagnostic value, are revealed by the ophthalmoscope, such as Bright's disease, diabetes, pernicious anæmia, leucocythæmia, angeiosclerosis, etc., might be dwelt upon; but I have not the

temerity to tax your patience further, and, besides, unless the principle of reciprocity is to be wholly ignored, it is incumbent upon me to show you, at least, a modicum of the consideration which you have so generously accorded me, and for which I—thank you.

References.

1. Beschreibung eines Augenspiegels zur Untersuchung der Netzhaut im lebenden Auge.

2. Such is the commonly accepted view, but Jabez Hogg states that Cumming's account of his experiments fell under the eyes of Brücke the year following its publication, *i. e.*, in 1847. *Ophthalmoscopic Surgery*, p. 9.

3. *Medico-chirurgical Transactions*, London, 1846, p. 283.

4. For much interesting information regarding the life of Babbage I am indebted to an unpublished biographical sketch of him by Mr. Barnes, which he has kindly placed at my disposal.

5. *Life of Helmholtz*, by John Gray M'Kendrick, p. 73. Longmans, Green & Co., New York, 1899.

6. *Op. cit.*, p. 25. Instead of a *concave* lens (ocular), he says, we may use two *convex* lenses, the first of which would form an *inverted* (*"umgekehrt"*) image of the retina, which would be magnified by the second. From his description it is evident that both of these lenses were placed *behind* the reflecting glass plates, one as near to the observed eye, and hence to the plates, as possible; the other, close to the eye of the observer. With the feeble illumination afforded by his ophthalmoscope, this was, doubtless, the only practicable method of obtaining an inverted image.

7. *The Ophthalmoscope*, Zander, translated by Brudenell Carter, p. 11. Robert Hardwicke, London, 1864.

8. It is said, upon what seems to be good authority, that the ophthalmoscope, which Anagnostakis described as his own, was "precisely like" one which von Graefe had previously shown him in Berlin. (See Addinel Hewson's account of the ophthalmoscope in the American edition of *Mackenzie on the Eye*. Phila., 1855.)

9. *Accommodation and Refraction of the Eye*, p. 331.

10. *Oesterreichische Zeitschrift für praktische Heilkunde*, No. 10, March, 1856.

11. In a communication upon the History of the Ophthalmoscope as an Optometer, *Medical Record*, New York, Vol. ix, p. 132, 1874.

12. *Boston Medical and Surgical Journal*, 1877, Vol. xcvi, p. 105.

13. *Transactions of the American Ophthalmological Society*, 1878, Vol. ii, part 4, p. 489.

14. Memorial tribute, *Transactions of the American Ophthalmological Society*, 1888.

15. The article, which was probably written two or three months previously, appeared in the number for July 1, 1854.

16. *Diseases of the Eye*, p. 135, New York, 1894.

17. A translation, somewhat condensed, of Helmholtz's original account of his ophthalmoscope, by Dr. W. R. Sanders, was published in England in the *Monthly Journal of Medical Sciences*, in July, 1852, and was reproduced in this country, in the *American Journal of the Medical Sciences*, in July, 1853.

18. In the earliest accounts in English of Helmholtz's invention, *"eye-speculum"* was used as the equivalent of the German "Augenspiegel." In his *Wörterbuch der Augenheilkunde*, Hirschberg tells us (p. 73) that the word *"ophthalmoscope"* was first employed in the sense in which it is now understood by Anagnostakis in his description of a "Nouvel Ophthalmoscope," published in 1854. In this he is, evidently, in error, for I find the word used in the same sense, in both English and French, prior to this date. Some Account of a New *Ophthalmoscope* is the title of the paper by Mr. Spencer Wells, already referred to, which, as stated, appeared in the *Medical Times and Gazette* for September 10, 1853. It seems not improbable that E. Follin was the first author to write of the *"ophthalmoscope,"* for, in the *Catalogue of the Surgeon-General's Library*, I find this entry: *"Follin*, Ophthalmoscope. Bull. Soc. de Chir. de Paris, 1851-52, ii, 480"; and, again, "Notice sur l'ophthalmoscope de MM. Follin et Nachet. *Ann. d'occulistique*, Bruxelles, 1852, xxviii, 76-86."

19. *Transactions of the Medical and Chirurgical Faculty of Maryland*, 1854, Vol. i, p. 51.

20. For many years professor, and now emeritus professor, of obstetrics in the University of Maryland.

AN INTRODUCTION TO THE PSYCHOLOGICAL STUDY OF BACKWARD CHILDREN.

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It is often difficult for one who may be well grounded in the principles of his own science or profession to realize that, in order to understand some important and difficult questions placed strictly within the limits of his own subject by the classification in common use, he must transfer his study to fields which at first sight seem to be entirely outside of his own proper sphere of work. There is no better illustration of this than in the subject before us for study this evening. To gain a proper appreciation of the study of mentally defective and backward children, one must look at it from the standpoint of the psychologist and teacher as well as of the physician. The study of the normal as well as of the abnormal child belongs equally to all three professions. "The study of physiology," says Bain, in beginning his work on *Education as a Science*, "is the theoretical guide in finding out how to rear living beings to the full maturity of their physical powers. The art of education assumes a *certain average physical health* and does not inquire into the means of keeping up or increasing that average." Yet every family physician realizes how constantly the children under his care vary in their physical condition, and no one doubts that the science of education must adapt itself to their varying needs. When it comes to the abnormal children who, from faulty physical or mental development, are more or less below the average, while we are well aware that in the past the public systems of education have taken little cognizance of these defectives, and even the feeble-minded children of the wealthy have often had less skilled educators than their normal brothers and sisters, it would seem to be one of the most important questions connected with education.

and one that deserves attention from the public and careful study on the part of the medical profession.

For this reason, all discussion of the work of scientific education as applied to the class of defective and backward children is valuable.

The medical profession has certainly realized the importance of psychology of late. The development of such annoying fads as "Christian Science" and allied forms of "mental healing" which are attaining certain definite results in individual cases, not always obtained by ordinary methods of therapeutics, must convince the most sceptical of the value of suggestion, for suggestion is one practical application of psychology and pseudo-psychology, no matter how crude and vulgar its methods may be. Suggestion has usually been at the bottom of the cures attained by the various quack medicines. Suggestion has been doing its work in influencing the minds of men from the earliest days of witchcraft and miracles up to the present. Mesmerism and "animal magnetism" were long in losing their cloak of mystery, and in later years the subject of hypnotism has only recently been placed in its correct place as dependent upon and associated with suggestion.

But suggestion has far outgrown its original limits as a part of quackery and as a part of hypnotism and ordinary therapeutics. In a recent work by Binet, representing the position of the modern French school, a study of the relation of suggestion to education is made, and all children are classified as follows with reference to their suggestibility:

1. Children who are more or less of an automatic type, who obey passively the will of their teachers. They are models of discipline and represent the average "good" school child.

2. Sensitive children, from whom obedience is obtained by an appeal to their emotional nature, who respond to suggestion most readily when it is based on an appeal to their affections.

3. Those children whose minds are active and bright, who have a sharply defined personality, upon whom it is difficult to act definitely by suggestion unless by calling up the spirit of overcoming an obstacle. They do best what they are told they cannot do.

4. The class who are obstinate and rebellious to all suggestion or incapable of following any suggestion whatever. This class includes all undisciplined, insubordinate children and a large class of neurotic and degenerate types. In this class are the children who are morally perverse and eventually become interesting from the standpoint of criminology. It includes all backward and feeble-minded children and the mentally defective in various ways.

Recognizing the truth of a rough classification of children with reference to their suggestibility, for suggestibility must be the basis of methods used in education, we realize how grave is the problem of children who must be included in the last class. Before any progress can be made in studying the care of this class of defectives we need something more satisfactory as a classification of its various types, which all agree in being unable to respond to suggestion as normal children do, and which even at the best give so much trouble to their teachers by their defects or perversity that they must be placed outside of the class of children who are properly considered as candidates for the ordinary schools.

There are included with them neurotic children, who, at first sight, might seem to belong to this class from their actions and mental condition, who are really suffering from symptoms of hysteria or epilepsy or chorea. Temporarily they would seem to belong to this class, yet they are capable of such improvement, and not infrequently are mentally so much brighter than other children, if their physical health is improved, that they may better be classed with the sick rather than the mentally defective children. A fifth class might be made for this type of cases, based on their suggestibility, including all children whose suggestibility is excessive and abnormally great, as is usually the case in the hysterical and allied conditions.

It is remarkable how little attention the books on mental diseases give to any of the psychological conditions lying between what is normal and such hopeless conditions as imbecility and idiocy. There are many such intermediate conditions of abnormal mental development which are regarded by relatives, physicians, and teachers in various ways. Some of these cases at first sight are wrongly taken to be really idiocy or imbecility. Others vary from the normal only by defect in some single faculty of the mind. Every school contains pupils who are regarded as generally backward and stupid, when their entire trouble lies in one single mental faculty.

In every one of these cases, if we would rightly interpret the individual mental conditions, we must cease considering the words "backward or mentally defective child" as a diagnosis and make as careful an examination of each mental faculty as we would make of each separate organ of the body if we were expecting to make a clinical diagnosis. Such an examination may yield the key to the future mental development of the child in an entirely unexpected direction. Two other general terms to be used with utmost care are degeneration and heredity. The study of these two subjects during the last years has certainly cast some light on the subject of defective children, and yet at the present moment no word is more often misapplied than, or applied in so many different ways as, the word "degenerate," and no laws are blinder than the so-called laws of "heredity." Some of the defective children present a history of definite physical disease or definite traumatism before, during, or after birth. Some are born into the world with their tissues poisoned or weakened from disease inherited from their parents. Some give no clue to any definite organic disease, and the pathological findings at autopsy

show in some cases definite lesions of the brain, in other cases nothing tangible. But the mental condition in these cases, however varied may be their ætiology or pathology, is often identical. For this reason it is better to make a detailed study of the individual mind in question and to ignore the obvious pathological conditions and the heredity for the time being.

To illustrate this I will invite your attention to a case which at first sight would seem to be an ordinary, typical case of a feeble-minded child, in order to illustrate the difference between a medical and a psychological diagnosis:

G., a boy aged sixteen; parents nervous, but otherwise unusually healthy people, who had suffered from the strain of intense business worry during the year before his birth. Birth instrumental, with definite asphyxia on the part of the baby, said to have lasted an hour, followed by convulsions, which recurred at frequent intervals for a week, but not afterward. Dentition, walking, and talking much delayed. He was sent to school when eight years old, but made slow and unsatisfactory progress. His disposition was obstinate and selfish, but affectionate at times to his parents, though he was generally eager to annoy them in little ways. He was a bad stammerer, using violent gestures when excited.

The physical examination was as follows: Head rather microcephalic. Palate, high-arched or Gothic. No paralysis or contracture. Physique that of a tall, splendidly developed boy, with no definite stigmata of degeneration except the arched palate. His general health was not good; he was constantly complaining of symptoms referable to constipation and torpid liver. His mind was changeable, easily excited, and obstinate. He lacked application. He would not associate with any other boys but his brother, or play in any sport excepting pool and billiards. His father stated that he was profane in language and fond of low company. My diagnosis was asphyxia at birth, with probable resulting minute meningeal hæmorrhages, mental weakness, and instability of the type seen in the majority of such cases, following asphyxia or convulsions in early infancy.

As a psychological study the case presents a different appearance. The only line of treatment beyond methods directed toward the nervous symptoms was some form of definite instruction partly for the stammering and partly for the general ignorance. I found that he was able to read, but absolutely unwilling to read anything except sensational newspapers. He could write, but would not write anything but his name. He stammered as badly with his pen as with his voice. It seemed absolutely impossible to interest him in any subject that would ordinarily appeal to boys, with the single exception of prize-fighting and sporting matters. He took some interest in a typewriting machine with which I tried to train him, with the idea not only of getting him to do something and improve his spelling, but chiefly to demonstrate how much attention he could develop and maintain. I discovered that in spontaneous attention, meaning thereby the natural attention to ordinary subjects of casual conversation, he was not absolutely deficient, but that voluntary attention was a faculty in which he was so deficient that I feel justified in calling the basis of his trouble a definite disease of the faculty of voluntary attention. He was seemingly unable by any effort of his own to concentrate and to hold his attention. But in spelling he would often balk at words of one syllable, while spelling long words correctly. When at one time, hoping to find a subject that would interest him, I asked him to write an account of the Corbett-Fitzsimmons fight, which had just occurred, to my surprise he wrote a full page, giving a complete biography of each pugilist, the number of battles each had fought, and the number of rounds in each (quite a feat of memory for any one).

I concluded that the defect or disease of the will was more responsible for his condition even than the lack of attention. In many respects he was morally obtuse, and the condition might have been called in ordinary language simple obstinacy and moral ugliness of disposition. But a year's continuous study of the case made the diagnosis of a disease of the faculty of will seem definite. He was as unable to compel or direct his attention or control his mental activity as he was to control his stammering. He had partial control of each, not more. Both conditions improved remarkably when the general health was improved by drugs, and under these circumstances a genuine all-around improvement was evident to every one, but a fit of constipation seemed often to undo it all for the time being.

The older works on psychology divided the mind into sharply defined sub-divisions and considered each one of the different mental faculties as if it could act by itself, independently of all the others. This system, though certainly convenient, is no longer considered good psychology, for each mental faculty is too closely dependent on each and every other mental faculty to permit such accurate vivisection or physiological isolation. But in conditions of disease or in the distinctly abnormal mind the disassociation which has already taken place, even in the milder cases, makes the method of sharply differentiating mental faculties not only permissible but necessary.

In our study of mentally defective children we may distinguish:

1. Those in whom the *faculty of perception* is deficient, and this includes all those who have been born defective in their special senses, the blind, the deaf, and the dumb, who can only develop mentally by some vicarious education of other faculties. In the extreme types we have the so-called idiots by deprivation, who are idiots simply because they lack certain special senses.

2. Those children who, in spite of possessing all special senses and power of perception, lack the *power of attention,* without which the most painstaking instruction or frequently repeated suggestion is without result. In its worst degree, where attention is not to be aroused by any stimulus from without or within the mind, we have the idiot in his various types, showing, as has been so clearly noted by the recent French writers, in what a defective condition the human mind is bound to remain for life if the single faculty of attention is lacking.

Those children who fail absolutely in attention do not seem to be able to advance in any other mental fac-

ulty. Those who can by some form of stimulus have a moderate degree of attention aroused will respond to instruction and make definite progress. It would seem as if the possession of a very little power of attention would give a chance for the conscientious teacher to increase it to an indefinite degree. It is on this principle that most of the practical methods for training defectives are based. But, unfortunately, when we add to the fact that the method of using the mind in an individual child is faulty the fact that the innate power of using the mind and directing its attention is feeble, we shall understand the difficulty of the problem. It is, unfortunately, true in a very sad and literal sense that many of these defective children are "born tired," and this fatigue of the brain cells, in the same way as the fatigue produced by every kind of motor exertion, is so soon developed by any attempt to exercise it that it is hard to get any prolonged work of any kind done. Even the brighter defective children tire quickly in physical and mental activity. Others seem to lack the strength to begin. Attention is in its nature a motor function. It is associated with a definite muscular activity, active for certain muscles, inhibitory for others. It is rather the rule where failure in attention is serious to find other defects of motor functions, such as muscular tics, stammering, choreiform or epileptoid movements, an old paralysis or contracture, or athetoid movements of one or more extremity.

In those feeble-minded children less seriously affected various conditions will be seen where the attention is moderately deficient, spasmodic, fluctuating, or only occasionally in evidence. In fact, there are few normal children who do not show some evidences of inattention, but in their case the simplest devices of the teacher's art secure their attention again. In the pathological cases, to gain or hold the attention is a very different matter.

The third class is one which is characterized, not by defect of special senses or the power of attention, but by *defect or disease of the will.* Of this, the case reported is in some respects an example.

3. Diseases of the will may be classified as follows:

(*a*) Impairment of the will by defect of impulse, varying from sluggishness or irresolution, not uncommon among children, to extreme types of what is called abulia, or "idiocy of the will," which is a complete lack of will power and decidedly rarer. Persons of this sort suffer from a relative insensibility affecting the emotional life and often develop a definite psychic paralysis which may appear like a definite organic paralysis of the body or a part of the body. (*b*) The will may be impaired through a morbid fear or a fixed idea; among children this is usually regarded by parents as a silly notion of an imaginative child and not anything serious, and in reality it seldom persists long in any one definite form. In adult life these phobias, or minor fixed ideas, are common enough. They affect the will directly in proportion to their persistence and intensity. In childhood definite fixed ideas or lasting imperative conceptions are sometimes found. As a basis for the failure of volition exhibited in mentally defective children the possibility of hidden, fixed ideas must not be forgotten. (*c*) The will may be impaired through some excessive impulse which may be instantaneous in its onset or something more gradual. The passionate outbursts of children, especially common in those of an epileptic tendency, illustrate this. Even homicide or suicide may result, sexual misdeeds or other criminal deeds. (*d*) There may be impairment of the will due to a *lack of power of attention.* This may be congenital, as in the case reported, or acquired, as seen in various neuroses and psychoses. Chorea is an example of the acquired form of loss of voluntary attention where often, even before the motor restlessness has developed, a failure in attention and of will power becomes evident in a child previously studious. Nervous conditions produced by overwork sometimes show this symptom, and frequently the temporary mental changes which may develop during the period of puberty. (*e*) The will may be limited or practically destroyed by being controlled by the *caprices of hysteria.* This loss of will power is probably one of the most constant of all the symptoms of hysteria, whether in an adult or in a child. (*f*) The will may be in abeyance in conditions allied to *hypnotism* which are seen in childhood, chiefly in connection with morbid religious revivals and similar mental excitements. The state of hypnotism itself, if developed in a child for experimental purposes, is an example of temporary abeyance of will power.

4. While attention and will are in a way associated with motor functions, the *higher, or cognitive, powers of the mind* seem more related to the sensory functions. A child may be normal in perception, attention, and will, and yet decidedly deficient in reasoning faculties. The simplest use of language or thought calls for the ability of the mind to analyze or put together various facts represented by the words of the sentence spoken, heard, or thought. This faculty has made tremendous strides in developing in a normal child by its third or fourth year. But an older child who for any cause has not developed it, and who does not reason or make any advance in what is commonly called judgment or common sense, is best characterized as a *fool* rather than an idiot or imbecile. Such a child may not be considered at first a feeble-minded child, but when he grows older and shows absolute lack of judgment in every way for which his growing responsibilities give an opportunity, it is only too evident that from the beginning he was a defective and more or less of a fool.

Those educators connected with the schools for feeble-minded will agree to the statement that many a semi-idiotic or imbecile child that has received the best special education will remain in the end in this class of foolish children, lacking judgment and common sense. But this is infinitely higher than where he started.

5. There are cases where the child has normal senses, power of attention, will power, and reason, but fails in *memory,* or the power to recall what may have been acquired in the near or remote past. These amnesias occur in a progressive form after meningitis and excessive masturbation and acutely after traumatism, epilepsy, severe mental shock, and various febrile conditions and intoxications. They are marked in imbecility developing in the later years of childhood and in the acute psychoses of the period of puberty.

6. The last and most important class is that of *the morally defective.* To develop attention, will, and reason, a moral basis is necessary. Mere curiosity will only insure a low degree of attention and progress. A certain amount of ambition and self-respect must be developed to insure any real mental development. Under the class of moral imbeciles are types of children who are inherently bad and practically incurable. The study of this type is really the study of criminology, at least of juvenile criminals. Bad as the prognosis is, for degeneracy seems to have its fullest development in the genuine moral imbecile, the necessity of a correct psychological diagnosis is even greater here than in any other division of this classification, of which moral imbecility is the last stage. There are many minor degrees of moral deficiency.

In closing, it will be necessary to make one more class in answer to the criticism that will certainly be made of my classification, that such sharply defined types with pronounced defect of only one mental faculty do not, as a rule, occur; and that most feeble-minded children are affected, to a greater or less degree, in all their mental faculties. This is true of a large number. There remains a class showing *mental stupidity,* which is the simplest term for uniform mental deficiency affecting the different mental faculties at the same time. Such children, though possessing special senses, do not really perceive. Attention, volition, reason, and moral faculties are not and cannot be developed to any great extent. This condition in its milder degree is stupidity; in its more pronounced degree dementia. It stands apart from the special conditions which have been described in detail.

28 West Sixty-first Street.

INGUINAL BUBO AS A COMPLICATION OF MALARIAL FEVER.

By A. C. SMITH, M. D.,

PASSED ASSISTANT SURGEON, UNITED STATES MARINE-HOSPITAL SERVICE.

My attention has been attracted a number of times within the past dozen years to a group of symptoms which I have never seen described in any text-book on medicine or in current medical literature, and which may be of special interest and importance to report at the present time. The group consists of inguinal bubo associated with malarial fever, the bubo being most commonly non-suppurating and the fever of the æstivo-autumnal type, though not invariably so. The bubo, in the cases which I am about to report, occurred without suspicion of venereal infection and was clearly secondary to the fever and dependent upon it.

The cases are presented solely as a clinical study. I regret that no blood examinations can be given with them. All were observed before the day of universal blood examinations in malarial fevers had arrived. The course of the fever and the mode of recovery in each are sufficiently distinctive, however, to place the diagnosis beyond probable dispute.

Case I.—No clinical notes at hand. Supplied from memory. The patient, a colored man, was in one of the wards of the Marine Hospital at Stapleton, Staten Island, in the early part of the year 1889, suffering with necrosis of the toes as a result of frostbite. No septicæmia or confined pus. Temperature running normal. One day, about noon, he was seized with a chill, ushering in a sharp rise of temperature. At the same time a considerable swelling appeared in one groin, reaching its maximum quickly and causing the patient much pain. There was no trace of inflammation of the lymphatics or veins leading up the leg from the toes, or of erysipelas or other local infection. The fever went off with a profuse sweat before the following morning. An abundance of quinine was given and there was no return of the attack. As the fever subsided the bubo disappeared and left no trace.

Case II.—Observed at Galveston, Tex. A native of Denmark, aged thirty-three years. Admitted to hospital August 12, 1891. The patient has a large and very ripe suppurating bubo in the right groin. The bubo appeared about four weeks ago. He does not know of any recent venereal infection which he has had and there is no evidence of any venereal sore. Says he has had no sexual contact within three months. Has not been feeling well for a couple of weeks. At first the bad feelings seemed to come every other day. Appetite poor and bowels inactive. Has taken no medicine. Temperature, 38° C. on admission. Treatment, a calomel cathartic.

August 13th.—The bubo was opened freely and flaxseed poultices, made up with bichloride solution, applied. ℞ Liq. potass. arsenitis, three drops t. i. d.

August 14th.—Dose of Fowler's solution increased to four drops. Fever absent this morning.

August 15th.—Temperature up again. Calomel repeated. Fowler's solution stopped and quinine bisulphate ordered in ten-grain doses, with two and one half grains of capsicum, at 6 and 7 A. M. to-morrow.

August 16th.—Three doses of the quinine bisulphate, with capsicum, ordered for to-morrow morning and thereafter till stopped. Iodoform dressing applied to sinus in groin.

August 19th.—Slight variations of temperature continue. Sinus in groin closing slowly.

August 21st.—A calomel cathartic again.

August 23d.—Quinine bisulphate continued without the capsicum.

August 25th.—Four ten-grain doses of quinine bisulphate given—at 6, 7, 8, and 9 A. M.—after which the

drug was stopped for the present. A calomel cathartic given.

August 28th.—Quinine resumed.

September 4th.—Quinine stopped.

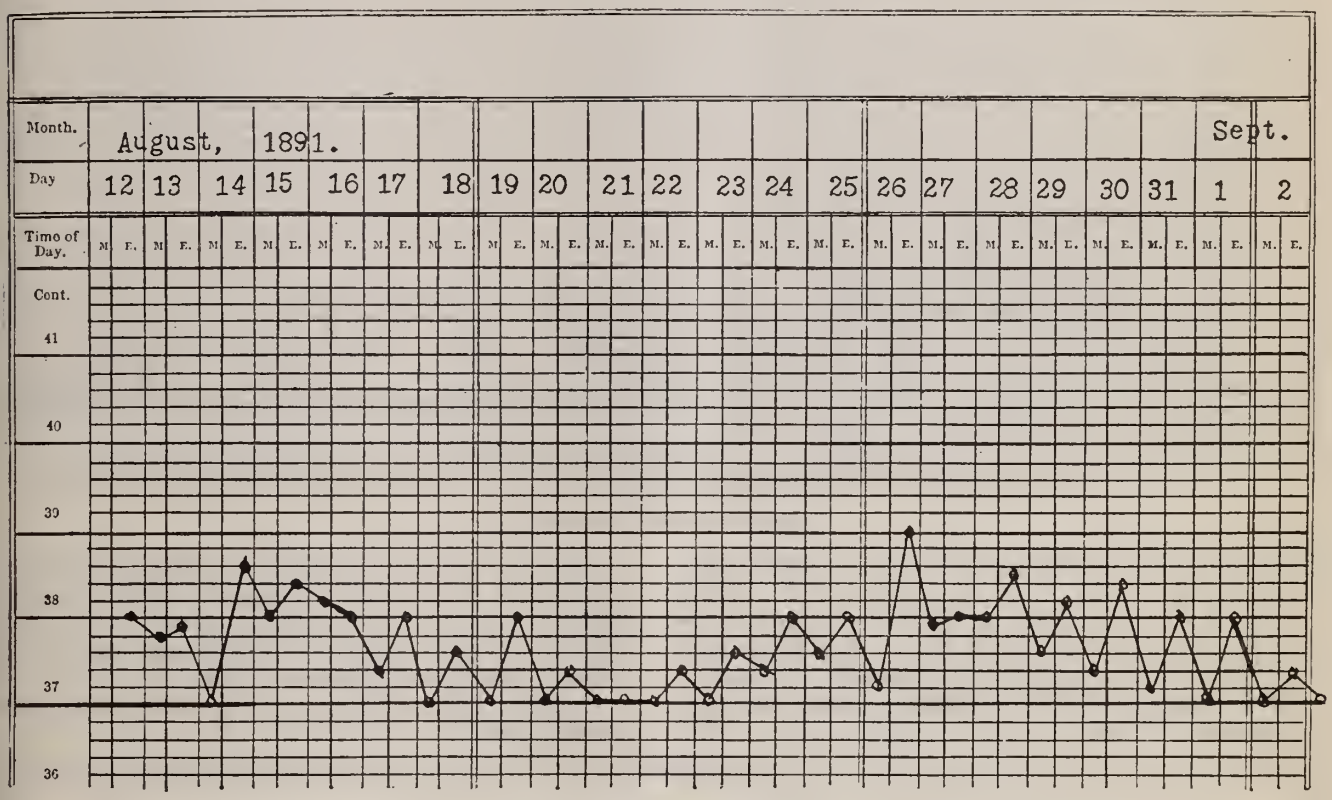
September 8th.—℞ Liq. potass. arsenitis, three drops t. i. d., increasing the dose by one drop each day up to eight drops.

September 10th.—Fever absent. Wound in groin closing rapidly.

September 2d.—Temperature almost down to normal. Patient had slight diarrhœa.

℞ Calomel. . . . . 3 grains;
Bismuth subnitrate. . . . . 15 "
Ipecacuanha. . . . . 3 "
Dover's powder. . . . . 7½ "

M. Divide into three powders. *Sig.*—One at 10 A. M. and at 1 P. M. and 5 P. M. to-day.



Temperature Chart for Case II.

September 14th.—Fowler's solution stopped at morning visit. Later in the day the patient had a chill, with moderate fever, and an acid solution of cinchonidine sulphate was ordered.

September 23d.—All medicine stopped.

September 26th.—Fever has been absent since September 15th. Groin healed. Discharged, recovered.

Case III.—Observed at Galveston. A native of Nova Scotia, aged twenty years. Admitted to hospital August 27, 1891. The patient applied for treatment, complaining of bubo in the right groin. The glands were found to be indurated, and slight induration of the glands in the left groin also existed. As there was no sign of venereal infection, I inquired for symptoms of fever and found that the patient had not been feeling well for a week, and had apparently had an exacerbation of fever the day previous to admission. Temperature on admission, 38.6° C. Tongue coated white. Bowels had been acted upon with a cathartic. Temperature rose to 40° C. at evening. ℞ Quinine sulphate, in ten-grain doses, at 6, 7, and 8 A. M. daily, beginning to-morrow.

August 28th.—Stramonium ointment applied to both groins.

September 1st.—Quinine increased to forty grains daily, given in morning doses as before.

September 3d.—Diarrhœa not yet checked; continue treatment.

September 5th.—Diarrhœa has ceased. Temperature normal this morning for the first time since admission.

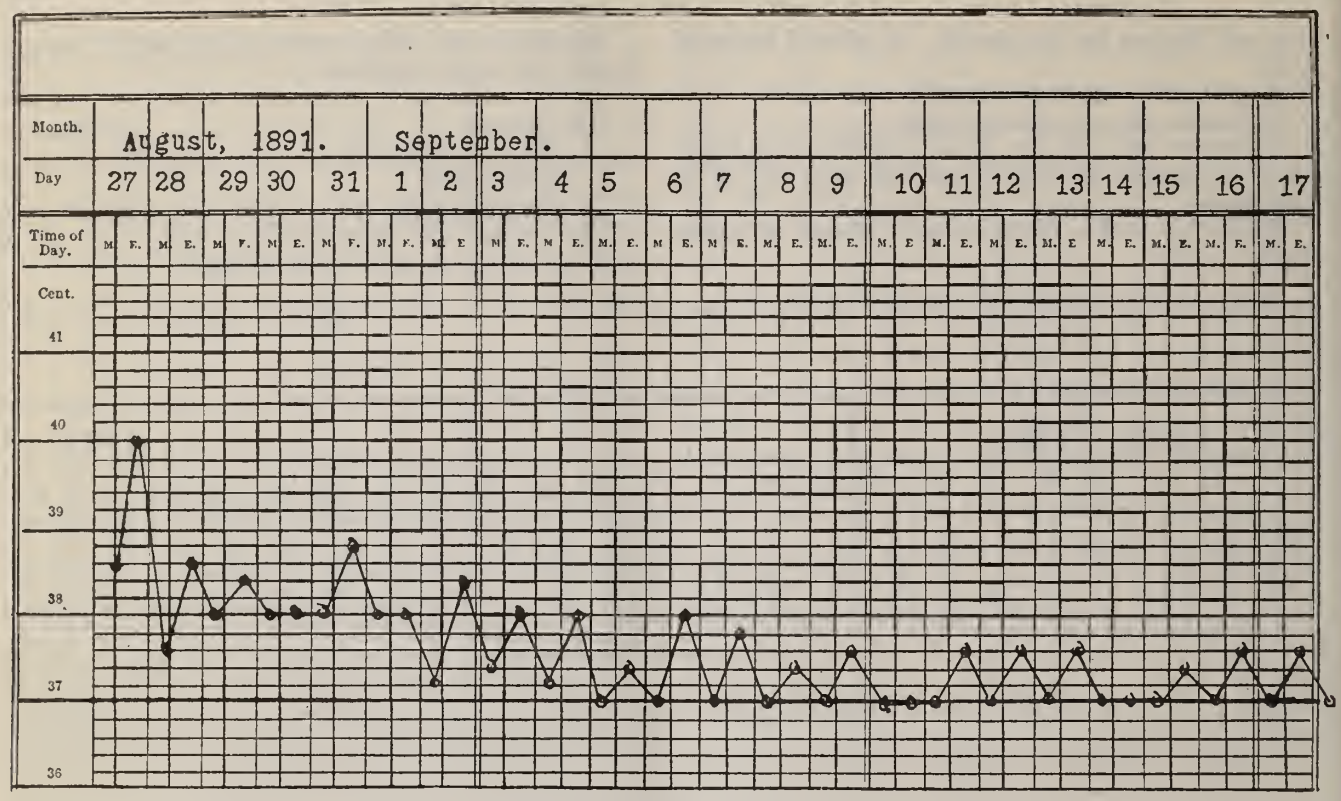
September 7th.—Quinine stopped.

September 8th.—Slight variations of temperature continue. ℞ Liq. potass. arsenitis, three drops t. i. d., increasing the dose by one drop each day up to eight drops.

September 14th.—The buboes have almost entirely disappeared. The patient looks puffy about the eyes from too much arsenic. Fowler's solution stopped and an iron tonic given.

September 20th.—Discharged, recovered.

Case IV.—Observed at Galveston. A native of Norway, aged twenty-eight years. Admitted to hospital February 9, 1892. Patient has an inflamed bubo in the right groin and a temperature of 38.4° C. The bubo made its first appearance nearly two weeks ago. He has had a few chills at irregular intervals, but has been ill every day without intermission. Lately arrived from Morgan City, La. Tongue red and flabby and lightly coated. Bowels rather loose. A moderate calomel cathartic was given and quinine sulphate ordered in ten-



Temperature Chart for Case III.

grain doses at 6, 7, and 8 A. M. to-morrow. Bubo poulticed.

February 10th.—Temperature continues nearly the same; patient had a chill about 5 P. M. yesterday. Quinine to be given in the same way to-morrow as to-day.

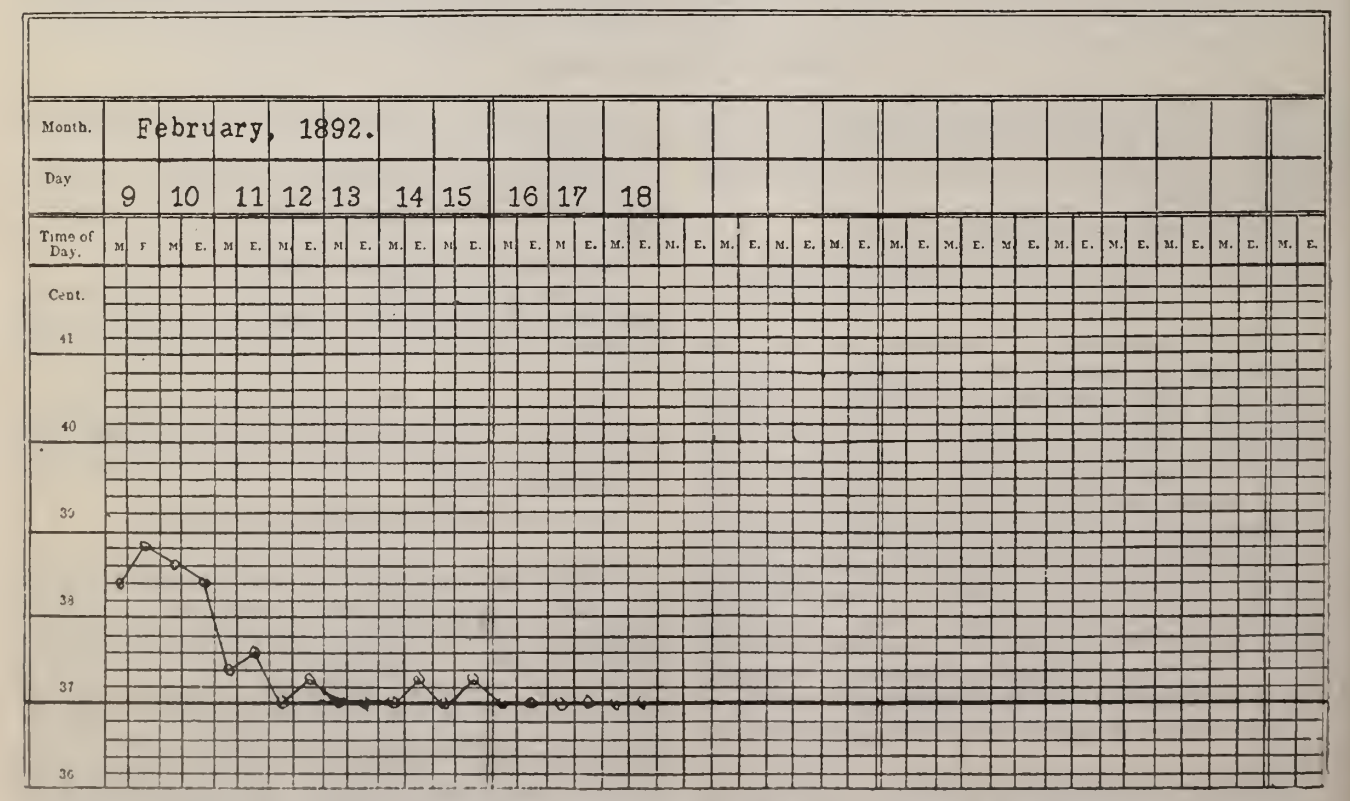
February 11th.—Fever declining. Quinine ordered to be repeated daily.

February 12th.—Temperature normal this morning.

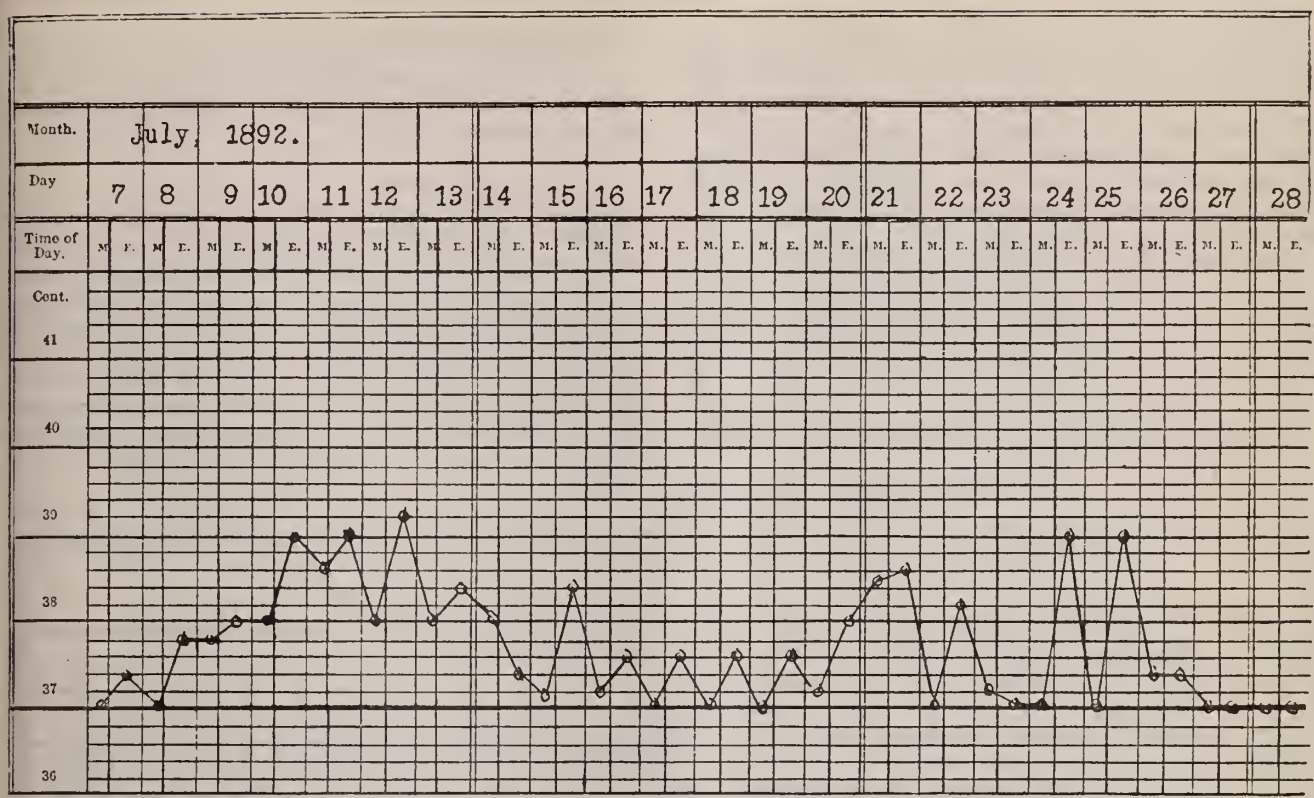
February 14th.—Bubo unchanged; poultice discontinued.

February 15th.—Quinine stopped and tincture of iron, with arsenic and strychnine, given.

February 18th.—Cod-liver oil, with malt extract and whiskey, given.



Temperature Chart for Case IV.

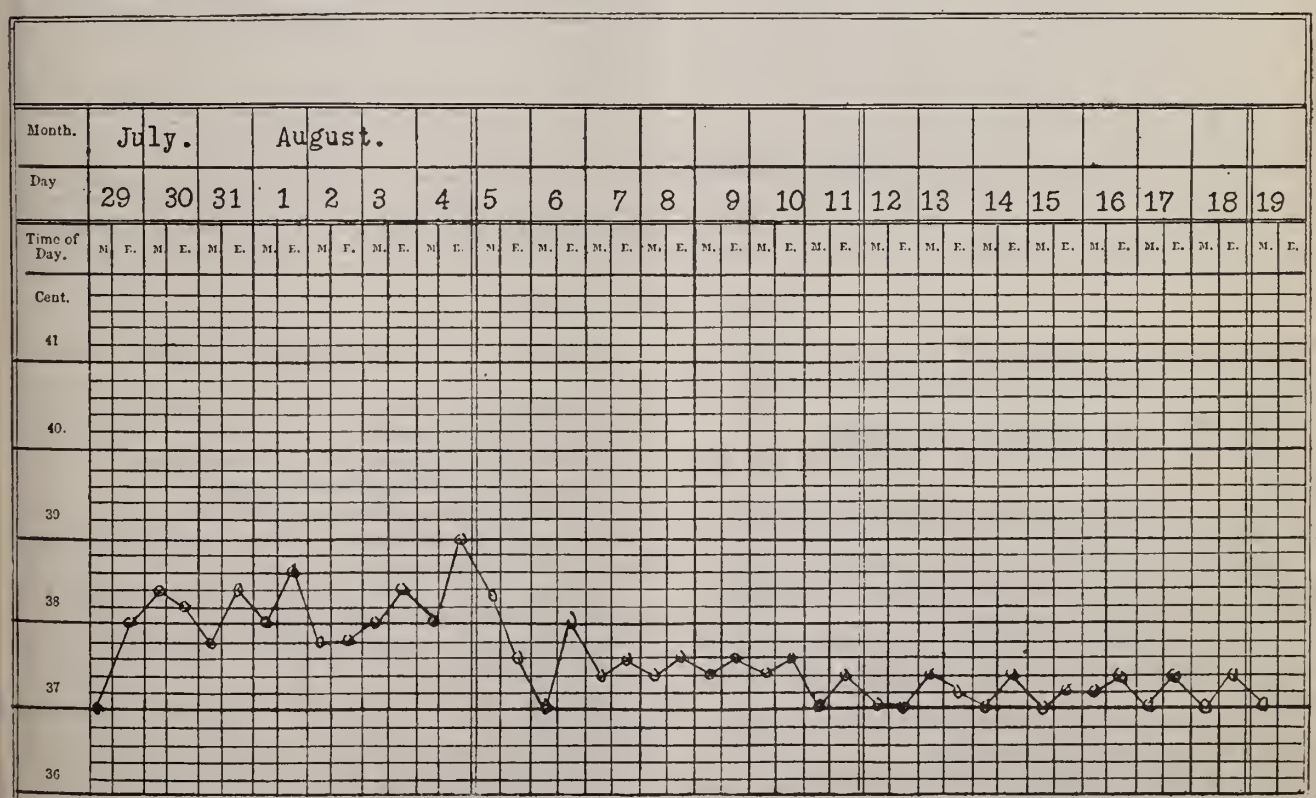


Temperature Chart for Case V.

February 20th.—The patient has had no fever since the 12th and is getting strength rapidly. The bubo is decreasing in size. Discharged from hospital and continued as an out-patient, and treated with the cod-liver oil mixture above noted and a tonic of iron, quinine, strychnine, and arsenic.

The patient was under observation until March 15th, at which time the bubo had disappeared, only slight induration of the lymphatics in the affected groin being perceptible to the touch.

Case V.—Observed at Galveston. A native of Norway, aged thirty-six years. Admitted to hospital July 7, 1892. The patient has a bubo in the left groin, with-



Continuation of Chart for Case V.

out any sign of venereal infection. He says that about twelve days ago he knocked against a pump-handle aboard the vessel, and he thinks that the bubo originated from that light blow in the groin. He is habitually constipated; looks cachectic. He received out-treatment two days ago and a cathartic was given him, but without effect. A mild cathartic and a tonic of iron, quinine, and strychnine given. Bubo poulticed.

July 8th.—It turns out that the patient has fever, of malarial type, which is probably the cause of the bubo, rather than the light blow in the groin ascribed by him as the cause. Previous medicine stopped and quinine sulphate ordered in ten-grain doses at 6, 7, and 8 A. M. daily (to-day at 9 and 10 A. M.).

July 9th.—Stramonium ointment applied to bubo instead of poultice.

July 11th.—Fever has increased in spite of quinine, which is therefore stopped. ℞ Liq. potass. arsenitis, three drops t. i. d., increasing one drop daily till eight are reached.

July 12th.—Applications to bubo stopped.

July 16th.—Fever has become intermittent and quotidian.

July 21st.—Slight tendency to diarrhœa has succeeded to inactivity of bowels.

July 24th.—Fowler's solution stopped and a tonic of arsenic, strychnine, quinine, and tincture of iron given.

July 26th.—Bubo disappearing.

August 2d.—Some return of fever since July 29th. Previous medicines stopped and treatment with quinine resumed.

August 7th.—Quinine bisulphate and capsicum substituted for quinine sulphate alone.

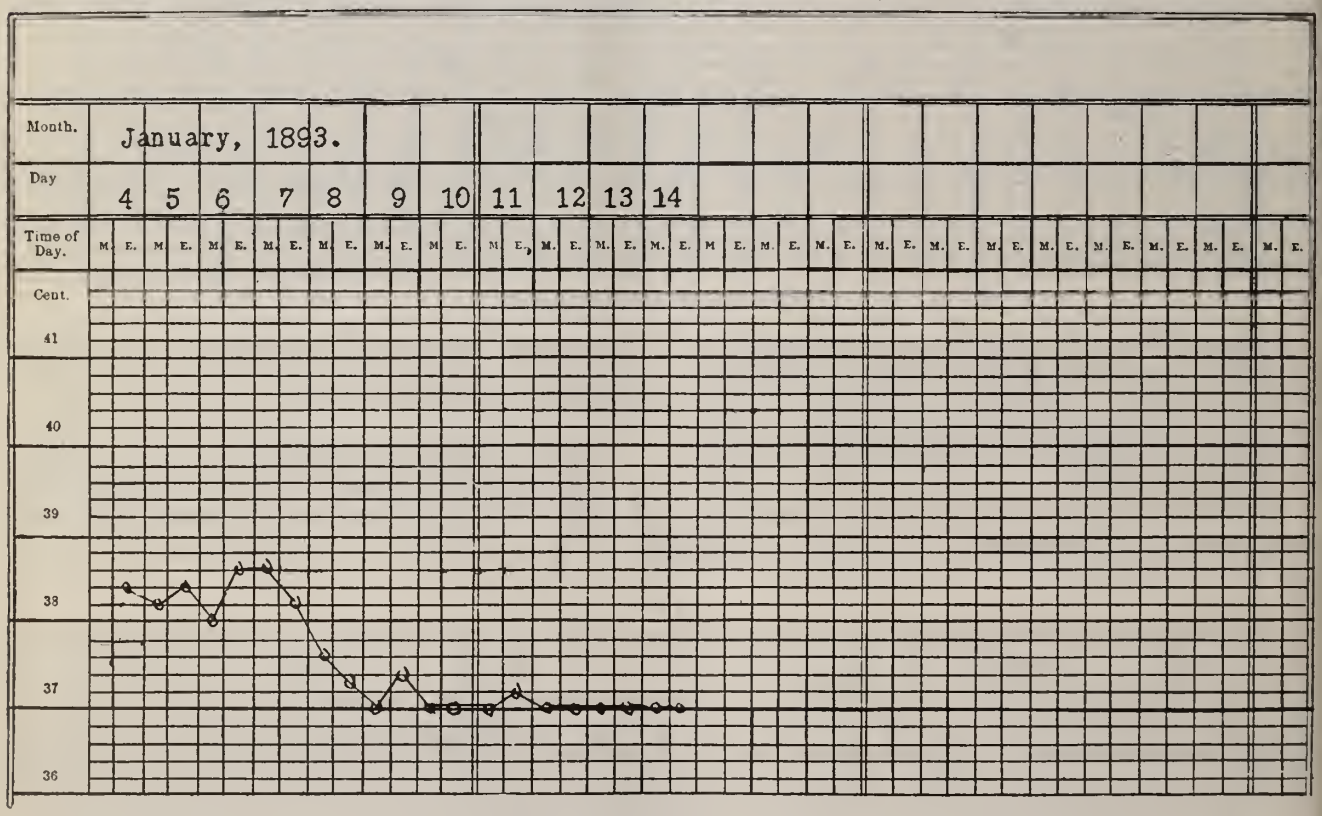
August 10th.—Quinine and capsicum stopped and Fowler's solution given again.

August 18th.—Improving rapidly.

August 22d.—Discharged, recovered.

A week later the patient was seen and had a slight return of fever. Tonics were given. Hospital treatment was not required.

CASE VI.—Observed at Galveston. A native of Denmark, aged thirty years. Admitted to hospital January 4, 1893. Patient has a large inflamed bubo in the left groin, which has been fifteen days in reaching its present condition. He has no sign of any venereal trouble and gives no history of such disease. He received treatment in this hospital for intermittent malarial fever from November 24 to December 2, 1892. Says he has had a feeling of fever every night for nine days past. Temperature on admission, 38.4° C. Stramonium ointment applied to bubo and Fowler's solution administered internally.



Temperature Chart for Case VI.

January 5th.—Bowels inactive; calomel cathartic given.

January 6th.—Treatment with quinine sulphate added to that with arsenic.

January 8th.—Application to bubo stopped.

January 9th.—Temperature normal.

January 11th.—Quinine stopped.

January 12th.—Fowler's solution stopped and tincture of iron and strychnine given.

January 15th.—Fever continuously absent, but bubo increasing in size. Poultice applied.

January 20th.—A change made to stramonium ointment locally.

January 23d.—Bubo is very tender and is softening superficially.

January 27th.—Tincture of iodine substituted for stramonium ointment locally.

January 31st.—The bubo was opened, but only blood was discharged from it.

February 2d.—No suppuration has taken place from the bubo and the wound is closed.

February 5th.—The swelling in the groin is decreasing in size and becoming less tender.

February 8th.—Discharged, recovered.

The cases are reported as they were recorded from day to day, which seems the most practicable way of showing their character. Besides the foregoing, I observed others at Galveston, of which I have no notes, and one or two at Memphis, Tenn. I have lately seen a case at New York, in the person of a sailor running between this port and Havana, but, unfortunately, only one examination of his blood was made before quinine was administered, and as that examination was not entirely satisfactory I omit reporting the case in detail. Free pigment granules were seen, but the plasmodium itself was not captured in that single search. I hope the attention of other observers will be attracted and that cases will be reported in which a thorough examination of the blood has been made. Such reports are most likely to come from tropical or subtropical regions.

In *Public Health Reports* for May 3, 1901, a report by Assistant Surgeon Stansfield, U. S. Marine-Hospital Service, from Cebu, Philippine Islands, mentions the existence in that island of a large number of cases of mild fever, rarely fatal, accompanied by glandular enlargement. It will be interesting to know what these cases prove to be on investigation.

Our Subscribers' Discussions.

I.

WHAT IS THE BEST WAY OF TREATING THE STUMP OF THE UMBILICAL CORD?

1. *Dr. Clarence L. Kilbourn, of New Haven, Conn.* (who takes the prize), sends the following:

Preface.—Always observe that simple rule laid down in every text-book, "Do not cut the cord until pulsation has ceased." This will, in nearly every case, prohibit hæmorrhage and perhaps lessen the chances of infection, which, fortunately, are not very great if modern technique is used. It allows the umbilical vessels to contract spontaneously, and this they do very firmly if left alone a few moments. There are contraindications, of course, such as uterine hæmorrhage or asphyxia of the mother, where immediate expulsion of the placenta is demanded. While waiting for pulsation to stop, have the nurse or attendant carefully bathe the child's abdomen, removing the excess of vernix caseosa. The child is held in a blanket and no unnecessary part of the body exposed.

Ligation.—It is well to recleanse and sterilize the hands before proceeding. Grasp the cord at a point two inches from the abdomen with an artery clamp and cut just beyond. Tie with narrow tape at the proximal side of the clamp or, if desired, at both proximal and distal. Loosen the grasp of the clamp and, if hæmorrhage is controlled by the ligature, remove it. If there is any oozing, cauterize the cut end thoroughly with pure carbolic acid or, better still, with the Paquelin. This may also be done if there is any doubt of asepsis. If prejudice exists toward the cautery, apply instead an aqueous solution of suprarenal extract.

Dressing.—Make a thin pad of sterilized gauze, six or eight inches square and of several thicknesses. Place this over the child's abdomen, drawing the cord through a hole cut in the centre of the pad. Surround the stump with sterilized absorbent cotton, and over it place another gauze pad corresponding in size and thickness to the one underneath. Pass a few turns of gauze bandage about the body of the child, to keep the dressing in place. If the gauze irritates the skin, which is hardly possible, dust the abdomen lightly with lycopodium or zinc stearate.

Subsequent Treatment.—Change the dressing every other day. Dusting powders are of no particular value unless the cord has been lacerated. In that event the lacerated areas may be covered with a powder containing tannic acid. When the stump has become separated from the abdomen, discontinue the dressing and substitute a firm, but not excessively tight binder. This prevents, or at least limits, the chances of hernia and may be worn for several days. It should be removed during the daily bath, which should now include the umbilical region.

Hæmorrhage.—When obstinate or excessive hæmorrhage occurs at the *umbilicus,* there is but one decisive treatment. A strong silk suture is passed, by means of a curved needle, into the abdominal wall at one side of the umbilicus and brought out at the opposite side. It should include the edges of both recti muscles and be tied tightly over the navel. A similar suture is passed at right angles to the first. This crucial suture is effective. It is covered with a dry dressing of boric acid and is removed on the fourth or fifth day.

2. *Dr. John A. Lane, of Lolita, Cal.,* writes:

The following is the most simple, practical, and efficient method of treating the cord with which I am acquainted, and is the one I now use:

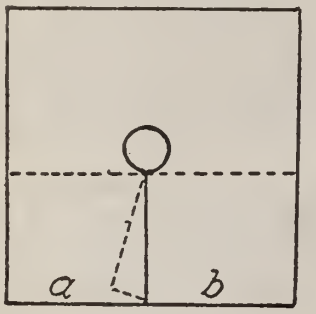
In preparing for the confinement, I have the nurse cut two strips of bobbin tape, eight or ten inches long, and sterilize them by boiling for twenty minutes, after which they are placed in a cup, previously sterilized by boiling, with some of the boiling water. The cup is covered with a fruit, fish, or tin cover and set aside until needed. Any antiseptic, such as bichloride, carbolic acid, etc., may be used in the water the tape is boiled in, but I rely more upon the boiling than upon an antiseptic.

When I sterilize the instruments which may be needed in the confinement, two hæmostatic forceps are included. After the sterilization the instruments are wrapped in a sterilized towel and placed on a stand at the side of the bed.

As soon as the baby is born its mouth is washed out with boric-acid solution or plain boiled water and respiration established. Sufficient time is allowed for the placental blood to pass into the baby; then the cord is clamped in two places with the hæmostatic forceps and cut between them. The baby is given to the nurse while I finish my part of the confinement, await the expulsion of the secundines, repair laceration, etc. This done, I have ample time in which to examine the baby and dress the cord.

The cord is squeezed between the fingers, about an inch from the body, then tied as tightly as possible with

one of the tapes. It is now cut a quarter of an inch externally to the tape with sterilized scissors. After the baby is washed, care being taken not to get the cord or the skin in the neighborhood wet, I conclude the dressing of the stump. A piece of sterilized old linen or aseptic gauze, four inches square, is cut as in the illustration. If gauze is used, three or four thicknesses are necessary.



The horizontal dotted line shows the fold. The hole in the centre is of about the size of the cord. This fits very well around the stump, but by causing *B* to overlap *A*, it will fit exactly.

A powder composed of one part of salicylic acid and fifteen parts of starch is dusted thickly on the stump and worked down in the crevices at the attachment of the cord. The cloth is now folded over the cord. First the lower part is folded, then the sides. This removes the stump as far as possible from the genitals and minimizes the danger of contamination of the dressings from the discharges.

The baby is now dressed. In bathing the child, the nurse is instructed to avoid wetting the dressing. If any moisture shows through the dressing, more of the powder may be applied. In four or five days the cord drops, leaving a healed umbilicus.

The advantages of this method are: 1. Its simplicity. 2. The cord encircling the neck does not interfere with the treatment at all. 3. There is no haste in tying the cord and no hæmorrhage from imperfect tying. 4. The material may be had in any house, with the exception of the forceps and powder. The forceps the doctor usually has in his emergency "grip." The powder may be sent as soon as possible and the nurse apply it as directed. 5. Efficiency. I have had no stumps remaining unusually long, as often happens with other stronger antiseptics, and I have had no infections.

3. *Dr. Charles E. B. Flagg, Captain and Assistant Surgeon, U. S. Army,* writes from Fort Grant, Arizona:

At the birth of the child, at once or when the cord ceases pulsating, a long-jawed artery forceps is applied at the junction of the skin and cord and another forceps to the cord nearer the placenta. The cord is severed between these forceps. The child is put aside in aseptic wrappings until the necessary attention has been given the mother.

The child is then placed on a table in a good light, the field of operation bared, sponged with a 1-to-4,000 solution of corrosive sublimate, and surrounded with sterile towels or gauze. A piece of gauze, with a hole or slit in the centre, answers well. The operator's hands are aseptic. The cord is then severed close to the edge of the forceps on the stump, the edge farthest from the skin of the child, or the cord may be cut here in the first instance. The vessels are then separately seized with other artery forceps, the forceps embracing the cord removed, and the vessels then stripped up toward the abdomen and separately ligated with fine catgut. The vessels retract when liberated from the forceps. The remainder of the cord, up to the skin margin, is then cut away, the wound is then sponged with bichloride-of-mercury solution and a pad of sterile gauze, held in place by a sterile binder, applied.

Appliances Needed.—Sterile gauze, catgut, artery forceps, scissors, and an antiseptic solution. A clamp that I have devised may be used in place of the artery forceps nearest the child, but it is not necessary and possesses no great advantage over the forceps.

Requirements on the Part of the Operator.—Aseptic technique and ability to ligate blood-vessels, supposed to be taught to every medical student before graduation. Ligation is especially easy in these cases, as the vessels stand out with great distinctness in the gelatinous cord and can easily be separated from it.

Advantages.—A sterile wound, with nothing to slough away and no dead or half-dead tissue to act as a culture medium.

Absolute security against bleeding.

No after-treatment.

Healing in from three to five days.

Lessened danger of umbilical hernia in a wound healing *per primam* than in one healing by granulation.

It is maintained by some obstetricians of repute that the cord will not bleed even though the cord or vessels are not tied. Under these circumstances I have had one case of hæmorrhage. It was arrested by suturing.

In place of ligating the vessels, I have sutured them through the skin margin, beneath and before removing the forceps. A doubled continuous suture is used and is cut in two places and tied in three knots, as illustrated.

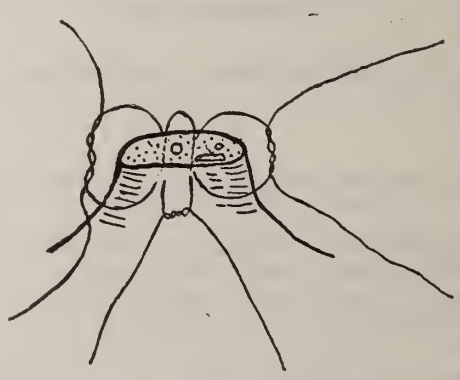


Diagram by Hospital Steward Lewis J. Schmidt, U. S. Army, showing method of suturing umbilical cord. A continuous doubled suture is applied, cut in two places, and tied as indicated above.

Bleeding may possibly occur in this method through retraction of the vessels, as the ligatures are not directly on the vessels, but have skin intervening.

I have amputated the cord at the skin margin since 1893. (See *Medical News,* 1897; also Is a Sloughing Process at the Child's Navel Consistent with Asepsis in Childbed? by Robert L. Dickinson, M. D., New York, *American Journal of Obstetrics,* December, 1898, and June, 1899.)

4. *Dr. Emile Aronson, of Dallas, Tex.,* writes:

The principles of asepsis and antisepsis which control at present every field of surgery, also hold good for the physician engaged in obstetrical work. The time has passed when a pair of rusty old scissors of grandma's and some black or white cotton thread were good enough

to ligate the cord; such procedures were frequently the cause of septic infection of the new-born. The time-honored practice of wrapping the stump in a linen rag soaked in olive oil, or even carbolated oil, has also fallen into deserved disgrace and oblivion, and the principle of surgery to create a sterile wound with as little chance as possible for the development of pathogenic bacteria is now carried out by every conscientious and progressive physician and, let us hope, by every intelligent midwife.

Experience has taught that the best time to ligate the cord is about two or three minutes after birth of the child. We then inspect the cord, and if the same appears to be large, *i. e.,* if it contains a large amount of Wharton's jelly, we try to press it away before applying the ligatures.

The best material for the ligatures is surgeon's silk, No. 9, or silk gut, which, together with dressing scissors, has to be sterilized beforehand. Two ligatures are applied, one about one inch from the umbilicus of the child, and the second one about an inch from the first one, toward the placenta. The ligatures are drawn tight and the cord is cut slowly between the ligature, the physician taking care not to cut too close to the first ligature, to avoid slipping of the same and the necessity of applying another ligature.

The stump is then inspected as to whether it is bleeding or not, and, if it is not bleeding, wrapped in absorbent cotton. The nurse then bathes, cleans, and dresses the infant and then begins the toilet of the stump, *i. e.,* the stump is again inspected, to see if it is bleeding or if the ligature has got loose or slipped, and if it is found in order, dried thoroughly; a piece of aseptic gauze with a hole for the stump is then slipped over it and a dry dressing powder applied. One or two layers of antiseptic cotton are wrapped around the stump, which is then placed upward and to the child's right, and a well-fitting flannel bandage is wrapped around the child's abdomen. Of late, alcohol has been recommended instead of the dry dressing powder, the advocates of the alcohol alleging for it better antiseptic powers and quicker mummification of the stump.

The abdominal bandage is renewed daily; the nurse is to be instructed to avoid pulling or mistreatment of the stump; if the cord was thin, the stump will fall off in four to five days; if it was large, it might take more than five days, but, in any case, pulling at the dried-in stump to encourage its coming off is not to be recommended.

After the stump has fallen off, the young cicatrix ought to be covered with the dry dressing powder and ought to be protected from irritation by some gauze or cotton for several days to follow.

As a rare occurrence hæmorrhage may take place before the separation of the stump or after it has come off. In either case a needle, armed with silk, should be passed beneath the bleeding vessels and firmly tied, and pressure with gauze, cotton, and a tightly fitting abdominal binder applied. It would be well also to think in these desperate cases of the injection of gelatin and the administration of the suprarenal gland, but, believing that the discussion of this condition and such others as umbilical polypus is not entirely within the sphere of the question proposed, I shall limit myself to the remarks made.

5. *Dr. J. P. McQuillin, of Brooklyn,* says:

As the mortality from sepsis through the cord is estimated at from 3½ to 22 per cent., the necessity of using more care in the dressing of the stump is apparent. I wish to call the attention of the profession to a simple and safe way to dress the stump of the cord. After notable pulsation has ceased in the lower portion of the cord, I take a small piece of silk braid, which has been standing in my antiseptic solution from the time I first examined the patient (I generally use creolin), and tie the cord tightly. I think it advisable to have the ligature aseptic, so that if the silk cuts into the cord there will be no danger of its absorbing septic matter from it. I tie the cord in two places and cut between the knots with a pair of sterilized scissors. I now sponge the end of the stump dry and cauterize it with full-strength carbolic acid. I now dress the stump with cotton, saturated with 96-per-cent. alcohol, changing the dressing once daily until the cord drops off. Any one using this method of dressing the umbilical cord will never have a case of septic poisoning.

6. *Dr. F. M. Wood, of Calumet, Mich.,* sends this:

The stump of the umbilical cord is the most frequent source of infection in the infant; it is therefore desirable to perfect a method of treating it that will be surgically clean and at the same time simple and easy of application. The following method has proved efficient in the practice of the author: The cord is first cut short, an inch to an inch and a half in length, so that as little will be left as possible, in order that it may dry rapidly and come away quickly. It is then tied with a piece of sterile tape. The following has been found convenient and easy of application: The margin of a gauze sponge is torn off on the side of the selvage; this answers as a very strong and easily tied piece of tape, which is at the same time sterile and quickly obtained. Next, the abdomen of the child should be cleansed as follows: The cord is held with a piece of sterile gauze, and the abdomen washed with green soap and warm water; it is then dried with sterile gauze and again washed with a 1-to-1,000 mercuric-chloride solution. Care should be taken during the washing not to wet the cord or its base, keeping it well covered with the gauze, so that it may be perfectly dry when the dressing is complete, thus favoring early desiccation. Now take a small gauze sponge and fold it over once in the middle, cut a round hole of the size of the cord in its centre, using sterile scissors, pass the cord through this hole and envelop it in the gauze; the cord is thus left in a covering of gauze shaped like a funnel, the mouth of the funnel being at the base of the cord. The cord is then dusted with equal parts of boric acid and fine talcum, or with one part of salicylic acid and nineteen parts of starch. The same powder is applied also to the base of the cord. The cord is then laid so that it points toward the chin, so as to avoid hanging down and closer proximity to the excretions. It is then covered with a pad of sterile absorbent cotton. The abdominal binder is then put on; this should be of soft canton flannel, and wide enough to reach from the hips to the axillæ; it should not be hemmed at the edges, as hems cause pressure and discomfort to the child. It is passed in two turns around the body of the child and pinned comfortably tight with safety pins, just tight enough so as not to embarrass the breathing of the child and still keep the dressing in place. Advise the mother not to allow the binder to become wet or soiled, which can be avoided by watching and frequently changing the diapers. Lastly, the cord should be inspected daily and dressed every other day with the dusting powder, clean gauze being applied when the previous dressing has become soiled. The hands of the attendant, the dress-

ings throughout, and all instruments used should be surgically aseptic; thus and only thus can the dangers of infection at this vulnerable point be avoided.

7. *Dr. Samuel Floersheim, of New York,* writes as follows:

It has been a routine method to place a short ligature around the umbilical cord about four inches from the umbilicus. This ligature is to prevent hæmorrhage from the placental end of the cord in case twins are present, and also for cleanliness. A second and long ligature is tied snugly about three inches from the umbilicus. This done, the umbilical cord is cut between the two ligatures, the placental end being allowed to drop down and the umbilical end cleansed and examined for any possibility of a hæmorrhage. If no hæmorrhage is found, the end of the cord is then turned inward toward the abdomen of the child, the two long free ends of the ligature are taken up, placed around the umbilical cord about half an inch from the umbilicus and tied tightly. This gives two ligatures to the cord and insures a safe procedure against primary and secondary hæmorrhage.

I have not found it necessary to strip the cord. There are many powders that can be used to dust on the stump to dry it. The one that has given the best satisfaction is stearate of zinc, plain, dusted on the abdomen around the umbilicus, a piece of sterile linen or thin, soft muslin with a perforation nearer to one end, through which the stump of the cord is placed and laid on the linen or muslin, the powdered stearate of zinc dusted on till it completely covers it, the linen folded over the cord and upon itself to prevent the powder from falling away from the cord.

Should infection of the cord take place, it is thoroughly washed in a 1-to-1,000 bichloride-of-mercury solution or in a 1-to-50 carbolic solution, dried and an antiseptic powder dusted on the cord, covered by a piece of iodoform or bichloride gauze, and a snug bandage applied. The cord, when infection has taken place, should be treated twice daily till all signs of pus have disappeared.

After the stump has fallen off and the umbilicus seems to be healing, the stearate of zinc powder is all that is necessary to dust on until the wound is healed.

If the umbilicus does not heal, but is granular and exuding fluid, it is thoroughly washed with tincture of green soap, rinsed with sterile water, thoroughly dried with sterile gauze, and a few drops of warm castor oil applied (and repeated about four times a day), a sterile gauze pad placed on the oil and a bandage in turn to hold the pad and oil in place.

When the stump of the cord has dropped off and hæmorrhage occurs, the suprarenal powder, dusted on the bleeding surface, covered by a pad of gauze of the size of a 25-cent piece and held in place by a snugly tied bandage, has succeeded in checking the hæmorrhage. The powdered suprarenal is washed off in half an hour to prevent infection. Oftentimes simply placing a small pad on the bleeding point and using finger pressure for a few moments or applying a bandage succeeds in controlling the hæmorrhage.

When granulations spring up from the umbilical wound or growths occur after the stump of the cord has fallen off, they are quickly and neatly removed by a pair of scissors. Pressure is then applied for a few moments to check the hæmorrhage and an antiseptic powder is dusted on the raw surface and a bandage applied. It is redressed daily till healed.

8. *Dr. Arthur H. Longstreet, of Brooklyn,* says:

Preparations.—I would recommend the procuring of a supply of $\frac{1}{16}$th-inch cotton tape, cutting it up into ten-inch strips, and sterilizing; to be carried in a suitable container and at the bedside dropped into a bichloride or carbolic solution to insure asepsis. This tape is strong, with ordinary precaution does not cut the tissues, is as sterile as silk, is more easily handled than catgut, and is the ideal ligature for this work.

Treatment.—Taking it for granted that the mother needs no particular attention (of course, if she does, the child can wait), we proceed with the treatment of the cord of the new-born. If the child is robust and crying lustily, the cord may be cut immediately; but if not so, wait until the pulsations have practically stopped. By waiting a few minutes, the child will tend to be more robust, not essentially on account of the possible addition of a few ounces of blood, but this enables a good pulmonary circulation to be established, from a combination of maternal and infant's blood current. With thumb and forefinger displace Wharton's gelatin for about two inches from the umbilicus and apply two ligatures, one about an inch and a half from the child's body and the other farther away, and cut between them. When the child is washed, see that the stump is thoroughly clean and wiped dry, then wrap the stump in a moderately thin layer of sterilized or borated absorbent cotton and apply a warm bandage, light in weight and not too tight. The double ligature prevents any complication, such as possible hæmorrhage in case of twins, etc.

When the cord is large or there seems to be a tendency to hernia, it is often a good plan to make a second ligation close to the child's body. This procedure lessens the amount of tissue to dry up and favors absorption, in addition to making a neater stump to handle and keep clean. The cotton may be changed or partially renewed each morning at the child's bath for the few days elapsing before the cord withers completely and drops off.

Cauterization is not needed where the stump is treated aseptically and antiseptically. A greasy rag or piece of burnt linen to wrap the stump in (which, strange to say, is still followed in some quarters) is an abomination.

If there should be some slight inflammation or irritation at the umbilicus either before or after the cord drops, or the parts keep moist, apply the following as a dusting powder after bathing and wiping dry:

℞ Powdered salicylic acid..... 1 part;
Starch..... 8 parts.
M.

9. *Dr. J. M. Kennedy, of Knoxville, Tenn.,* contributes the following:

The stump, having been washed and dried, should be enveloped in absorbent cotton and laid flat on the body of the child, pointing upward. The belly-band, four inches wide and long enough to go around the child three times, made of thin flannel in winter and of gauze bandage in summer, should be applied, the first turn above, but overlapping, the umbilicus; the second turn below, but also overlapping, and the third and last turn directly over the umbilicus. The end of the band should be fastened with half-inch strips of adhesive plaster. The band should be removed daily, or oftener if necessary, soiled cotton around the cord picked off, fresh cotton applied, and the binder replaced as before. When the cord is detached, the umbilicus should be

kept clean with pure warm water and dry with absorbent cotton. The belly-band should be kept on four weeks.

This dressing protects the parts from injury and infection, gives support to the umbilicus and abdominal organs, receives exudation from the cord, prevents the cord from adhering to the dress or skin of the child, and meets every indication, and I know of no objection to it.

If no dressing is applied, as has been occasionally suggested, the stump becomes hard and dry, is liable to be pulled by the clothing and prematurely detached, and is a mechanical irritant, and the part is not protected from infection. The ordinary folded linen, with a slit or hole in the middle, is apt to irritate by rubbing or chafing the base of the stump, and is not sufficiently absorbent. Oils are heating and sometimes irritating, powders are often both chemically and mechanically irritating, and neither oils nor powders can be rendered germicidal without being local irritants.

10. *Dr. Z. E. Lewis, of New Rochelle, N. Y.,* furnishes the following:

I am not sure that the phraseology of this question does not bar me from its discussion, for how can a man profess to propound the "best" way who has not tried all ways in forming his judgment? And I have not that qualification. But if it is pertinent to state a method which thirty-five years' use, without the discovery of a single urgent drawback, has sanctioned, then I am in order in relating what I venture to denominate a sufficiently good method, having at least these elements of a "best way," that it is simple, that the necessary materials are always easily obtainable, and that the stupidest woman can carry out its details.

Before a "stump" can be "treated," it must be made, and I make it by tying the cord, at a distance of half an inch to an inch from the infant, with any clean cotton or linen tie which may be provided, most often the common white string of the shops. (I use the word "clean" in the ordinary lay acceptance.) The tying is tight enough to completely strangle the cord and to preclude slipping. The cord is then severed just outside the ligature. There is the stump.

After the babe has been washed, I insert the stump through a hole—just sufficiently large to admit it—in a pad made of from four to eight thicknesses of clean, soft white cloth (preferably linen, though cotton often has to be used) and then fold the pad so as to enclose the stump and make it lie flat on the belly, pointing upward and to the baby's left, where it is confined by the binder. This completes the initial treatment of the stump of the cord.

The remaining treatment consists chiefly in letting alone. I direct that the dressing shall be disturbed as little as possible in the necessary adjustments and washings, and shall on no account be allowed to become wet. The primary object is to have the cord dry into the dressing. If the baby's comfort requires that it be further protected in the drying, this object is attained by sliding a fresh pad of sufficient thickness under the first pad, with as little disturbing motion as possible. In due time the stump in its dressings comes away, leaving a perfectly healed navel.

The points are these: A short stump; a clean pad, thick enough to absorb the fluids of the stump; a hole small enough to secure against friction on the stump, that its position may not be disturbed in the folding and handling; no wetting of the pad; and a fair amount of immobility till the stump separates.

Therapeutical Notes.

Suggestion in the Treatment of Uncontrollable Vomiting.—Dr. Triantaphyllides (*Grèce médicale,* April; *Lancet,* May 25th), of Batoum, records a case of uncontrollable vomiting treated by suggestion. The patient was thirty years of age and in the first month of her seventh pregnancy. Unsuccessful attempts to induce premature labor had been made. Dr. Triantaphyllides, on taking charge of the case, assured her that abortion had taken place and that the uterus was empty. He stopped all local treatment and gave bread pills every three hours. The vomiting soon ceased almost entirely. Labor followed at term.

Santonin (Santonic Acid) in Tabetic Pains.—Negro (*Giornale della reale Accademia di medicina di Torino,* February; *British Medical Journal,* May 18th) has tried santonin with success in the treatment of the lightning pains of tabes. Of the 11 cases in which the drug was tried, 8 were decidedly relieved, 2 temporarily relieved, and 1 unaffected. At first the author gave 15 grains in three doses, at intervals of three hours, and in subsequent attacks began with 10 grains, 5 grains five hours later. The pain became decidedly less in three hours after the first dose, and completely ceased two hours after the second dose. So far the author has only administered it during the crisis, not in the intervals. None of the patients had this treatment more than four or five times in the course of two or three months.

The Treatment of Furuncles.—According to the *New York State Journal of Medicine* for April, Philipson recommends salicylic acid, in fifty-per-cent. strength, in the treatment of well-formed furuncles. The following paste is applicable for such conditions:

℞ Salicylic acid. . . . . 1 ounce;
Powdered starch. . . . . 1 drachm;
Lanoline. . . . . 1 ounce.
M. Sig.: Apply locally and change three or four times a day, in order to hasten the necrotic process.

When the core has been eliminated, he advises treatment to favor granulations. Minute furuncles may be checked by applying the following:

℞ Tincture of benzoin. . . . . 1 drachm;
Alcohol, enough to make. . . . . 3 ounces.
M. Sig.: Apply locally three times a day.

In generalized furunculosis the parts should receive a warm bath daily and then be rubbed with the following:

℞ Salicylic acid. . . . . 25 grains;
Vaseline, enough to make. . . . . 2 ounces.
M. Sig.: To be well rubbed in over the affected area.

Heat in the Treatment of Gonorrhœa.—The *Medical Press and Circular* for June 5th says that attention has recently been called to the fact that the therapeutical effects of irrigations of the urethra by Janet's method are greatly increased by employing the solutions of permanganate of potassium or other salt at a comparatively high temperature; indeed, it is confidently asserted that the temperature is of more importance than the chemical composition of the solution. The temperature should not be less than 98° F. and may advantageously be carried to 120° F. These hot injections are stated not to give rise to any untoward consequences.

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THE PROPOSED EXCLUSION OF ALIEN CONSUMPTIVES.

It is our conviction that the United States Bureau of Immigration, if it has really determined upon the course of indiscriminately excluding consumptive immigrants from the country, as has been announced, has been ill advised. As has been said publicly by Dr. S. A. Knopf, the indefatigable champion of everything that promises to conduce to our eventual mastery over tuberculous disease, a consumptive pauper may properly be denied admittance to our domain, but because he is sure to become a burden on the community in which he casts his lot, not because he is tuberculous. In our great southwestern resorts for consumptives, many a person has arrived with the disease in a decided, if not in an advanced, stage, and lived to become a valuable member of his adopted municipality or even of his adopted State, and that, too, without endangering any of its people. If a consumptive is conscientious and properly managed, he is sure not to become a source of danger, and the very fact of a consumptive's coming to this far-away country for the benefit of his health may almost be taken as *prima facie* evidence of his conscientiousness and of his readiness to be guided by medical advice.

So little do we fear retaliation by European nations, however, that, if the short-sighted policy of our own bureau is carried out, we should rather welcome it, for then the American money that is annually spent in European resorts for the tuberculous would go toward enabling our own people to perfect their appliances for supplementing climatic influences in the treatment of consumptives. What the people need to be taught—and they have already partly learned the lesson—is, not that pulmonary consumption is a monster to be fled from, but that it is a danger that can be effectively overcome. Even if this were not true, it remains a fact that the policy of selfishness and inhumanity, pursued to the end, rarely if ever proves to be for the general welfare of those who follow it. We of the East should protest loudly if Colorado, Arizona, New Mexico, and California forbade our consumptives to enter their limits; let us as a nation, then, pause to contemplate the matter of exclusion from the foreign consumptive's point of view, and throw our sanitary resources open to the world as we long ago made our lands and our industrial facilities free to all worthy comers.

INFLUENZA AS A PROMOTER OF SUICIDE.

Three recent occurrences, the deaths of Dr. Guernsey and the Rev. Mr. Babcock, of New York, and of Dr. William H. Daly, of Pittsburgh, by suicide after an attack of influenza, can hardly fail, we should say, to impress upon the medical profession and upon the general public the dangerous character of the emotional perversion that often follows in the wake of that disease and lasts sometimes for a very long period—as long as two years, to our certain knowledge, in some instances. All three of the victims whose names we have mentioned were men in the prime of a successful and creditable career, with every reason to look forward to many more years of usefulness and happiness, but the wretched dejection consequent on their ailment seized upon them and overthrew their mental balance. Even men who are naturally the greatest of optimists—optimistic almost to the extent of being visionary—are caught in the toils of this dreadful melancholy, and in too many cases yield to the suicidal tendency. The intellectual faculties, so far as we have observed, are but little if at all impaired; so soon as he has recovered his physical strength, and even sooner, the subject is able to do his ordinary amount of intellectual work and do it as well as before. But any occasion of emotional disturbance, no matter how trifling, upsets him, makes him lacrymose, and plunges him into the despair that so often leads to suicide.

When we add to the vast physical damage wrought by influenza, directly or indirectly, this melancholic psychical sequela, we have some idea of the death-dealing power of the disease. In the absence of any specific curative treatment, we must bend our efforts toward restricting the spread of the infection—with no great prospect of substantial success, it must be admitted—and toward preventing patients who are apparently con-

valescent from resuming their ordinary course of life too soon, having first, if we are able, prevailed upon them to give up work and take to bed in the incipiency of the ailment. From the particular point of view of the not uncommon suicidal tendency in the after-melancholy, we may well urge upon the friends of convalescents who are affected with this sequela unusual watchfulness, even to the degree of rousing the patients' resentment, which, indeed, might prove a wholesome restorative.

THE TREATMENT OF SQUINT.

In the May number of the *Archives of Ophthalmology* Dr. Herbert Wright Wootton has published a strong paper on the correction of strabismus, or squint, by the advancement of the opposing muscle as the primary operation, instead of the tenotomy of the contracted muscle which is commonly performed. This operation, first advocated by Landolt, of Paris, certainly offers important advantages over the older method which deserve the attention of every surgeon who may be called upon to operate in such cases. For the most part surgeons will agree with Dr. Wootton when he says: "Tenotomies, as primary operations, particularly in convergent cases, are at best hazardous procedures. Apparent parallelism, for the time being, is frequently obtained, but almost always with great sacrifice of the power of convergence. . . . The operation, one might almost say, has attempted to cure the causative factor, the hypermetropia, by superadding a pathological condition, a relative insufficiency of convergence, ignoring the fact that an excess of converging power is a normal condition with an uncorrected hypermetropia." In the great majority of cases the only benefit obtained by tenotomies is an improvement in the cosmetic appearance; indeed, only too often this is the only benefit sought for. A careful examination reveals the fact that the parallelism is not perfect, and time may demonstrate it to be temporary. It is not an infrequent occurrence to have divergence of the eyes appear some months or years after the internal recti have been tenotomized for the correction of a convergent squint, and this is a weighty testimony to the weakened condition of the tenotomized muscles which in a measure explains why binocular single vision, or the conjoint use of the two eyes, is so seldom obtained and maintained after such an operation. But when the eyes have been straightened by the advancement of the tendons of the external recti, in a case of concomitant convergent squint, without tenotomy of the internal recti, the cosmetic result is quite as good, while at the same time no function of the eye has been interfered with and its motility has not been lessened in any direction. Then if, when the correcting glasses are worn, the vision of each eye is good, there is a much better opportunity to obtain binocular single vision than after a tenotomy, and, if minor deviations exist, the eyes are in a good condition to have them recognized and corrected. These two considerations alone should be sufficient to command for this method its thorough and practical trial, at least in all cases of strabismus in which the vision of the two eyes even approaches equality.

THE SURGEON'S RIGHT TO DISCRETION AT OPERATIONS.

A very important and, as it seems to us, a very just and reasonable decision, was given in a Chicago court by Judge Kavanagh on June 18th. On June 7, 1897, Dr. Franklin H. Martin, of the Post-graduate Medical School and Hospital, Chicago, in the course of an operation on a patient under an anæsthetic, was unexpectedly confronted with conditions that appeared to him to demand another operation besides the one contemplated. Both were successfully performed, and the patient at the time suit was brought, four years later, was in good health. The action was brought by the patient against the hospital for the unauthorized performance of the uncontemplated operation. For the defense the point was raised that conditions were found in the course of the operation which rendered the further operation essential to preserve the life of the patient, and the judge ruled that in acting without loss of time under such conditions the surgeon acted within his right. Of course, it is not contended by any one that a surgeon, having obtained the consent of a patient to one operation, should in addition perform another, however desirable in the patient's interest, that is only an operation of expediency; but it would be absurd to argue that, some sudden emergency arising, the surgeon has not discretion to do what is necessary to deal with it, as, for instance, by ligating at a distance the main trunk of an artery to check otherwise uncontrollable hæmorrhage; or, in the case of a malignant growth having ramifications beyond what the pre-operation diagnosis had established, the removal of other affected organs, or portions of organs, besides those whose removal was originally contemplated. It is, however, wise policy, whenever there is any reasonable probability of unexpected complications, to obtain the patient's prior consent to deal with any other conditions that may be found essentially connected with the proposed operation. An appeal has been threatened. We trust that the appeal court will sustain the eminently just decision of the lower court if appeal is actually taken in this case.

TROLLEY-CAR DANGERS.

It is satisfactory to learn that the Appellate Division has done something toward minimizing one of the many dangers to life that a long-suffering public endures at the hands of the trolley cars in New York. In the case of William F. Fay against the Metropolitan Street Railway Company, which had been dismissed in the court below, the court held that reasonable time to board a car must be afforded to the public; and that the contributory negligence alleged by the defendant company against the plaintiff did not hold good, because the plaintiff "having hold of the car, about to board it when the car suddenly started, there was presented an emergency which required the exercise of judgment as to the best course to avoid being injured." Such exercise of judgment was, of course, rendered particularly difficult by the premature starting of the car, which, therefore, there could be no doubt, "was the proximate cause of the injury." What with the reckless speed at which cars are at times driven, especially at crossings and around curves, and the scant consideration afforded to passengers mounting or alighting, it is a wonder that there are not more serious accidents than actually occur.

THE DEFICIENCY IN ARMY SURGEONS.

The contention of Surgeon-General Sternberg, that the provisions of the recent army act relating to the medical department, by increasing the establishment in the lower ranks without a proportional increment in the upper ranks, would keep physicians from entering the service, has been justified by the dissolution of the boards created to examine applicants for medical commissions in the army without their having been able to secure a sufficiency of candidates. The extent to which governments at large seem to ignore the judgment and superior knowledge of those of their higher executive officials as to the needs and otherwise of those portions of the public service over which those officials have been selected, presumably on account of their fitness, to rule, seems almost fatuous. The United States is by no means alone in this matter. A much more conspicuous example may be seen in the entire military administration, medical and otherwise, of Great Britain.

OUR SUBSCRIBERS' DISCUSSIONS.

In this issue of the *Journal* we publish a few—all that we have space for—of the answers to our first prize question. We would again remind our subscribers that answers to our second question, *What is the best way of prescribing calomel as a purgative?* should reach us on or before July 10th, as was stated in our issue for May 11th. We will also now announce the third question, *How do you treat Colles's fracture of the radius?* Answers to the third question should reach us on or before August 12th.

News Items.

Society Meetings for the Coming Week:

MONDAY, *June 24*. Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, *June 25:* Buffalo Academy of Medicine (Section in Obstetrics and Gynæcology); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, *June 26:* New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; American Microscopical Society of the City of New York; Auburn, N. Y., City Medical Association; Berkshire, Massachusetts, District Medical Society (Pittsfield); Philadelphia County Medical Society.

THURSDAY, *June 27:* New York Academy of Medicine (Section in Obstetrics and Gynæcology); New York Orthopædic Society; Brooklyn Society for Neurology; Pathological Society of Philadelphia.

FRIDAY, *June 28*: New York Society of German Physicians; Philadelphia Clinical Society; Philadelphia Laryngological Society.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending June 15, 1901:

DISEASES.	Week end'g June 8		Week end'g June 15	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	30	5	28	8
Scarlet Fever	449	30	466	40
Cerebro-spinal meningitis	0	0	0	4
Measles	302	13	270	8
Diphtheria and croup	241	48	244	39
Small-pox	86	16	102	11
Tuberculosis	226	152	243	141

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine Hospital Service for the fourteen days ending June 13, 1901:

BREADY, J. E., Acting Assistant Surgeon. Granted leave of absence for one day from June 19th.

DECKER, C. E., Assistant Surgeon. Granted leave of absence for ten days, on account of sickness.

ECROYD, HENRY, Acting Assistant Surgeon. Granted leave of absence for ten days from June 8th.

KING, W. W., Assistant Surgeon. Granted leave of absence for four days.

MASON, W. C., Acting Assistant Surgeon. Granted leave of absence for six days from June 23d.

NYDEGGER, J. A., Passed Assistant Surgeon. Granted leave of absence for thirty days from June 8th.

PETTUS, W. J., Surgeon. Granted leave of absence for three days from June 13th.

SMYTH, F. R., Acting Assistant Surgeon. Leave of absence for three days granted him by the Bureau. Telegram of May 31, 1901, is revoked.

SPRAGUE, E. K., Passed Assistant Surgeon. Granted leave of absence for thirty days from May 30th.

STANTON, J. G., Acting Assistant Surgeon. Granted leave of absence for fifteen days from June 3d.

WHITE, J. H., Surgeon. To report at Washington for conference.

WICKES, H. W., Passed Assistant Surgeon. Granted leave of absence for four days from June 3d.

WILLIAMS, L. L., Surgeon. Granted leave of absence for five days from June 8th.

Board Convened.

Board convened to meet at Washington on June 7, 1901, for the physical examination of an applicant for cadetship in the United States Revenue Cutter Service. Detail for the Board: Passed Assistant Surgeon H. D. GEDDINGS, *Chairman;* Assistant Surgeon B. S. WARREN, *Recorder.*

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending June 15, 1901:

Small-pox—United States and Insular.

Douglass City, Alaska	May 25	5 cases.	
San Francisco, California	May 25-June 1	4 cases.	
Washington, District of Col.	May 30	1 case.	
Chicago, Illinois	June 1-9	6 cases.	
Michigan City, Indiana	June 3-10	2 cases.	
South Bend, Indiana	June 1-8	1 case.	
Wichita, Kansas	June 1-8	7 cases.	1 death.
New Orleans, Louisiana	June 1-9	5 cases.	1 death.
Shreveport, Louisiana	May 25-June 1	2 cases.	
Portland, Maine	June 1-8	1 case.	
Baltimore, Maryland	June 1-8	1 case.	
Boston, Massachusetts	June 1-8	1 case.	
Fall River, Massachussetts	June 1-8	1 case.	
Marlboro, Massachusetts	June 1-8	1 case.	
New Bedford, Massachussetts	June 1-8	27 cases.	1 death.
Somerville, Massachusetts	June 1-8	1 case.	
Detroit, Michigan	June 1-8	33 cases.	
West Bay City, Michigan	June 1-8	1 case.	
Winona, Minnesota	June 1-8	1 case.	
St. Louis, Missouri	May 26-June 2	32 cases.	
Manchester, New Hampshire	June 1-8	4 cases.	
New York, New York	June 1-8	86 cases.	16 deaths.
Cincinnati, Ohio	May 31-June 7	5 cases.	
Cleveland, Ohio	June 1-8	30 cases.	
Toledo, Ohio	June 1-8	1 case.	
Lebanon, Pennsylvania	June 1-8	1 case.	
Philadelphia, Pennsylvania	June 1-8		1 death.
Pittsburgh, Pennsylvania	June 1-8	5 cases.	
Providence, Rhode Island	June 1-8	1 case.	1 death.
Ogden, Utah	May 1-31	11 cases.	
Salt Lake City, Utah	June 1-8	4 cases.	
Tacoma, Washington	May 26-June 2	1 case.	
Green Bay, Wisconsin	June 2-9	2 cases.	
Manila, Philippines	Apr. 13-20	9 cases.	
San Juan, Porto Rico	May 10	Extinct; 8 cases on island.	

Small-pox—Foreign.

Prague, Austria	May 18-25	3 cases.	
Antwerp, Belgium	May 18-25	3 cases.	1 death.
Pernambuco, Brazil	Apr. 1-15		27 deaths.
Hongkong, China	Apr. 22-27	7 cases.	5 deaths.
Panama, Colombia	May 27-June 3	5 cases.	1 death.
Paris, France	May 18-25		15 deaths.
Glasgow, Great Britain	May 25-31	42 cases.	1 death.
Athens, Greece	May 18-25	2 cases.	
Calcutta, India	May 4-11		34 deaths.
Karachi, India	Apr. 28-May 12	9 cases.	3 deaths.
Naples, Italy	May 19-26	161 cases.	28 deaths.
Nagasaki, Japan	May 6. 1 case on U. S. S. Indiana.		
Tokyo, Japan	May 11	3 cases.	
Winnipeg, Manitoba	May 25-June 1	2 cases.	
Mexico City, Mexico	May 19-June 2		3 deaths.
Odessa, Russia	May 11-26	9 cases.	1 death.
St. Petersburg, Russia	May 4-18	24 cases.	5 deaths.
Warsaw, Russia	May 4-11		8 deaths.

Yellow Fever.

Vera Cruz, Mexico	May 18-25		1 death.

Cholera.

Bombay, India	May 7-14		3 deaths.
Calcutta, India	May 4-11		47 deaths.

Plague—Foreign and Insular.

Cape Town, Africa	To Apr. 5	412 cases.	181 deaths.
Hongkong, China	Apr. 20-27	65 cases.	55 deaths.
Bombay, India	May 7-14		289 deaths.
Calcutta, India	May 4-11		134 deaths.
Karachi, India	Apr. 28-May 12	657 cases.	563 deaths.
Formosa, Japan	May 18, increasing. From May 3-June 1	2,157 cases.	
Manila, Philippines	Apr. 13-20	27 cases.	16 deaths.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending June 15, 1901:

ANDERSON, F. A., Assistant Surgeon. Ordered to the Naval Hospital, New York.

BACKUS, J. W., Assistant Surgeon. Ordered to the *Vermont*.

EVANS, S. G., Passed Assistant Surgeon. Detached from the *Monocacy* and ordered to the *Solace*.

HARRIS, H. N. T., Surgeon. Detached from the *Albany* and ordered to the *Monocacy*.

MAYERS, G. M., Assistant Surgeon. Ordered to the Pensacola Navy Yard, Florida.

MURPHY, J. F., Assistant Surgeon. Ordered to the Naval Academy, Annapolis.

WENTWORTH, A. R., Surgeon. Detached from the *Solace* and ordered to the *Albany*.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from June 8 to 15, 1901:

CARTER, W. FITZHUGH, Major and Surgeon, is granted leave of absence for twenty-one days, to take effect on or about June 14, 1901.

DUTCHER, BASIL H., First Lieutenant and Assistant Surgeon. So much of Par. 12, S. O. 131, June 6, 1901, H. Q. A., as directs him to proceed to Fort Totten, New York, for duty, is amended so as to direct him to proceed to Fort Hancock, N. J., to relieve DEANE C. HOWARD, Captain and Assistant Surgeon.

ERWIN, JAMES J., Captain and Assistant Surgeon, is honorably discharged, to take effect June 30, 1901.

GRISWOLD, RICHARD S., Major and Surgeon, will proceed to San Francisco for transportation to Manila.

HOWARD, DEANE C., Captain and Assistant Surgeon. So much of Par. 7, S. O. 2, January 3, 1901, as relates to him is amended so as to direct him to proceed to Havana, Cuba, upon his relief from duty at Fort Hancock by BASIL H. DUTCHER, First Lieutenant and Assistant Surgeon.

KULP, JOHN S., Major and Surgeon. So much of Par. 24, S. O. 58, March 12, 1901, as assigns him to duty at Fort Hancock, N. J., is amended so as to direct him to proceed to New York for duty as attending surgeon and examiner of recruits, and as medical superintendent of the Army Transport Service in that city, to relieve WILLIAM D. CROSBY, Major and Surgeon, who will proceed to Fort McPherson, Georgia, for duty.

MCCAW, WALTER D., Major and Surgeon, is detailed as a member of the board of medical officers appointed by Par. 12, S. O. 15, January 18, 1901, for the examination of candidates for admission to the Medical Corps of the Army, *vice* WILLIAM J. WAKEMAN, Major and Surgeon, who is relieved.

Changes of Address.—Dr. Joseph E. Lumbard, to Graham Court, Seventh Avenue and One Hundred and Sixteenth Street, New York; Dr. Edwin Ricketts, to No. 408 Broadway, Cincinnati, Ohio.

A New Laboratory Building for the Medical College of New York.—A four and five story laboratory building of brick, limestone, and terra cotta, 22.6 by 18.6, from plans by William Burnett Tuthill, is to be added to the Medical College of New York, at 17 and 19 East One Hundred and First Street. It is to cost $40,000.

Hygienic Exhibition at Carlsbad.—Consul-General Guenther, at Frankfort, in a report to the State Department at Washington, D. C., says that a general exhibition of articles of hygiene of the sick room, of food and drink, and also of those pertaining to the entertainment and comfort of the traveling public, will be opened at Carlsbad on August 10th of this year.

Class Reunion of the Jefferson Medical College Graduates of the Year 1891.—Dr. Matthew F. Smith, editor of the *Texas Medical News,* calls upon all graduates of the Jefferson Medical College of 1891 to attend a meeting of the class, to be held in Philadelphia on June 28th and 29th. Dr. Smith's address is 101 West Sixth Street, Austin, Tex.

Colonel Forwood Placed in Charge of the Medical Department of the Army.—Colonel William H. Forwood, of the Medical Department, who has been in charge of the important medical depot station at San Francisco, has been assigned to Washington and placed in charge of the Medical Department of the army dur-

ing the absence of Surgeon-General Sternberg in the Philippines.

Yale University.—The annual address in medicine will be delivered by Professor Edmund B. Wilson, Ph. D., of Columbia University, on The Higher Claims of Minute Research in Biology and Medicine, in the College Street Hall, Yale University, on Tuesday, June 25th, at noon.

Physicians Held Guiltless of Malpractice.—The second trial of the action brought by Miss Lucy V. Kellen, a dressmaker, to recover $60,000 damages from Dr. Morris Manges and Dr. Julius Rosenberg for performing an operation on her, as she alleged, unskilfully and without her consent, terminated, after a trial lasting several days, before Justice Bischoff and a jury in the Supreme Court, New York, in a verdict, on June 11th, in favor of the defendants. The former trial ended in a disagreement.

A Physician Missing.—We have been requested to ask for information concerning William Clifford McDonald, M. D., Harvard, '98, who left his home, in Lynn, Mass., for New York three months ago. He wrote of his arrival in New York and stated that he would write soon again. Since then nothing has been heard of him and his friends fear foul play. Dr. McDonald was a young man, six feet tall, weight 200 pounds, with a dark-brown mustache. Any information will be gladly received at the home of his friend, Dr. James Keown, 23 Irson Street, Lynn, Mass.

Presentation to Dr. Charles K. Briddon.—On Friday evening, June 14th, the Alumni Association of the Presbyterian Hospital, New York, Dr. W. K. Simpson presiding, gave a complimentary dinner to Dr. Charles K. Briddon at the University Club, presenting him at the same time with a loving cup and an illuminated parchment testimonial signed by the members of the association in commemoration of his service of twenty-five years as attending surgeon to the hospital. The presentation address was delivered by Dr. Benjamin Hedges, of Plainfield, N. J. Responses were made by Dr. Briddon, members of the attending staff, and by each member present as the loving cup was passed.

The New York Hospital Distributes its Museum.—All the anatomical and pathological collections of the New York Hospital Museum have been given by the governors of the hospital to the medical colleges of New York, the Post-graduate Medical College, the New York University, the Bellevue Hospital Medical College, the Cornell University Medical College, and the College of Physicians and Surgeons. These institutions arranged among themselves for the division of the collections donated. It was thought that as no lectures were given at the New York Hospital, and the museum was maintained only for exhibition to visiting doctors and others interested, the specimens could be used to better advantage in connection with the work of educational institutions. Three years ago the hospital gave away its library for the same reason to the Academy of Medicine.

Tuberculosis Data is Sought by the New York State Department of Health.—Local health officers throughout the State have been requested by the State Department of Health to furnish a list of the number of persons afflicted with consumption in their respective localities. The present purpose is not to acquire or obtain personal registry of these cases, nor to institute a system of sanitary inspection or isolation of consumptives, but to obtain with such accuracy as is possible a record of the number of persons in each municipality who at this time are subjects of this disease, to learn the locality of the disease, its distribution, and surroundings. The data thus collected will lead to more exact plans for its control. The knowledge will likewise be of great value in the discussion of the question of State care of consumptives and also in determining the death rate from this cause. A further report of the source of infection would also be valuable in the study of the ætiology of tuberculosis as well as of its prophylaxis.

A State Laboratory for New York.—A State laboratory is to be established at Albany, N. Y., at once by the State health commissioner, Daniel Lewis, under an appropriation of $20,000, made by the last legislature. In order to facilitate the prompt commencement of the work contemplated, pending the construction of the new laboratory building, Dr. Lewis has arranged for the State's work to be performed at the Bender Laboratory. The State Laboratory will be in charge of Dr. Blumer, the pathologist for the State health department. The laboratory is to be utilized in connection with the legislature's direction so that the State Department of Health shall conduct the work of the manufacture of tetanus, streptococcus, and diphtheria antitoxine, and to conduct further investigations of serum therapy in tuberculosis, typhoid fever, and kindred diseases.

A Chicago Judge's Decision in a Christian Science Case.—Judge Tuthill, of the Juvenile Court, Chicago, on June 11th committed John Chamberlain, who, while suffering from a shrunken leg, was taken out of the custody of his mother, a Christian Scientist, to the Crippled Children's Home. According to the view of Judge Tuthill, adults are at liberty to use medicine or "faith cure," or any other means to fight disease. Children, however, according to his belief, must legally be given that sort of cure, which, according to generally accepted notions, is needed. When the parents refuse to call in a physician, and when the child is subjected to long-continued suffering, Judge Tuthill holds, it is time for the court to step in and demand protection for the young. The parents failing to afford it, institutions should care for the children.

"Christian Science" Death in Brooklyn to be Investigated by Authorities.—District Attorney John F. Clarke, of Brooklyn, with the officials of the local health department, may, if the evidence they expect is forthcoming, have the parents of Francis Nixon Fletcher before the Kings County Grand Jury and endeavor to obtain an indictment for manslaughter in the second degree. Young Fletcher died in the home of his father, on June 5th. A wrong date in the death certificate, which was signed by a woman practitioner, Dr. A. E. Morris, excited the suspicion of the authorities, who were led to believe that the boy died while under treatment by Christian Scientists. The legal question as to whether or not Christian Scientists, who, by failing to call a physician, make themselves responsible for a death, can be held for manslaughter on the ground of culpable negligence, will, it is believed, be threshed out before the Grand Jury. Through Dr. Byrne, the health department is prepared to carry the matter to a final issue.

The London Tuberculosis Congress.—The British Congress on Tuberculosis, which is to be held in London on July 22d and three following days, promises to be the occasion of an important gathering. There will be four sections: (1) State and municipal; (2) medical, including climatology and sanatoria; (3) pathology, including bacteriology; and (4), veterinary (tuberculosis in animals). Professor Koch, Dr. Roux, Sir Lauder Brunton, Sir Richard Douglas Powell, Professor Dewar, Sir William Broadbent, Sir Dyce Duckworth, and Professor Allbutt are a few of those who have intimated their intention of being present and reading papers or taking part in the discussions. A considerable number of American physicians are expected to attend the congress and the meeting of the British Medical Association, and for their convenience a special excursion, leaving New York on July 10th by the Red Star Line steamer *Zeeland*, has been arranged by Gage & Sons. The twenty-nine-day trip is to cost $238 and will include first cabin on Atlantic steamers, second class on European railroads, baggage transfer, hotels, fees, etc. The programme is as follows: Paris from July 19th to 22d; London, for the congress, 23d to 28th; Cheltenham, for the British Medical Association's meeting, from July 29th to August 1st, when the party will sail from Liverpool, arriving at Boston August 8th. For a slight extra cost the entire meeting of the British Medical Association can be attended. Dr. William Osler writes to us, urging the desirability of as strong a contingent as possible of American physicians joining in the congress. Those who wish to do so, should send their names, enclosing five dollars, to Dr. St. Clair Thomson, 20 Hanover Square, London, W., England.

The Right to a Reasonable Time for Boarding a Car.—While about to board a downtown Broadway car, a man took hold of the upright rail and waited for those ahead of him to get on. Just as he had his left foot on the step the car gave a sudden jerk. He was unable to get on, and so ran along with the car. There was some projection sticking out, obscuring a hole in the street, and into this hole the man fell. The dismissal of his suit for damages against the Metropolitan Street Railway Company has been held, on appeal to the Appellate Division, to be an error. "The defendant," said the court, "was bound to give the plaintiff a reasonable time to board the car, and the evidence would have justified finding that the defendant was negligent in that respect, nor do I think that the plaintiff was, as a matter of law, guilty of contributory negligence. Having hold of the car about to board it, when the car suddenly started, there was presented an emergency which required the exercise of judgment as to the best course to avoid being injured. If to avoid being thrown down by the sudden starting of the car, he held on to the car to steady himself until he could let go in safety, it was certainly not negligence as a matter of law. But for the existence of this trench in the roadway alongside of the track, which he had not observed, he would probably have escaped injury by adopting the course that he did, but his falling into the trench was caused by his being dragged along by the car. It seems to me that the question of contributory negligence was one for the jury. There can be no doubt that the starting of the car was the proximate cause of the injury. If the car had not started, the plaintiff could have got aboard in safety. It, however, started when he had hold of the car, and the sudden starting of the car carried him along with it, and if he, to avoid falling, kept hold of the car until he could regain his equilibrium and in so doing was by the momentum of the car thrown into this trench, it was the sudden starting of the car and the motion contributed by the car to the plaintiff which caused him to fall into the hole, from which he sustained the injury for which he seeks to recover."

The Medical Society of New Jersey will hold its one hundred and thirty-fifth annual meeting at the Hathaway Inn, Deal Beach, N. J., on June 25th, 26th, and 27th. The following is the order of business:

Tuesday, 3 P. M.—Minutes of the last meeting, reports of officers, committees, and delegates, election of permanent delegates, announcement of committees by the president, the reception and acting upon applications for the degree of M. D., and nominations for honorary membership.

Tuesday Evening, 8 o'Clock.—Annual address by the president, Dr. J. D. McGill, of Jersey City, The Medico-legal Expert; Progress in State Medicine and Hygiene, by Dr. W. H. McGee, of Belvidere; Progress in Medicine and Therapeutics, by Dr. Dowling Benjamin, of Camden; Progress in Surgery, by Dr. Charles Young, of Newark; Progress in Diseases of the Nose and Throat, by Dr. B. A. Waddington; Progress in Diseases of the Eye and Ear, by Dr. W. J. Atkinson, of Paterson; Progress in Bacteriology, by Dr. D. H. Bergey, of Philadelphia.

Wednesday Morning, 9 o'Clock.—What Measures are Practicable for Preventing the Spread of Tuberculosis? by Dr. Henry Mitchell, of Asbury Park; Arteriosclerosis and Nervous System, by Dr. Charles Lewis Allen, of Trenton; Neuralgia and Allied Affections, by Dr. William M. Leszynsky, of New York; Infant Feeding, some Difficulties in the Management of those Deprived of Milk, by Dr. Alexander McAllister, of Camden; Some Observations on the New Hæmostatic Adrenalin, by Dr. N. L. Wilson, of Elizabeth; A Plea for the Physician on the Witness Stand (discussion opened by Dr. William A. Davis, of Camden, and Dr. H. C. H. Herold, of Newark), by Dr. Daniel Strock, of Camden; The Modern Treatment of Gonorrhœa and its Complications (discussion opened by Dr. E. B. Silvers, of Rahway, and Dr. Mortimer Lampson, of Jersey City), by Dr. Daniel Currie, of Englewood; The Treatment of Neurasthenia (discussion opened by Dr. Philip Marvel and Dr. G. H. Balleray, of Paterson), by Dr. W. B. Stewart, of Atlantic City.

Wednesday Afternoon, 3 o'Clock.—Some of the Infections, their Genesis, Habitat, Consequences, and Prevention (discussion opened by Dr. Ferdinand M. Jeffries, of New York, and Dr. W. L. Vroom, of Ridgewood), by Dr. Samuel E. Armstrong, of Rutherford; Diagnosis of Intestinal Perforation in Typhoid Fever (discussion opened by Dr. Alexander Marcy, of Riverton, and Dr. William H. Shipps, of Bordentown), by Dr. Joseph Stokes, of Moorestown.

The annual dinner will take place at the Hathaway Inn on Wednesday, at 7 P. M.

Another "Bellevue Hospital Scandal."—There has been another charge of cruelty to patients ending fatally made against the insane pavilion at Bellevue. It is alleged that a man who died recently had been seriously assaulted, and that the post-mortem examination made by the coroner's physician proved that the man had peritonitis, probably due to injury, and fractured ribs,

besides other marks of violence. Testimony was brought to show that these injuries were not on the man's person when he was admitted to hospital. Commissioner Keller thereupon instituted a searching inquiry which, he said, satisfied him that there had been no violence exercised on the patient at the hospital. He caused a second autopsy to be held, the findings of which were at direct variance with those of the coroner's physician. This second autopsy disclosed, it is stated, no evidence of peritonitis, and showed that the man's death was due to acute mania and exhaustion. It was further asserted that, as no evidence of hæmorrhage in the neighborhood of the fractured ribs was to be found, the fractures occurred after death.

Residents of the Bronx Ask for the Removal of a Hospital for Consumptives.—Residents of Spuyten Duyvil, Riverdale, and Kingsbridge, the Park District Protective League, and the Kingsbridge Improvement Association have made complaints to the municipal authorities that the patients of the Seton Consumptive Hospital do not keep within the grounds of the institution and are a menace to the health of the community. They want the hospital removed, especially as its location is near swampy ground and its death rate abnormally high. The hospital receives $30,000 a year from the city for the care of poor consumptives.

Hospital Arrangements at the Pan-American Exposition.—Medical Director Roswell Park has concluded negotiations which have been going on for some time between the Exposition Company and the War Department at Washington, whereby the detachment of the United States Hospital Corps detailed at the Exposition will cooperate with the medical department of the Pan-American. This means that, no matter what great accident or catastrophe may take place on the grounds, there will be ample facilities for attending the injured immediately without calling upon city downtown hospitals for aid. Nearly one hundred men of the United States Hospital Corps are now encamped on the grounds, and it is proposed that this force be split up into several detachments with emergency hospital tents at various points about the grounds. The fact that the detail of 100 hospital corps men stands ready to act in any emergency will be a great assurance to nervous exposition goers. The hospital facilities at the Pan-American are now considered better and greater than those provided at any previous exposition, not excepting Chicago.

Dr. William H. Daly, whose suicide was recorded in our last issue, was well known and highly esteemed as a specialist in diseases of the nose and throat, having at one time been president of the American Laryngological Association and of the American Laryngological, Rhinological, and Otological Society, and chairman of the Section of Laryngology of the Ninth International Medical Congress. Dr. Daly served during the civil war as a medical cadet in various army hospitals and graduated from the Medical Department of the University of Michigan in 1866. He then engaged in practice at Pittsburgh, where he resided at the time of his death. He was a close personal friend of General Nelson A. Miles, and served on the staff of that officer as chief surgeon of volunteers during the Spanish war. Dr. Daly observed the character of the beef being issued to the troops and made a report to General Miles condemning it, which report served as a basis for the army beef scandals. Dr. Daly had been quite despondent for some time, his wife having died about three years ago, and was apparently suffering from melancholia when he committed suicide.

Births, Marriages, and Deaths.

Married.

DOTY—REES.—In New York, on Wednesday, June 12th, Dr. Alvah H. Doty and Miss Blanche Ida Rees.

DWIGHT—RUNDLE.—In New York, on Wednesday, June 12th, Dr. Jonathan Dwight, Jr., and Miss Georgina Gertrude Rundle.

GARROTT—ADAMS.—In Sharpsburg, Maryland, on Wednesday, June 12th, Dr. E. W. Garrott, of Hagerstown, Maryland, and Miss Mary Kretzer Adams.

HART—ROBBINS.—In New York, on Wednesday, June 12th, Dr. Theodore Stuart Hart and Miss Mary Ayres Robbins.

HEISKELL—BRYAN.—In Philadelphia, on Tuesday, June 11th, Dr. Sidney Heiskell, of Baltimore, and Dr. Doralyn Bryan.

HICKS—THAYER.—In East Rockaway, N. Y., on Wednesday, June 5th, Dr. Shirley Hicks and Miss Minnie Thayer.

JAMAR—SAVAGE.—In Reading, Pennsylvania, on Wednesday, June 12th, Mr. J. H. R. Jamar, son of Dr. John H. Jamar, of Elkton, Maryland, and Miss Isabelle R. Savage.

JOHNSTON—DRAKE.—In Detroit, on Wednesday, June 12th, Lieutenant Edward Neele Johnston, Corps of Engineers, and Miss Cornelia Bissell Drake, daughter of Dr. Harlow B. Drake.

JONES—JOHNSTON.—In Washington, on Thursday, June 13th, Dr. James T. Jones and Miss Minnie Frances Johnston.

MACKEAN—FLAGLER.—In Washington, on Wednesday, June 12th, Dr. George W. MacKean, of Nova Scotia, and Miss Elizabeth Moore Flagler.

MAGRUDER—GULICK.—In Baltimore, on Friday, June 14th, Dr. Alexander F. Magruder, United States Navy, and Mrs. Ida Newton Gulick.

RANDLE—FLEMING.—In St. Louis, on Thursday, June 6th, Dr. Henry T. Randle, of Clayton, Missouri, and Miss Josephine M. Fleming.

READING—RULOFSON.—In San Francisco, on Wednesday, June 5th, Dr. Wallace Wall Reading and Miss Clara Estelle Rulofson.

STOCK—SCHIEKLER.—In New York, on Wednesday, June 12th, Dr. Caspar Stock and Miss Lillian Schiekler.

WILCOX—MCILWAINE.—In Washington, on Wednesday, June 4th, Dr. William Wilcox and Miss Annie Reade McIlwaine.

WILSON—WILSON.—In Washington, on Wednesday, June 12th, Dr. Arthur Lee Wilson, of Lynchburg, Virginia, and Miss Elinor Wilson.

Died.

BLOCH.—In Denver, on Monday, June 17th, Dr. A. J. Bloch, of New Orleans, in the thirty-fourth year of his age.

BRIGGS.—In Rochester, on Friday, June 14th, Dr. William H. Briggs, in the seventy-ninth year of his age.

CALDWELL.—In Freeport, Illinois, on Friday, June 7th, Dr. William S. Caldwell, in the sixty-eighth year of his age.

CAMPBELL.—In Worcester, Massachusetts, on Friday, June 14th, Dr. W. J. Campbell.

CHILTON.—In Dallas, Texas, on Thursday, June 6th, Dr. R. H. Chilton, in the fiftieth year of his age.

ELLIOTT.—In New York, on Saturday, June 15th, William M. Elliott, youngest son of Dr. George A. Elliott.

FARRAR.—In Ridgeway, Pennsylvania, on Friday, June 14th, Dr. Percival J. Farrar.

GILLASPY.—In St. Louis, on Thursday, June 6th, Dr. Rufus Gillaspy, in the forty-third year of his age.

JOYCE.—In St. Louis, on Monday, June 10th, Dr. P. W. Joyce, in the thirtieth year of his age.

LEWIS.—In Kansas City, Missouri, on Saturday, June 8th, Dr. Eugene R. Lewis, in the forty-ninth year of his age.

MARTIN.—In Belgrade, Maine, on Sunday, June 16th, Dr. R. J. Martin, of Augusta, Maine.

SEEBOLD.—In Baltimore, on Wednesday, June 12th, Dr. Charles Scott Seebold, in the fifty-first year of his age.

SMITH.—In Linglestown, Pennsylvania, on Sunday, June 16th, Dr. William C. Smith, in the seventy-third year of his age.

TIMPANY.—In Toledo, Ohio, on Friday, June 7th, Dr. Robert H. Timpany, in the thirty-sixth year of his age.

Pith of Current Literature.

Journal of the American Medical Association, June 15, 1901.

The Natural Method of Teaching the Subject of Medicine. By Dr. William Osler.

Relation of the Medical Profession in the Twentieth Century to the Tuberculosis Problem. By Dr. S. A. Knopf.

Gumma of the Spermatic Cord, with Report of a Case. By Dr. R. R. Campbell.—This case is interesting chiefly on account of the rarity of syphilitic manifestations in this particular location.

Surgical Shock. By Dr. William H. German.

Non-constrictive Dressings for Fractures. By Dr. J. F. Pritchard.—Under no circumstances in the treatment of diseases and injuries should we interfere with the beneficent efforts of Nature, and the author points out that an unimpeded circulation will give a more rapid healing process than is attainable if, by a constrictive dressing, the circulation is impeded in the slightest degree. All indications are fulfilled if the broken fragments of bone are in apposition and at rest. In the old fracture-box this principle is partially applied, and the so-called Hodgen's splint gives for fractures of the leg and thigh a plan of suspension that meets all requirements. Plaster-of-Paris splints or casts should never under any circumstances be used for a primary dressing. Illustrative cases follow.

Acute Glaucoma Developing in a Cataractous Eye, after Cataract Extraction in other Eye. Iridectomy and Cure. By Dr. H. N. Rafferty.

Sitophobia of Enteric Origin. By Dr. Max Einhorn.—The author writes of sitophobia, meaning fear of food, a condition which may last a long period of time, and, if not successfully treated, may endanger life.

The Relation Existing between Diseases of the Conjunctiva, Nose, and Throat. By Dr. Heman H. Brown.—The author points out the need there is that the ophthalmologist should bear in mind the fact that in the treatment of conjunctivitis he is not dealing with an isolated tissue.

Round Ligament Ventrosuspension of the Uterus. By Dr. D. Tod Gilliam.—The method of suspension indicated in the title is believed by the author to be the nearest approach to the ideal, and to be superior to all other methods, both from a physiological and a utilitarian standpoint.

Magnetic Foreign Bodies in the Eye. By Dr. E. Villiers Appleby.

Variability of the Tubercle Bacillus. By Dr. Carl Ramus.—The author's conclusions are that: (1) The tubercle bacilli are not always so easy to demonstrate as is commonly believed; (2) the fuchsine solutions, like those of other dyes, cannot at all times be absolutely depended upon; (3) tubercle bacilli from different patients, and from the same patient at different times, will not invariably stain by one method; (4) the staining variations probably depend on physical and chemical changes in the bacterial substance, instituted either by antitoxic action, by the products of associated organisms, or by a combination of both; (6) in the absence of demonstrable tubercle bacilli, where physical signs of tuberculosis exist, a prompt diagnosis of that disease should be confidently made in the interest of the patient, and no valuable time be lost in waiting for typical bacilli to appear.

Medical Colleges and Professional Standards. By Dr. Inez C. Philbrick.—The need of fewer and better institutions is pointed out.

Philippine Customs and Habits. By Dr. J. C. Minor.

Medical Departments in Public Libraries. By Dr. C. D. Spivak.

Medical News, June 15, 1901.

Decortication of the Lung for Chronic Empyema. By Dr. George Ryerson Fowler.—The author believes that: (1) Decortication of the lung is an operation adapted to all cases of old empyema in which extensive tuberculous lesions of the lungs, discoverable prior to operation, are not present, and in which the patient's condition will permit of a major operation; (2) it may be advantageously substituted for Estlander's operation in the majority of instances in which the latter has been considered, up to the present time, as being indicated; since it is a more rational procedure, in that it combines the advantages of restoration of function of the lung, so far as possible, with closure of the empyemic cavity; (3) it should replace Schede's operation in all cases; (4) the method by extirpation of the diseased portion of the pleural membrane, including the visceral, cortical, and diaphragmatic portions, is the operation of choice; (5) failing this, visceral pleurectomy should be selected; (6) pleurotomy, with simple detachment of the visceral layer of the diseased pleural membrane, gives sufficiently good results to warrant the surgeon in resorting to this procedure in cases in which the condition of the patient will not permit of the application of the other and more desirable methods; (7) whatever operative method is adopted, the most complete access possible to the cavity of the chest should be obtained, and rapid closure of the opening in the chest-wall afterward secured, since the complete reexpansion of the lung must depend largely upon the normal respiratory movement; (8) pulmonary or respiratory exercises should not be neglected in the after-treatment, since they aid greatly in the restoration of the function of the lung.

A Study of some Complications and Sequelæ of Typhoid Fever. By Dr. H. A. Hare and Dr. H. R. M. Landis.

The "Porro-Cæsarean Operation," with Report of Two Successful Cases. By Dr. James H. Glass.

The Treatment of Scarlatinal Nephritis. By Dr. Charles Gilmore Kerley.—A remedy which stands out prominently superior to all others, is the hot-water flushing of the colon, and the author looks upon the colon flushings as being of more value in restoring the kidney function than any other one measure. It may be used with advantage when the urine first becomes scanty, as well as when convulsions are threatened or present. For a child three years of age, from sixteen to twenty-four ounces of normal salt solution at 110° F. are introduced into the colon by means of a rectal tube, which should be inserted at least ten inches. This should be repeated every six or eight hours and will be retained by most patients. After from three to five flushings, in a stubborn case, the kidneys often begin to act, and soon there is a fairly free flow of urine.

Boston Medical and Surgical Journal, June 13, 1901.

Internal Medicine in the Nineteenth Century. By Dr. N. S. Davis, Jr.

Some Observations on Chronic Seminal Vesiculitis. By Dr. Arthur L. Chute and Dr. Richard F. O'Neil.—The experience of the authors leads them to believe that this disease is much more frequent than it has generally been supposed to be. Among five hundred and forty patients presenting various sorts of genito-urinary disease were found sixty cases of seminal vesiculitis. A point on which the authors would lay stress is that seminal vesiculitis, secondary to urethritis, is seldom a sharply defined single disease, but is practically always associated with more or less chronic prostatitis and chronic involvement of the posterior urethra. The treatment which has given the authors the best results is massage of the vesicles and ducts of the prostate as well. As the authors believe that a certain number of the cases of impotence, and many of sterility, are due to vesiculitis, its treatment thereby has a wider importance than the mere remedying of the discomfort the patients suffer. They advise the examination by the rectum of all patients with urethral disease in whom the disease is not progressing favorably, particularly of those showing the so-called neurasthenic symptoms.

Iodophilia. By Dr. Theodore Dunham.

Contributions from the Long Island College Hospital, Boston Harbor. Cystic Tumor of Median Nerve; Operation; Restoration of Function. By Dr. A. S. Hartwell.

Medical Record, June 15, 1901.

A Note on the Spread of Yellow Fever in Houses. Extrinsic Incubation. By Dr. H. R. Carter.—It is well known that when a case of yellow fever develops in a house, the house may become endowed with such properties that people susceptible to yellow fever may contract the disease by visiting or residing in the house. The author adduces evidence to show that a certain interval from the development of the infecting case of yellow fever passes before this property of communicating the disease to other people is attained by the place. This time agrees with the time that Dr. Reed finds to elapse from the infection of the mosquito by biting a yellow-fever patient to the time the mosquito becomes capable of communicating the disease to man. This time is placed definitely at not less than twelve days, and up to eighteen or more days.

On the Origin of Cancer: What Remains to be Demonstrated. By Dr. Samuel W. Bandler.

The Redundancy of the Preinsula in the Brains of Distinguished Educated Men. By Edward A. Spitzka.—In the highly intellectual, according to the author, the excessive growth and development of the left preinsula causes a displacement of the opercula, even though the latter be very well developed. In the defective, exposure of the preinsula is due to deficient development of the opercula. In such cases the insula itself is of inferior development, indicated by the soundings of the Sylvian cleft, by the flatness of configuration, and by the lesser area of the insular cortex.

Philadelphia Medical Journal, June 15, 1901.

The Topical Treatment of Focal and Jacksonian Epilepsy. By Dr. J. William White.—A method of treatment proposed by the author is described as follows: The affected centre being determined in advance, its relation to the cranium is indicated by a silver or iodine mark upon the scalp. The scalp is sterilized and resterilized three times at intervals of twelve hours, not only before the trephining, but also before each subsequent application of the treatment. A horseshoe-shaped flap is raised and a half-inch button of bone removed with a small trephine. The dura is left intact. Thirty minims of a sterile two-per-cent. solution of eucaine are then injected into the brain substance at the centre of the trephine opening, the point of the needle being introduced about three quarters of an inch. The needle is gradually withdrawn as the last ten minims of the solution are injected. The flap is replaced. The patient is returned to bed and, on the day of operation and the following day, should receive full doses of bromides. At intervals, to be determined only by experience, the injection is repeated. The patient should be kept in bed at least four hours after each injection and should take bromides for from one to two days.

Theoretical and Practical Considerations on the Treatment of Jacksonian Epilepsy by Operation, with the Report of Five Cases. By Dr. James Jackson Putnam.

What I have Learned from One Hundred and Sixty-one Operations for the Relief of Senile Hypertrophy of the Prostate Gland. By Dr. S. Orville Horwitz.—The author's conclusions respecting prostatectomy are as follows: 1. With the exception of ligation of the internal iliac arteries, prostatectomy is the most dangerous of any operation that has been recommended for the relief of prostatic obstruction due to hypertrophy. 2. Suprapubic prostatectomy is the safest method, especially if combined with perineal drainage. 3. The best period to select for the performance of this operation is early, before the breakdown of catheter life and serious complications have supervened. 4. An atonied or a contracted bladder of long standing, associated with chronic cystitis, and attended by the formation of sacs, or pouches, contraindicates the operation. 5. A partial prostatectomy is indicated in those cases where a valve-like lobe exists and interferes with urination, or where there is partial hypertrophy of one of the lobes. 6. A complete prostatectomy is indicated where a hypertrophy of the three lobes has taken place, especially if the condition is associated with tumor formation projecting well back into the bladder, or has given rise to a stenosis of the prostatic urethra. 7. Perineal prostatectomy is best suited to those cases where the enlargement of the lateral lobes has a tendency to grow toward the rectum, or to obstruct the urethra. 8. When performing a perineal prostectomy the semi-circular incision advocated by Pyle, or the transverse cut of Wolholm, is the most satisfactory. 9. The removal of a portion of a small, hard, fibrous prostate gland, by means of the perineal route, is a very difficult operation. There is danger of extirpating not only the entire gland, but the prostatic urethra as well. (*To be concluded.*)

The Value of the Combined Medical and Surgical Clinic to the Student. By Dr. Robert G. Le Conte.

A Case of Abdominal Pregnancy. By Augustus C. Behle.

Specialism and some of its Relations to the General Practice of Medicine. By Dr. Henry Wallace.

Lancet, June 8, 1901.

Some of the Anatomical Associations of the Kidneys from a Surgical Point of View. By E. Owen, F. R. C. S.—Will be abstracted at length in a later issue.

Retention of Urine. By C. Heath, F. R. C. S.—In this article the author reviews the various forms of retention of urine by the bladder. In children it is occasionally due to a tight foreskin; the treatment is simply to dilate the orifice with a forceps or by circumcision. Later in life, a child may have retention of urine from a calculus in the urethra, which calculus is usually lodged near the meatus and can be easily extracted. Occasionally retention in children is due to a thread having been tied around the penis, as children who have been punished for wetting the bed sometimes do in desperation. In the young adult retention is usually the result of gonorrhœa. It may be in the early, acute stage of the disease, or it may be in the later stage, when the inflammation has traveled up the urethra and affected the prostate. Another common form of retention in old gonorrhœa is the spasmodic variety, following the use of alcohol. Another and much more serious condition of retention is where the patient has had a stricture for years, which has been dilated several times. In all these forms the treatment consists in catheterization. With a certain amount of skill most cases of stricture should yield to the catheter, but it may be necessary to puncture and aspirate the bladder above the pubes.

Retention of urine sometimes results from atony of the bladder; the muscular coats of the bladder are so weakened by continual distention that they fail to contract. It is in these cases that retention with overflow and continual dribbling occurs, for which the physician should keep a sharp lookout. The treatment consists in frequent catheterization, the administration of strychnine and, if necessary, the use of electricity. In old age retention of urine is usually due to enlargement of the prostate gland. Here, again, the treatment is catheterization, followed, in suitable cases, by operation. The author prefers vasectomy to castration or prostatectomy.

Retention in the female occurs most generally in connection with pregnancy. A full bladder should never be overlooked, for many of the serious accidents following parturition are due to the prolonged presence of a full bladder. When in doubt catheterize. Lastly, there is that form of retention occurring in young people which is called "hysterical retention." In its treatment the great secret is not to pass a catheter. Put the girl into a hot bath and tell her to micturate; if she will not, suddenly pour cold water on her head, which will most certainly have the desired effect.

An Early Experience Concerning the Therapeutic Virtues of Iodide of Potassium in Asthmatic Affections. By Sir W. T. Gairdner.—The author describes how an old asthmatic patient of his, a minister, brought him many years ago a complicated prescription given him by Dr. Jephson, which had benefited his asthma greatly. The prescription contained fourteen or fifteen more or less active drugs, among them potassium iodide. By personal experimentation it was gradually determined that the beneficial effect was due to potassium iodide alone, since which time Dr. William Gairdner has steadily advocated its use in all bronchial affections.

Rat Plague. A Preliminary Communication on an Outbreak of Disease in Rats at Cape Town. By Dr. A. Edington.—The author has examined the bodies of rats supposed to have died of the plague at Cape Town, and finds that the micro-organism causing their death is not the bacillus of bubonic plague at all. The rat has a disease which is communicable to guinea-pigs, but not to rabbits, and to which rabbits are also refractory even after the disease has been passed through guinea-pigs. Inoculation of the rabbit with the rat bacterium in its virulent form gives no protection against a subsequent inoculation with bubonic plague, thus proving that this rat plague cannot be bubonic plague. The morphological and cultural characteristics of the rat microbe are described and the results of inoculation experiments given.

Alcohol and Arsenic in the Ætiology of Alcoholic Neuritis. By E. F. Buzzard, M. B.—The author has carefully investigated 120 cases of alcoholic neuritis as well as some twenty other cases in which alcohol was a possible, but not a reliable, cause, with a view to determining the part played by alcohol in the causation of multiple neuritis. Special attention was paid to the following points, which are dwelt on at length: (1) age; (2) sex; (3) habits in reference to alcohol; (4) changes of a nutritional, vasomotor, or pigmentary nature in the skin, hairs, or nails; and (5), the result of treatment with arsenical drugs.

The author concludes that (1) alcoholic neuritis is more often found in the sequel of spirit drinking than in other forms of alcoholism; and (2) that clinical evidence is antagonistic to the idea that arsenic is the cause of alcoholic neuritis.

An Explanation of the Vulnerability of the Apices in Tuberculosis of the Lungs. By Dr. E. H. Colbeck and Dr. E. Pritchard.—The authors conclude that the vulnerability of the apices of the lungs to tuberculosis is largely determined by an alteration in the shape of the chest in conjunction with displacement and deficient musculature of the shoulder girdle. The importance of such alteration lies in the modification which these changes induce in the dynamical relations of the superior aperture of the thorax, whereby the movements of the apices become inverted in their relation to the normal respiratory rhythm. The exact position of the site of deposit is determined largely by the distance the apex rises above the border of the first rib. The practical bearing of this theory is the enormous importance of developing the muscles of the shoulder girdle with the object of "pulling the chest into shape." Any muscular movement bringing into play the great pectoral muscles should be sedulously carried out.

The Surgical Treatment of Ulcers of the Stomach which are or have been Complicated by Severe Hæmorrhage. By C. B. Keetley, F. R. C. S.

Vitality after Severe Injury. By W. H. C. Greene, M. R. C. S.—The author reports the case of a man who had fallen on some area railings and sustained the following injuries: Irregular wound in the left hypochondriac region, with fracture of the sixth, seventh, eighth, ninth, and tenth ribs; complete perforation of both walls of the stomach; perforation and laceration of the diaphragm; collapse of the left lung; and perforation of the pericardium and left ventricle of the heart. Yet the man lived for nine hours after receiving his injuries. Large rectal injections of saline solution undoubtedly helped to keep him alive.

The Morbid Anatomy and Origin of the Various Presystolic Murmurs Heard at the Apex. By Dr. C. C. Gibbes.—The presystolic murmur has been proved to be present under the following morbid conditions: 1. Obstruction of the mitral orifice by sclerosis and adhesions or by invagination of an auricular thrombus. 2. Simple dilatation of the mitral orifice. 3. Roughened margins of a normal-sized mitral orifice. 4. Insufficiency of the aortic valves, with (*a*) normal mitral orifice; (*b*) simple dilated mitral orifice; and (*c*) dilated mitral orifice with thickening of the cusps and chordæ.

The author holds that the presystolic murmur cannot arise entirely from the auriculosystolic blood current, as asserted by Gairdner. In all cases the two conditions common to the whole of them are: (1) Hypertrophy of the heart muscle and therefore increased muscle tones; and (2), loss of compensation, producing partial asynchronism, thereby causing the muscle tones to be heard during the diastolic period, the intensity of the presystolic murmur varying in proportion to the amount of hypertrophy present.

British Medical Journal, June 8, 1901.

Some of the Anatomical Associations of the Kidneys from a Surgical Point of View. By E. Owen, F. R. C. S. —(See note in abstract of *Lancet* for June 8th.)

Remarks on Skiagraphy and Fractures, Especially in their Medico-legal Relations. By C. H. Golding-Bird, M. B.—As an aid to diagnosis none will now question the value of the x rays; and while their employment is quite unnecessary in by far the larger proportion of cases, yet there is a certain class of doubtful cases where the use of skiagraphy is most advisable. Such doubtful cases are of two kinds: (*a*) Where, although it is certain that a fracture exists, there is yet doubt as to its exact location; and (*b*), where the very existence of fracture is doubtful. In all cases in which the nature of the accident leads to the possibility of any fracture which cannot with certainty be diagnosticated, the surgeon should in self-defense give the patient the chance of skiagraphy to try and settle the point, though no practical outcome may result. For if he does not do this, the patient may have a skiagraph taken on his own initiative, and much trouble result thereby. Though over-reliance on mechanical aid to diagnosis, such as that of the x rays, in fractures may not be so detrimental to the patient, as when an exploratory operation is involved, yet it is only as a subsidiary agent to diagnosis that skiagraphy should be employed, and, even in this secondary capacity, its evidence in cases of difficulty and doubt should be received with caution, and only after due interpretation by some one whose experience warrants his speaking with authority.

The x rays are sometimes used to judge of the results of treatment of fractures, but those who are versed in the vagaries of the x rays will hardly care to stand or fall solely by such a test. In the majority of indirect fractures, even after the best of "setting" and treatment, the skiagraphs show an apparent maladaptation of the bones which, taken alone, would seem to indicate hopeless failure; yet the patients recover with perfectly sound and functional limbs. In order to satisfy the æsthetic requirements of skiagraphy, it would be necessary to operate upon almost every case, and that the bones should be adapted by screws or wires. If the final appeal is to be the beauty of the bone scar and not the utility of the limb, then every case must be so treated.

The following are some of the mistakes that have been and may be made by others than experts: A. *Can a skiagram show a fracture where none exists?* 1. Epiphyseal lines have been mistaken for fractures. 2. Impacted fracture of the neck of the thigh can be simulated by a foreshortened view. 3. Fracture through the base of the olecranon is simulated always where the light is directly over the bend of the elbow; the rays penetrate the joint. 4. The acromioclavicular joint resembles a fracture. 5. The appearance of a gradual thickening of bone can be produced at will.

B. *Is it possible to miss seeing a fracture?* Yes, though rarely. 1. Irregularity of bone outline may be completely masked, yet the line of light through the fracture is usually seen, no matter how closely the bones are adapted. 2. Fractures may be overlooked in the ribs and in the spine. 3. The centres of ossification in the ends of very young bones may be mistaken for detached bone or *vice versa*. 4. Where the bones are deep and much blood is extravasated, the image may be indistinct (base of the skull, etc.).

C. *Is it possible to show a fracture as still existing, though long united?* Yes. Early callus does not show, and the line of union will seem to be one of separation still.

D. *Can distortion be produced?* Yes, in several ways: 1. By foreshortening; also from the fact that x rays are divergent. 2. The appearance of gradual expansion of a bone can be easily produced by want of parallelism between the plate and the limb.

The article is accompanied by a special plate of most excellent skiagraphs, illustrating the various points mentioned above.

A Case of Oblique Fracture of Tibia and Fibula with Skiagraphs Showing Repair. By Dr. B. Duke.—The author reports a case of fracture of the tibia and fibula in which, although apparently perfect recovery had taken place, the skiagraph taken on the eightieth day after injury showed wide separation between the ends of the fractured bones. But a second skiagraph, taken eighteen months later, showed recovery to be perfect.

A Case of Cervical Rib; Obliteration of the Arteries of the Right Arm; Gangrene of a Portion of Several Fingers; Excision of the Rib. By T. E. Gordon, M. B —The author reports a case of cervical rib occurring in a man aged thirty-two years, causing obliteration of the arteries of the right arm and gangrene of the fingers. A skiagraph showed the presence of a cervical rib on both sides. The author reviews the literature of the subject and epitomizes his remarks as follows: 1. The cervical rib was in some way the cause of the arterial obliteration. 2. The circulation through the subclavian was not obstructed. 3. The occurrence of embolism may be excluded. 4. The manner of the obliteration suggests thrombosis, which in turn implies preceding disease of the endothelium. 5. The cause of this arterial disease was very probably in part, but only in part, the carrying of heavy weights. 6. If the rib acted directly on the artery, our present knowledge of pathology cannot explain it. 7. The rib may have acted on the artery indirectly through the nerves. 8. The nerves are more likely to have suffered than the artery, and nervous symptoms are much more common than arterial. 9. A nerve lesion is capable of causing gangrene. 10. A nerve lesion may cause structural lesions in the vessels. 11. The absence of clear signs of a peripheral neuritis is a striking argument against the theory of nerve origin. 12. The case resembles one of Raynaud's disease. 13. But in Raynaud's disease the arteries are stated to be healthy. 14. Structural changes in arteries may arise not only from nerve lesions generally, but from disease of vasomotor nerves in particular. 15. In cases of cervical rib there occasionally occur symptoms which may possibly be explained by injury to the cervical sympathetic. 16. A study of the anatomy of the region concerned suggests that the rib may have excited its evil effects not at its distal but at its proximal extremity; here the rib is in intimate relation not only of the seventh and eighth cervical and first dorsal nerves, but also of the inferior cervical sympathetic ganglion and its branches.

The Effect of the Röntgen Rays in a Case of Chronic Carcinoma of the Breast. By A. Clark, F. R. C. S.—The author reports the case of a woman, aged sixty years, suffering from chronic carcinoma of the breast, in which the use of the Röntgen rays over a period of nine weeks was followed by marked improvement. Islands of epithelium appeared over the diminished ulcerated surface, and the indurated lump decreased in size. The glands in the axilla grew smaller, there was less pain, and the general condition of the patient improved greatly.

Note on the Pathology of Toxic Amblyopias. By J. H. Parsons, F. R. C. S.—The author has studied the effect of the local action of nicotine upon the superior cervical ganglia of cats, and concludes that the action of nicotine may be supposed to be twofold: (1) Vascular, causing vasoconstriction of the arterioles; (2) paralytic, upon the synopses either of the cone fibres, or of the inner granules, or of both.

Paralysis of the Cervical Sympathetic. By Dr. P. Stewart.—The author reports a case of lesion of the cervical sympathetic which is unique, not so much because it exemplifies to a marked degree nearly all the classical symptoms of the cervical sympathetic, but because it demonstrates with great clearness the precise limits of one symptom in particular—*anidrosis*. This has not been previously recorded. It is sharply limited by the middle line, it extends as low as the third rib in front and the third dorsal spine behind, and it includes the whole upper extremity on the affected side.

Wiener klinische Rundschau, May 19, 1901.

Bronze Diabetes.—Professor August Murri reports the case of a woman, fifty-nine years of age, who had suffered from diabetes for many years and who developed a bronze coloring of the skin. After a long stay at the hospital, the sugar disappeared from the urine, and the skin and mucous membranes assumed their normal white color. Albumin, peptone, acetone, or hæmoglobin were never found in the urine. (*To be continued.*)

Hospital Gangrene.—Dr. A. Brabec reports a case of this very rare condition appearing in Maydl's clinic in Prague. It was in a young girl, who had an ulcer on the external malleolus. During its treatment at the clinic, gangrene appeared. Bacilli and cocci were found in the secretion, but no organism which could be held to specific account. (*To be concluded.*)

Acute Trigger Finger with Periosteitis. By Dr. E. von Czyhlarz.

Klinisch-therapeutische Wochenschrift, May 19, 1901.

Medical Treatment of Perityphlitis. By M. Bourget. (*Continued article.*)

Effect of Steam Baths upon the Skin of the Face.—Dr. Rudolf Steiner has devised an apparatus for playing steam, plain or medicated, upon any desired part of the face. He has had good results from this treatment in cases of seborrhœa oleosa and acne vulgaris.

Centralblatt für Gynäkologie, May 11, 1901.

Pathogenesis of Eclampsia.—Dr. Arthur Dienst has investigated this subject for a year and a half in Küstner's clinic. He finds that both mother and child are involved in an eclamptic seizure. The blood serum and the urine of both are similarly pathological, as are the changes in the internal organs. In the blood, the fibrin-forming elements are increased; in the urine, albumin, casts, and blood are found. The essential cause of eclampsia, he thinks, resides in the insufficient elimination of toxic substances by the liver and kidneys of the mother. This depends upon insufficiency of the mother's heart or kidneys, or upon anomalies of these organs. The metabolic results of fœtal life, added to those of the mother, normally increased during pregnancy, are the elements which provoke the changes in the maternal blood. If these do not lead to eclamptic seizures, but to a toxæmia, we may have eclampsia without albuminuria and with sound kidneys; but if there is a gradual heaping up of the poisons, eclampsia with albuminuria appears suddenly. *Postpartum* eclampsia is due to the impairment of the hepatic function, deranged by the same toxines as those which affect the kidney.

Cæsarean Section after Vaginal Fixation.—Dr. Hermann Pape reports eight cases from the literature and one of his own, in which Cæsarean section at term was necessary after the uterus had been strongly fixed in anteflexion by the vaginal method.

Dialyzed Ergot. By Dr. E. Niehergall.

A New Abdominal Binder. By Dr. Kurt Witthauer.

May 18, 1901.

Conservative Treatment of Inflammatory Disease of the Adnexa.—Dr. H. Thomson believes in the vaginal incision of a pyosalpinx. The hæmorrhage is never severe and can always be controlled by tamponing or ligature or by forceps. The posterior fornix should always be the one opened, the incision should be a free one, and the pus cavity should be thoroughly opened and drained as other abscesses are. Recovery is prompt, as a rule; pain and the tumor disappear, and if the result is not satisfactory, a radical operation may still be performed.

Ætiology of Facial Paralysis after Spontaneous Birth.—Dr. E. Frank reports such a case as a rarity, and finds the explanation in the severe pressure of the left shoulder against the aural region.

Drainage after Laparotomy.—Dr. L. Seeligmann recommends drainage through the pouch of Douglas with closure of the abdominal wall, in laparotomies which are complicated by adhesions or by soiling of the peritonæum. He cites an illustrative case.

Wiener klinische Wochenschrift, May 16, 1901.

Influence of Alcohol upon the Course of the Infectious Diseases.—Professor Max Gruber decries the routine employment of alcohol in the acute infections as being productive of more harm than good. He believes that it weakens the resisting power of the organism, but is sometimes useful in the collapse of some of the infectious diseases.

Ætiology of Acute Articular Rheumatism.—Dr. Gustav Singer takes issue with Wassermann and Meyer as to their recently described organism, and says that it is a variety of the *Streptococcus pyogenes*. The specific organism has not yet been isolated, he thinks.

Clinical Diagnosis of Renal Infarcts. By Dr. Rudolf Schmidt (*concluded*).—The author says that it is always desirable, in cases of renal colic, to try to distinguish between intrarenal and extrarenal lesions (ureteral). Intrarenal lesions are more sharply circumscribed in the neighborhood of the kidney; if there is an infarct, the kidney itself is sensitive to pressure, the pain is continuous, albuminuria suddenly appears, or the sediment shows nephritic changes. Ureteral lesions have a tendency to radiate, the course of the ureter is sensitive, hydronephrosis may appear, and the pain is intermittent. A

high-tension pulse speaks against an infarct, but pain appearing while in the recumbent position is characteristic. Hæmaturia is rarely seen in infarction, but a rapidly appearing and rapidly vanishing intense albuminuria is seen in such cases. Renal infarction, complicated by enteroptosis, offers an unfavorable prognosis. Lying on the healthy side increases the pain of a kidney the seat of an infarct. It may happen that total occlusion of the renal artery will give no urinary symptoms. Oliguria or anuria may be seen in bilateral infarction, but there is no vesical tenesmus.

May 28, 1901.

Theodore Meynert.—A memorial address on the unveiling of Meynert's monument, by Professor Anton.

Alimentary Glycosuria.—Dr. Emil Raimann says that the assimilation of sugar is an expression of the general healthy condition. It is influenced by a variety of external and endogenous toxines.

Juvenile Form of Progressive Paralysis.—Dr. Josef A. Hirschl points out the essential differences between the progressive paralysis of adults and that of the youthful. Congenital syphilis may be the cause of the disease in the latter, and it begins in early life. Hereditarily tainted individuals are subject to it. The prodromal stage is long and rich in symptoms. At the height of the disease simple dementia is most commonly seen rather than paralytic mania or hypochondriasis; remissions are uncommon. The disease lasts a comparatively long time. The post-mortem findings are those of cerebral sclerosis with a marked leptomeningitis.

Münchener medicinische Wochenschrift, May 14, 1901.

Mixed Ether and Chloroform Narcosis.—Dr. H. Braun describes an apparatus of his own devising for the combined administration of ether and chloroform, which he characterizes as safe, cheap, and as employing the principal elements of the two drugs with a minimum of chloroform.

Acute Yellow Atrophy of the Liver. By Dr. Aby Bey Ibrahim (*continued article*).

A Case of Noma in Old Age. By Dr. O. Zusch.

Diphtheria Antitoxine Results, 1894-1900.—Dr. F. Cuno writes that the results from the use of the diphtheria antitoxine in Dr. Christ's hospital have been excellent, showing a remarkable decrease in mortality when compared with the years preceding its introduction. Intubation has worked better in their hands than tracheotomy.

Contusions of the Pelvis. By Dr. F. Bähr.

A Case of Inguinal Ovarian Hernia. By Dr. Quadflieg.

Virulence of Scarlatinal Contagion.—Dr. Friedrich Schmidt relates a case in which a puerperal woman became infected from the bedding of her husband, who had had scarlatina three months previously. He emphasizes the necessity of scrupulous disinfection after this disease.

Kissingen Saal-baths in Heart Disease. By Dr. Leusser (*conclusion*).

Indépendance médicale, May 29, 1901.

Recurrent Hemichorea.—M. Paul Farez reports the case of a young woman, nineteen years of age, who, after three months, had a recurrent attack of hemichorea. She was completely cured by a single hypnotic *séance*, by means of suggestion.

Discipline of Tuberculous Subjects.—M. Portes emphasizes the necessity of strict discipline among persons suffering from pulmonary tuberculosis, this discipline to consist in teaching them, in sanatoria, if necessary, the hygienic measures essential to prevent the spread of the disease.

Lyon médical, May 26, 1901.

Gaseous Cysts of the Intestine.—M. Jaboulay speaks of microbic invasions of the intestine, slow in their course and development, which tend to produce large collections of gas. If these are not controlled, peritonitis and occlusion of the intestine may follow. He relates a case in a man, fifty years of age, who, from this cause, had a pyloric stenosis which necessitated operation.

Case of Pemphigus Vegetans. By M. Paul Jourdanet.

Parkinson's Disease. By M. Pierre Grange.

Gazette hebdomadaire de médecine et de chirurgie, May 12 and 16, 1901.

Intestinal Occlusion Following Appendicitis. By M. Broca.—A clinical lecture.

Preparation of Patients for Surgical Operations.—M. L. Dor shows by experiment that iodides administered before operations on dogs limit the virulence of experimental sepsis. Despite the disadvantages of the iodides, he thinks the principle might be employed with human beings.

Province médicale, May 18, 1901.

Nervous Arthropathy. By M. Durand.

Ancient Man in the Rhone Basin. By M. Mayet.

Hæmoptysis of Non-tuberculous Character.—M. J. Charvet says there are certain anomalous forms of pneumonia which give rise to hæmoptysis. Sometimes a previous attack of grippe predisposes to this condition. It may arise in a patient suffering from pneumonia alone, or from pneumonia complicated by an infarct, or from pneumonia in the course of tuberculosis or following an old pleurisy. (*To be continued.*)

Presse médicale, May 18, 1901.

Circular and Lateral Suture of Veins.—M. G. Clermont gives an exhaustive review of the entire subject of venous suture. He recommends both the circular suture and the lateral suture, the latter with a round needle and fine silk; an additional suture into the neighboring tissues close to the vein is advisable. The union of the venous walls need not be close. If, on central pressure, hæmostasis remains perfect, the result will be good. [The article is full of detail and is of interest to surgeons.]

Eruptions Due to Orthoform.—M. W. Dubreuilh reports a number of cases of eruptions following the local use of orthoform. He describes them under two main divisions: (1) Erythematous eruptions, complicated or uncomplicated by vesiculation and pustulation; (2) the rarer form of gangrene of the local area in which the drug is used.

Progrès médical, May 25, 1901.

Rhinopharyngeal Origin of Goître.—M. Hamon du Fougeray finds an explanation for the origin of goître in lesions of the nose and pharynx. Vascular lesions of the oropharynx produce simple goître; of the pharynx and nose, exophthalmos; of the mucous membranes of the nose and pharynx, goître and exophthalmos. Vascular and sympathetic disturbances of the oropharynx evoke goître and cardiac troubles; of the pharynx and nose,

exophthalmos and cardiac disturbances; of the entire rhinopharynx, the classical picture of Basedow's disease. Sympathetic disturbances alone of the rhinopharynx call forth heart affections with neither goître nor exophthalmos. Treatment of the nose and the pharynx is to be directed against these lesions.

Riforma medica, April 27, 29, and 30, and May 2, 1901.

On some Symptoms of Primary Cancer of the Head of the Pancreas. By Dr. Ferruccio Schupper.—The author reports the histories of eight cases of cancer of the head of the pancreas, and sums up the symptoms observed as follows: The disease was more prevalent in males, and the age varied from thirty-three to seventy years. Alcoholism seemed to favor its development, but there was no hereditary history of cancer in the cases observed. The subjective symptoms were, at first, slight, so that the patients presented themselves only when the disease had made considerable progress. This is a useful differential sign in the diagnosis of cancer of the pancreas from cancer of the stomach. The liver was enlarged in four cases. In one case there was a rapid diminution in its size within four days. The gall-bladder was swollen and painful on palpation. Jaundice developed suddenly in one case. In two cases it came on a few days after a severe pain was felt in the epigastrium; in the remaining cases it appeared gradually. In most of the cases the tumor was palpable, and in some it moved with respiration owing to adhesions or secondary invasion of the stomach. A profound and rapid cachexia accompanied all the cases. The supraclavicular glands were involved in only two cases, the inguinal more frequently. In two cases the pain was severe and resembled colic, but in the others it was moderate. In two cases there was subnormal temperature toward the end of the disease, while in three there was fever, depending on infection of the biliary tract or on peritonitis. Moderate degrees of gastrectasia were observed in two cases, and there were, in addition, vomiting of food and of coffee-brown material, and diarrhœa preceding the icterus. In three cases there was a splenic tumor, and in one case marked salivation. In two alcoholics with infections of the biliary passages there was albuminuria late in the disease. Glycosuria and polyuria were observed in one out of eight cases, and even in this one the signs disappeared rapidly. When present, glycosuria is a valuable diagnostic sign, but when absent it is of no negative value.

May 3, 4, and 6, 1901.

A Comparison of Hæmolytic and Agglutinating Action in Life and in Vitro. By Dr. Alessandro Bongiovanni.—There are marked differences between the hæmolytic and agglutinating powers of serum *in vivo* and serum *in vitro*. After being removed from the body the red blood cell alters its sensibility to the influence of agglutinating and hæmolytic agents. These red cells, according to the author's experiments, acquire a greater resistance toward the coagulating and destructive agents, though the extraction and defibrination of the blood are manœuvres which should weaken the organic elements, acording to the generally accepted notion. The other cells of the blood in the rabbit are especially sensitive to the hæmolytic powers of the bile of the ox and to the agglutinating powers of the serum of the sheep. They are less sensitive to the serum of the frog. In the body, however, the serum of the frog is more active than the other agents before mentioned.

May 7, 1901.

On the Capsule of Bacteria. By Dr. Icilio Boni.—The author recommends the following method of staining for capsular organisms: (1) The specimen is placed in a drop of a liquid composed of a white-of-egg beaten with fifty cubic centimetres of glycerin and two drops of formaldehyde and filtered; (2) it is fixed on a slide over the flame until all the glycerin has evaporated; (3) stained in Ziehl's solution for from twenty to thirty seconds; (4) washed in water and dried; (5) contrast-stained in Loeffler's solution for from four to five minutes; (6) washed in water, dried, and examined in Canada balsam. By this method the author has been able to obtain well-stained capsules in a number of species of bacteria, including the *Bacterium coli commune,* the bacilli of glanders, diphtheria, typhoid fever, etc. The author is investigating the significance of the capsule in bacteria, and his work, thus far, has shown that the capsule is the product of the bactericidal action of antiseptics or of antibacterial substances in or out of the body. The peripheral layers of the bacterial cell are injured and become swollen, so that their staining qualities are altered. This explains why sometimes a germ is found encapsulated and sometimes not. On the other hand. this theory destroys the morphologic value of the capsule.

A Contribution to the Treatment of Anthrax. By Dr. Salvatore Gugliuzzo.—The author reports eight cases of anthrax and concludes as follows as regards the treatment of this affection: (1) That in man the most common manifestation of anthrax is the malignant pustule, which may originate from infection through a very slight abrasion, or from the use of meat of animals that have died from anthrax; (2) in the treatment of this disease the most efficient means are deep cauterization with the Paquelin cautery, the use of Sclavo's serum, injections of phenol, or of sublimate. By these means the results of treatment are so good that fatal terminations are almost the exceptions. Seven of his eight patients recovered.

May 8, 1901.

Notes on Five Cholecystotomies for Biliary Calculi. By Dr. Tito Scarrone.—The author's conclusions are as follows: (1) Cholecystotomy in one operation is to be preferred to cholecystotomy in two stages; (2) when the bile-duct is pervious, it is preferable, after suturing the wound in the gall-bladder, to make the line of sutures extraperitoneal; (3) cholecystotomy is to be preferred to cholecystectomy.

Vratch, April 21 (May 3, N. S.), 1901.

On Sporadic Elephantiasis. By Dr. L. V. Orloff.—The author reports four cases of elephantiasis in which he performed operations that included the removal of the growth and the restoration of the parts involved. (*To be continued.*)

Haffkine's Lymph, and other Remedies against the Plague, which Produce Active Immunity. By Dr. A. F. Vigur.—As the result of his experiments, Vigur concludes as follows concerning Haffkine's lymph: 1. Monkeys of the species *Macacus rhadiatus* can tolerate Haffkine's lymph injected subcutaneously. 2. These monkeys do not show any local or any general reaction after the injection of six times the amount of serum usually injected into human beings. 3. In order to obtain a general reaction in these monkeys, very large quantities of the serum must be injected, and in order to produce a

marked local reaction a large quantity of Haffkine's serum must be injected at some tender spot in the skin of the animal. 4. Even the injection of the sediment from 135 cubic centimetres of the serum is borne well by the monkeys. 5. These animals, after injection with Haffkine's lymph, present a certain degree of immunity against the infection, while some of them are fully immune. The test for the quantity of lymph required is always the reaction. 6. Monkeys that have shown a reaction present a considerable mortality after two months and perhaps earlier. 7. In cases where infectious material has got into the serum, abscesses very rarely occur either in man or in animal. 8. The liquid part of Haffkine's lymph has but little effect. As a rule, from forty to sixty cubic centimetres were required to produce a reaction in *Macacus rhadiatus*. (*To be continued.*)

On the Question of Ankylosis of the Spine. By Dr. A. N. Vinokouroff.—The author describes two cases of ankylosis of the spine that he observed while the process was developing. In the first of these cases the "ankylosis" was due to inflammation of the spinal meninges. Thus it belonged to the type of cases described by Bechthereff, who spoke of the connection between disease of the spinal meninges and ankylosis of the spinal column. In the present case the paresis, the muscular atrophy, and the disturbances in sensation were not in the upper part of the body, as Bechthereff describes, but in the lower; and there was no kyphosis. In the second case there was also an acute inflammation of the spinal meninges followed by a chronic meningitis and by ankylosis of the spine. In this case, however, the disease had remained in the stage of irritation, and had not gone on to the paralytic stage as in the first case. As the result of his observations the author concludes as follows: "Ankylosis of the spine" is a symptom of spinal meningitis. The location and extent of the ankylosis depends upon the location and extent of the meningeal inflammation. The statement of Bechthereff, that the symptoms first appear at the upper part of the body and then travel downward, is not founded on facts. The paretic condition and the muscular atrophy may be absent. Kyphosis may only appear late in the disease, and the same is true of the anæsthesia. He does not agree with Bechthereff in calling ankylosis of the spine the result of compression of the intervertebral cartilages by the distorted spinal column. Immobility of the spine as a symptom occurs in a number of conditions.

On the Question as to the Effects of High-tension Electric Currents upon the Human Body. By Dr. S. A. Broustein.—The author reports a case in which the accidental exposure to a strong electric current was followed by the development of a neurasthenic condition with symptoms of hysteria. It may be regarded as a traumatic neurosis. In these cases there may be a medico-legal question of malingering, but in the author's case this was excluded from the circumstances of the patient.

Kumyss Treatment and some Kumyss Settlements in Ufa. By Dr. P. V. Zesarievsky.

Chirurgia, March, 1901.

On the Treatment of Diffuse Suppurative Peritonitis by Laparotomy. By Dr. S. P. Fedoroff.—Laparotomy is at the present time the only method by which the life of a patient with general septic peritonitis may occasionally be saved. It must be performed so soon as the diagnosis is made. The use of antitoxic serum and the injection of large quantities of salt solution may be of value as adjuvants. The laparotomy must be followed by the use of a copious irrigation of the cavity with some indifferent fluid at 40° or 50° C. The exposure of large loops of intestine is to be avoided as much as possible. The author recommends a method of draining the peritoneal cavity which is adapted to various topographic conditions of the peritoneal infection. For thorough drainage of the cavity he recommends three incisions in the abdominal wall—one median incision, or the operation wound proper, and two lateral incisions, parallel to Poupart's ligament on either side. Through these it will be possible to drain every part of the peritonæum where pus is apt to collect. If, at the time of the operation, pus is discovered in the omental bursa, it may be drained through the foramen of Winslow into the right lateral wound, or through an opening in the gastrocolic ligament. The author favors the wick drain suggested by Delagénière, consisting of a metallic tube perforated in ten places at one of its ends. Into this tube strips of gauze or of cotton yarn are drawn and the perforated end is introduced into the cavity.

On Operative Interference in Fibromyomas of the Uterus during Pregnancy. By Dr. Th. A. Alexandroff.—The author has collected statistics of twelve cases of fibromas in pregnant women, which were allowed to go on without surgical interference; of sixty-two cases in which enucleation or myomectomy was performed; of fifty-six cases of supravaginal hysterectomy; of thirty-three cases of complete hysterectomy, and of twenty-eight cases of Porro's operation. His conclusions on the moot question as to the operation of choice in these cases are as follows: The mere presence of fibromyoma in a pregnant woman does not constitute an indication for an operative procedure. Indications for the latter are symptoms threatening the life of the patient or the course of the pregnancy. In the absence of such symptoms the pregnancy must be allowed to take its course. Artificial labor and abortion must be excluded from the list of operations indicated in these conditions. Myotomy and enucleation are better performed in the first half of pregnancy. The immobility of the womb in the first half of pregnancy should be considered as an indication for enucleation or myotomy. Porro's operation is indicated only in multiple intramural fibromyomas. A conservative Cæsarean section with enucleation of the growths should be performed if the growths threaten to interfere with the progress of labor while the child is being born. If the patient's condition is poor, one may leave enucleation for a secondary operation.

On Excision of the Lower Extremity at the Hip-joint in Tumors of the Femur. The Best Methods of Operation and the Best Therapeutic Results. By Dr. B. G. Prgevalsky.—The author has collected 180 cases of operations on the hip-joint and analyzes them in detail. The following conclusions are the results of his study. The lowest percentage of mortality was obtained with Wyeth's method, namely, 12.8 per cent. Veitch's method does not give so low a mortality and is less easy of execution. There are not sufficient data to determine the value of Ravaton's operation, but it must be supposed that it is less dangerous than that of Veitch. The combination of Ravaton's and Veitch's methods can be justified neither from a scientific point of view nor for clinical reasons. Shock is the most frequent cause of early death in these operations. Cases of recovery from sarcoma of the femur after operation are so rare because the diagnosis is in most cases made too late.

Proceedings of Societies.

AMERICAN MEDICAL ASSOCIATION.

Fifty-second Annual Meeting, Held in St. Paul, on Tuesday, Wednesday, Thursday, and Friday, June 4, 5, 6, and 7, 1901.

The President, Dr. CHARLES A. L. REED, of Ohio, in the Chair.

General Session.

(Concluded from page 1058.)

The Control of Vice in the Army.—By the courtesy of the association, a delegation of the Women's Suffrage Society, which has been in session in St. Paul, was allowed ten minutes in which to present a memorial upon the subject of the regulation of vice in the army. Miss Susan B. Anthony, the first speaker, said that she wished to protest, on behalf of their organization, against the policy of controlling vice in Manila, Hawaii, and Puerto Rico. She hoped that some action would be taken in regard to this question by the American Medical Association, which would no doubt have great weight in influencing legislation.

Miss Anthony was followed by the Rev. Anna Shaw, who declared that the time had come when we should not be content with attempting to regulate vice, but should begin to protect virtue.

Dr. Louis L. Seaman, of New York, who at the previous session of the association had introduced a petition in favor of reestablishing the army canteen, said that the surgeons of the army were just as anxious as the members of the Women's Suffrage Society to protect the virtue of the soldiers. Vital statistics of the army in Peking showed that fifty per cent. of the patients treated there were affected with venereal disease, and that since the abolition of the army canteen the number of these diseases had almost doubled. He said the army canteen had been opposed by misguided enthusiasts, who should stop interfering with matters in the army, which they did not understand.

President Reed cut off further discussion upon the subject by stating that the meeting would proceed with its regular order of business.

State and County Societies.—Dr. McCormack presented the following resolution, which was adopted: "*Resolved,* That this association cordially endorse the plan proposed by the committee of reorganization for a uniform system of organization of State and county societies in affiliation with this body, and the secretary is hereby instructed to correspond with the officers of each State society and urge the adoption of such plan in so far as it may be applicable, and that he shall report to the next annual meeting the result of such correspondence."

Report of the General Executive Committee.—After considerable discussion, it was decided to act upon this report by sections. Upon the recommendation of the committee the meeting passed a resolution of disapprobation of the action of Congress in failing to pass the bill providing for the proper recognition of the army corps.

The recommendation of the committee that the president appoint a special committee of three members to revise the code of ethics brought out a lively discussion. It was finally decided that this recommendation be tabled.

The Oration in Medicine was delivered by Dr. N. S. Davis, Jr., of Chicago. (See page 978.)

The president announced that, as there seemed to be some misunderstanding regarding the reorganization scheme which had been adopted, he wished to state that its provisions went into effect in the present session only so far as they applied to the election of new delegates. All standing committees and all special committees appointed at the present session would stand and report at the next meeting.

The Oration in State Medicine was delivered by Dr. George M. Kober, of Washington, D. C. (See page 991.)

The London Tuberculosis Congress.—Dr. Judson Daland, of Philadelphia, was appointed to represent the association at the World's Tuberculosis Congress, to be held in London in July of the present year.

Report of the General Executive Committee.—Dr. L. D. Bulkley, of New York, the secretary of the committee, announced that Mr. John D. Rockefeller had recently given the sum of $200,000 for the promotion of scientific research. This sum had been placed at the disposal of the association's committee, under the chairmanship of Dr. William H. Welch, of Baltimore. A resolution was adopted thanking Mr. Rockefeller for his generous gift.

Report of the Judicial Council.—Dr. F. H. Wiggin, of New York, read the names of a number of physicians and announced that the Judicial Council recommended that they be dropped from membership. The cause for this recommendation was either the non-payment of dues or the fact that the gentlemen were no longer in good standing in their affiliated State or county societies. The report of the council was adopted without comment.

Report of the Committee on National Legislation.—Dr. H. L. E. Johnson, the chairman of the committee, said that at the recent meeting of the National Association of Military Surgeons the following resolution was adopted:

"*Resolved,* That this body deplores the action of Congress in abolishing the army-post exchange, or canteen, and in the interest of discipline, morality, and sanitation recommends its reestablishment at the earliest possible date."

This resolution had been presented at one of the general sessions by Major L. L. Seaman, and the meeting was now asked to endorse the action taken by the National Association of Military Surgeons. It was referred to the Committee on National Legislation, who reported as follows:

"We have carefully considered the resolution proposed, and declare it to be wise and proper and of importance to every citizen of the republic. The resolution is the outgrowth of careful study and observation by the medical department of the United States army; is concurred in by the commanding officers at the several posts, and is intended to correct serious abuses under the present law, which result in drunkenness, desertion, insubordination, dishonorable discharge, crime, poverty, appalling increases in venereal disease, and invalidism among the soldiers of the United States army.

"We find that the experience of foreign governments coincides with that of the National Association of Military Surgeons in the necessity for the army-post exchange, or canteen.

"We recommend that the American Medical Associa-

tion adopt the resolution proposed, and that it petition the Congress of the United States to repeal at the earliest moment the objectionable law which prohibits the army-post exchange."

The recommendation of the Committee on National Legislation was unanimously adopted.

Introduction of the President-elect.—Dr. John A. Wyeth, of New York, the president-elect, was escorted to the platform by Dr. Marcy and Dr. Magruder and introduced by the retiring president, Dr. Reed, who said:

"The moment has arrived that I can relinquish the arduous duties of this office, and in doing so I feel that I am passing the work to one under whose guidance this association shall be kept true to its exalted purposes. I take pleasure, therefore, in introducing to you my successor, Professor Wyeth."

Dr. Wyeth responded briefly as follows: "I appreciate deeply the honor that has been conferred upon me. It will take my best efforts to repay the association, even in part, for what I have received, but, such as they are, it shall have them. In the future, as in the past, I will do what I can to advance the highest and noblest interests of medicine and surgery."

A motion was adopted thanking the retiring officials, the committee on arrangements, and the good people of St. Paul and Minneapolis for the splendid management of the convention.

In seconding this motion, Dr. H. O. Marcy, of Boston, one of the ex-presidents of the association, said: "For twenty-six years I have followed the good fortunes of this association from the Atlantic to the Pacific, from the north to the south. Everywhere we have been received with that open arm of welcome, that cordiality of spirit that becomes the American citizen. Twenty years ago we met in this city of St. Paul. Those of us who were present then will recall the splendid hospitality that the people and physicians of this city accorded us. Upon this occasion it has been magnified even out of proportion to the growth of these twin cities of the Northwest."

Section in Surgery and Anatomy.

(Concluded from page 1012.)

The Mortality of Appendicitis.—Dr. John B. Deaver, of Philadelphia, in a paper with this title, began by saying that during the year 1900 there were operated on at the German Hospital, in Philadelphia, 268 persons with appendicitis, of which 144 had acute attacks of the disease and 124 chronic. Of those operated on during the acute stage, twenty-six died from the appendicitis or from some intercurrent or previously existing disease. In the cases not subjected to surgical treatment, by far the most potent factor was septic peritonitis. As to the *number* of attacks, the author said that the fatal attack might be the "solitary severe one." Severe attacks without fatal issue subsided to varying degrees, but commonly rendered the internal symptoms more aggravated. In cases complicated with adhesions, but without septic infection, the mortality was very low. In one case the author had operated twelve hours after the onset of the attack and found an advanced general purulent peritonitis, a condition from which he had never seen a recovery. He believed that where there was localized pus, the success of the operation depended upon emptying and draining every pocket; merely opening and draining the main abscess would not do, the great problem being how to drain all these collections without infecting the general peritoneal cavity. Post-cæcal collections of pus offered a serious problem. As to the advisability of removing the appendix in the presence of pus, the opinion of the author was that it should be removed, except in certain cases. Another very common cause of death was necrosis of the bowel. Dr. Deaver's experience showed that recurrent attacks of appendicitis were progressive in their severity, each one adding fuel to the flame; that the position of the appendix was an important feature; that delay in operating was responsible for more deaths in appendicitis than all the other factors having to do with the disease; that an operation in the first twelve, and at the latest eighteen to twenty-four hours, would save patients without subsequent complications, such as fæcal fistula, etc.

Some Unusual Features of Appendicitis and their Treatment.—Dr. Ernest Laplace, of Philadelphia, said, in a paper thus entitled, that in every case of fatal appendicitis there was a time when, had the operation been performed, the patient would have survived. He was of the opinion that it was not the appendicitis that killed, but the peritonitis incident thereto. He divided appendicitis into three different periods or stages: 1. That of appendicitis. 2. That of peritonitis. 3. That of septicæmia. He believed in rapid operative procedure in peritonitis from chronic appendicular abscess that had perforated or an acute peritonitis set up by appendicitis. Careful cleansing of the operative field should be instituted, with flushing of the abdominal cavity. When septicæmia and peritonitis were both present, then he would simply wash out the abdominal cavity, close it, and drain with gauze. He believed that it must be taken for granted that the phagocytes would compete more successfully with a slight amount of septicæmia than with septicæmia which was continually increasing by constantly forming toxines taken up from the peritonitis. Continuous flushing of the peritoneal cavity for at least a few hours after the operation would constitute the local treatment, whereby the arrest of progressive septicæmia might be hoped for.

The Knot within the Lumen in Intestinal Surgery, with Report of Eight Cases, was the title of a paper by Dr. F. Gregory Connell, of Chicago. The author said that the possibility of placing all the knots in enterorrhaphy within the lumen was no longer in doubt, but the advisability of such a procedure was still a disputed question by those who never used it. In no case could death be attributed either to the method of suture employed or to the manner of employing it; to include all the coats of the bowel-wall removed the danger of stitch yielding; to fail to include the submucosa left an insecure stitch; and it was not only possible, but practicable, to place all the knots of an enterorrhaphy in the lumen.

Dr. J. B. Murphy, of Chicago, commended Dr. Deaver for his work on this important line, styling it a debt of gratitude which the profession would never be able to pay. He considered that the question as to whether it was possible to make a diagnosis of the pathological conditions within the peritoneal cavity from the symptoms presented was a very vital one. In the fulminating type the speaker did not believe that one could tell from the outside whether it was progressing to that stage where it manifested its virulence.

Dr. Knight, of Connecticut, believed in the great helpfulness, if not the reliability, of the presence of leucocytosis as an indication of the condition.

Dr. Maxwell, of Iowa, endorsed thorough irrigation of the abdomen.

Dr. Andrews, of Chicago, spoke of the length of time of infection. "How do we know," he asked, "what the conditions are when we find free pus in the intestines without the restraining wall?" He believed that around this area of pus there was another zone of mucopus or serum.

Dr. Harris, of Chicago, did not believe that we were able to ascertain the condition in the abdomen. When a man had operated upon one hundred cases, he found he knew little or nothing about the conditions therein.

Dr. Moore, of Minneapolis, did not think there should be any hard-and-fast rule to be laid down in surgery where human life was involved. The question of operating should likewise be considered from the standpoint of environment; every one did not possess the advantages of a well-equipped hospital, such as existed in the large cities.

Dr. Morris, of New York, said that in appendicitis we were dealing with an infection the limits of which were unknown.

Dr. Smythe, of Memphis, said that the proper treatment of the patient was surgical.

The Nature of the Cancerous Process.—In a paper thus entitled, Dr. Roswell Park, of Buffalo, said that, like a huge and frowning sphinx at the very gateway or entrance to the field of surgical pathology, had stood for centuries the great problem of the nature of cancer. This had, at least until recently, remained the inscrutable mystery of ages. The author held that the parasitic. or infectious, theory of cancer was the only one which satisfied the needs of both pathologist and clinician.

In the New York State Laboratory, with which Dr. Park was connected, the disease was studied by the pathologist, biologist, chemist, histologist, and clinician, all working in close association. As to causation, the author was of the opinion that cancer was due to an extrinsic cause, parasitic in its nature. He took the analogy of vegetable life to sustain the parasitic theory, stating that the woody masses or xylomata, or knots, in trees, which suggested the tumor or cancer idea, destroyed the tree; they were frequently spoken of as tree cancers. Tumors were also common in the lower animals. He believed that tumors in man and animals were due to the same general causes, and thought it was not too strong a statement to make that Dr. Gaylord and the laboratory staff had absolutely produced adenocarcinoma by inoculation in a number of animals, and that this could be produced in such a way as to afford unmistakable evidences of the infectiousness of the disease.

The Present Status of the Carcinoma Question.—Dr. Nicholas Senn, of Chicago, considered this the most important research of to-day. Carcinoma resulted from atypical proliferation of epithelial cells. As carcinoma originated in epithelial cells, its development was impossible in mesoblastic tissues. Histology did not support the parasitic theory. The progressive extension of a tumor into the adjacent tissues was proof positive of malignancy. It was by the lymphatics only. The increase of carcinoma was more imaginary than real. There was more basis to heredity than was believed by the profession at large. The age was important; although usually occurring after forty, it might develop before twenty, and in these cases it was almost invariably extremely malignant.

The Early Diagnosis of Carcinoma—Methods.—Dr. Charles A. Powers, of Denver, said the salient features he desired to bring forward were early recognition, thorough operative removal of the widest possible area, and a careful, systematic surveillance of the patient during the rest of his life. The laity should be instructed upon these points. The author reviewed the diagnostic reaction of the use of cancer serum and auto-inoculation as aids in the early diagnosis of cancer.

The Pathology of Breast Carcinoma and its Relation to Early Diagnosis and Treatment.—Dr. William S. Halsted and Dr. J. C. Bloodgood, of Baltimore, grouped the tumors under multiple, malignant, and benign and those associated with various acinous changes in the tissues of the breast. They said: "In our experience of some 294 cases, the number of cases of malignant tumors which have been admitted to the hospital at such an early stage that the clinical picture was suggestive of a benign tumor, is about nine per cent., or about twenty-three cases. What it will be in the future we are not prepared to say."

Carcinoma of the Cæcum.—Dr. William J. Mayo, of Rochester, Minn., believed that carcinoma of the cæcum constituted seven per cent. of all cancers of the intestines, and was of the columnar-cell variety. Colloidal changes were frequent. It was usually annular in form, but might present a well-marked tumor. Glandular infection occurred in fewer than one half of the cases of death from this malady. Age was not so important a feature as in carcinoma of other organs. It was not infrequent in the comparatively young. This disease might be confounded with chronic appendicitis, tuberculosis of the cæcum, fæcal impaction, etc. The results of radical operations, both immediate and remote, were good and compared favorably with those for cancer in other situations of the body.

An Improved Method for Resecting High Rectal Carcinoma.—Dr. Robert F. Weir, of New York, considered the Kraske operation unsatisfactory for the removal of high-seated cancers of the rectum, and preferred Maunsell's method. He especially covered the technic of high rectal operations and gave an interesting list of cases.

The Treatment of Malignant Disease.—Dr. Frederic S. Dennis, of New York, considered surgery, toxines, drugs, caustics, electricity, and the Röntgen rays. A surgical operation was successful only when it was performed early, when it was radical in character, and when it was repeated indefinitely. Patients were not considered cured unless three years at least had elapsed since an operation, and by some this period was estimated as too short. The importance of education of physicians as to the necessity of an early operation as the essential feature of cure should be borne in mind, as well as the importance of microscopical examinations of every growth as the only means to obtain accurate information for the future study of malignant disease. It was necessary to keep a careful record of every case, with its subsequent history. He said that the increase of cancer was not explainable. He was of the opinion that the action of the toxines upon malignant tumors was only explainable upon the theory that such tumors were the result of some infectious micro-organism, and this view was strongly supported by the recent opinion of Czerny. Surgical intervention was the only resource, since all drugs had proved ineffectual.

Dr. A. C. Bernays, of St. Louis, believed that in cancer we had to face an endemic disease, and that it affected all classes. Dared we hope for a curative remedy? He thought not. Many men had worked on this question, but all had failed to solve the nature of cancer.

As to ætiology, some growths, he thought, were of an embryonal nature, some parasitic, and others rudimentary. He thought we might hope to exercise a sort of prophylaxis as we now did in tuberculosis.

Dr. Crile, of Cleveland, spoke of a screw-clamp to close the arteries, and thus prevent hæmorrhage, in the operation for cancer of the tongue.

Dr. Rodman, of Philadelphia, said there was accumulated evidence to show that carcinoma was of parasitic origin. Until recently it had been supposed that carcinoma was not found so frequently in the Indian and in the negro, yet it was found in both those races. Certainly this is true of carcinoma of the breast, and in the negro it was probably somewhat more common than in whites.

Dr. Fütterer, of Chicago, was opposed to the parasitic theory, but did not wish to discourage research along that line. He referred to the mechanical theory, the displacement of the epithelial cells in the deeper layers, and the Cohnheim theory.

Dr. Massey, of Philadelphia, thought that cancer was a separate entity, separate from the man or woman on which the disease fed. He spoke of the use of the electric current, causing immediate chemical disintegration of the growth under ether.

Dr. Robert H. M. Dawbarn, of New York, commended the method of Dr. Halsted and Dr. Bloodgood in the extirpation of tumors or lumps in the breast, whatsoever they might be. In operations for cancer of the tongue he believed death was caused by shock and that the chief cause of shock was hæmorrhage.

Dr. Leavings, of Milwaukee, referring to cancerous growths coming from a development of epithelial cells, embryonal or post-natal in character, drew an analogy between this and the embryology of the teeth and the enamel organ.

Dr. McKenzie, of Oregon, spoke from the standpoint of the clinician. He thought that, in considering the origin of cancer, the point of locality had a great deal to do with it, and that when it developed in any part of the human body it did so in tissues which were not normal anatomically and in organs which were not normal physiologically.

A Method for the Study of Relational Anatomy.—Dr. C. M. Jackson, of the University of Missouri, gave an interesting talk on this subject, in which he said that the relative inefficiency of the present courses of instruction in anatomy was largely due to the lack of a practical method of studying the topographical relations of the various organs. For this purpose sections were necessary. The method of employing frozen sections he considered unsatisfactory. The author had obtained excellent results by sectioning bodies hardened by arterial injections of formalin. He gave a detailed account of this method as applied in teaching relational anatomy in the University of Missouri, and exhibited a new apparatus for making rapid and accurate drawings of sections.

Hæmostasis in Amputation at the Hip Joint—A Résumé of 267 Cases by the Author's Method, was the title of a paper by Dr. John A. Wyeth, of New York. During the past eleven years the author had collected 267 cases in which the operation had been done. It had first been made public at a meeting of the American Medical Association in Nashville, in 1890. The 267 cases were classified as to neoplasms, sarcoma, epithelioma, and osteocarcinoma. While the mortality was large, the lesions were of a very severe type. The death rate in 1881, from all causes, was 64 per cent.; it was now 19.8 per cent. The death rate twenty years ago, from all causes, was equal to that for crushing accidents from railway trucks or heavy machinery at this date. Antisepsis must share with the improved hæmostasis the credit of this diminished rate of mortality.

Dr. Means, of Columbus, stated that his experience had been limited to two cases. He thought that the use of these pins in hæmostasis could be extended quite as well to various other portions of the body. He felt that the profession should congratulate Dr. Wyeth on this method of controlling hæmorrhage.

Dr. Walker said that the ease with which hæmorrhage could be controlled was a revelation to him. He asked why the operation could not be done without the use of the pins. Why not do the ligation primarily?

Dr. Sylvester considered it a very scientific and satisfactory operation. He was in the habit of tying the silk-worm sutures in bow-knots, which could be untied without the use of an anæsthetic.

Dr. Wright, of Bridgeport, Conn., used a heavy rubber bandage and converted it into a roll, passing it around the groin. He had thus been able to produce an hæmastasis which was quite satisfactory. It occluded the vessels and saved the necessity of the pins.

Autoplastic Suture in Hernia and other Ventral Wounds.—Dr. L. L. McArthur, of Chicago, in a paper on this subject, said that, as to suture material, he would not have presented the paper if he did not believe that his method possessed strong merits, viz.: 1. The obtaining of a living suture. 2. Lessened chance of failure through avoidance of the introduction of dead or foreign tissue. 3. The incorporation in the resisting cicatrix of organized white fibrous tissue. He felt that failure of cure in hernia operations by any of the recognized methods was practically due to associated infection, for the Bassini, the Andrews, or the Girard method, unassociated with infection, could be said to be practically always successful.

Dr. Powers, of Denver, believed that Dr. McArthur's proposition was well worthy of trial. He did not know whether the essayist had operated on any children by this method.

Dr. G. F. Shimonek, of Milwaukee, believed that this tissue, so united, was of rather low vitality, as all tissues of that kind were, and that by passing it through the opening and putting it on a stretch it must become devitalized.

The chairman called attention to the fact that there was no tension after suturing. There was no constriction, as occurred when the tissues were tied with catgut.

Dr. McArthur said he had found that the edge did not tear out any more than it would in using any other suture material. The speaker reported a case of a rather rare type of hernia, which was spoken of as the "sacless hernia."

A New Method of Skiagraphic Diagnosis for Renal and Ureteral Surgery.—Dr. L. E. Schmidt and Dr. G. Kolischer, of Chicago, referred to the fact that skiagraphy for medical purposes had been especially advanced and perfected in America, and stated that calculous deposits were particularly attractive for x-ray diagnosis. The authors' paper was elucidated by illustration, one showing a kidney and a renal stone. By their method they were able to determine the course of the ureters, the location of the renal pelvis, the degree of dilatation

of the renal pelvis, and the situation of renal calculi; also to distinguish gall-stones from renal stones.

Prostatotomy versus Prostatectomy for Prostatic Hypertrophy.—Dr. Ramon Guitéras, of New York, outlined the history of prostatectomy and prostatotomy, stating that each had been developed by a gradual evolution. His personal preference was for the vesicorectal method, and the most important part of his technics was the inserting of two fingers high up in the rectum. It was too grave a condition—senile hypertrophy of the prostate—to allow of dogmatizing. There were three important classes of these cases: The first, the physiological young, suitable for radical operation; the second, elder, could withstand the palliative Bottini method. The third class, fortunately small, and growing smaller, were able to undergo no operation whatsoever. Statistics showed the mortality of prostatectomy to be three times that of prostatotomy.

Prostatectomy the Method of Choice in the Management of Prostatic Obstruction.—Dr. Eugene Fuller, of New York, opened his paper with a plea for radical operative relief in these cases. At the present time, if a practitioner allowed a patient to die from appendicitis without resorting to surgery, or, at least, to asking for surgical interference, the community at large blamed him severely; the same ought to apply to prostatic obstructions. With proper surgical management, the mortality of prostatectomy, under favorable circumstances, was not over from 8 to 10 per cent. Castration for the relief of this condition Dr. Fuller cast aside as a discarded method. The Bottini method was also considered.

A Further Report on Permanent Catheterism.—Dr. J. Rilus Eastman, of Indianapolis, in a paper on this subject, said that permanent catheterism in the male had been practised by him in fifteen cases; in each case the catheter being retained for at least ten days and in two cases for sixty days. The cystitis which occurred in the author's cases was not sufficiently severe to produce symptoms. Hydrogen peroxide was introduced into the bladder. Regular flushing of the bladder had been done in only two cases. It was essential that the catheter be introduced just far enough so that the tip should project into the bladder and be accurately secured.

Perineal Prostatectomy.—Dr. Parker Syms, of New York, said in a paper that, while prostatectomy by most methods had shown a large death rate, he had thus far been fortunate in not having lost a patient and in having obtained a complete cure in all his cases except one.

Dr. Robert H. M. Dawbarn demonstrated his apparatus for suprapubic drainage, which had already been tested for ten years.

Dr. Rockery regarded the question of prostatic hypertrophy as one of vastly greater importance than it seemed to be considered by the profession. He believed the operation of prostatectomy had been an evolution, and that the question to decide was as to the method. He thought the operation should be done earlier for the relief of this condition, and not left until it became the last resort.

Dr. McGowan, of Los Angeles, had operated on about fifty old men by prostatotomy and prostatectomy, the ages of the patients ranging from sixty-five to eighty-one years. The results had not been perfect by either method.

Dr. Guitéras, speaking of retention of urine, said that the bladder ought never to be emptied at once. Not over a pint should be withdrawn the first time. Speaking of the Bottini operation, he said that it held the same position to-day as hysterectomy had held a few years ago. He hoped that some day an operation that could be done with ease and safety would be devised.

Pneumectomy and Pneumotomy.—Dr. J. B. Murphy, of Chicago, read a paper in which he said that pneumectomy was frequently indicated and could be performed with safety to the patient. The danger of pneumothorax was not great. Portions of the lung might be excised without danger of hæmorrhage and without the production of pneumothorax from division of the branches of the bronchi. Pneumotomy was also frequently indicated; it was not a dangerous procedure, and might be accomplished with or without adhesions of the lung; the hæmorrhage was easily controlled. The author showed why the scalpel should be used in place of the Paquelin cautery in opening pulmonary abscesses, interlobar abscess, and bronchiectatic cavities.

The Removal of Foreign Bodies from the Trachea and Bronchi.—Dr. DeForest Willard, of Philadelphia, said in his paper that foreign bodies, such as seeds, nuts, toys, food, etc., were exceedingly liable, especially in children, to be sucked into the trachea during laughing, crying, etc. The violent efforts at coughing usually dislodged the offending body if it had not reached the larynx, but it might be arrested at the vocal cords or pass on and become impacted in one of the bronchi (usually the right), from anatomical reasons. A low tracheotomy should at once be performed and a large opening made, when the object to be sought for was metallic, and x-ray representation might prove of great value. Should gangrene of the lung occur, a free incision should be made down to the pleura.

The Treatment of Empyema.—Dr. James H. Dunn, of Minneapolis, in a paper on this subject, said that the average treatment of empyema was still far from satisfactory and decidedly behind the present status of surgical science. He assigned as some of the causes of failure tardy diagnosis, inefficient drainage, and slovenly after-treatment. A pleural collection of pus should at once be removed. The drainage opening should be large.

Dr. Bernays said he believed the time had come when surgery should attack the ravages of tuberculosis in the lungs, and that it could be done successfully. The speaker then related some interesting post-mortem findings of tuberculous tissue. He believed that this department of surgery was still in its infancy. As to Dr. Dunn's paper, the speaker said that the treatment of empyema depended on the microscopical findings in the fluid that had been withdrawn by the exploratory needle.

Dr. William Jepson, of Iowa, considered that the removal of foreign bodies from the air-passages formed an important part in general surgery; that in every instance of foreign body in the air-passages the trachea should be opened. He did not believe that emetics or holding the patient upside down would avail. He said that when the trachea was once opened we immediately knew whether the foreign body was near the distal or the proximal opening, and whether it was toward the lung or in the larynx. If it was in the larynx, it could easily be removed with the forceps.

Dr. Frank, of Chicago, said that, from his experience in two cases of lung surgery and from experiments on dogs, he had come to the conclusion that surgery of the lung was not so easy as most of the speakers would lead one to believe.

Dr. Norred, of Minnesota, related the case of a child,

two years and a half of age, who had swallowed a peanut kernel, which was drawn into the bifurcation of the trachea. His two consultants said there was no hope, but he persisted and suggested that they relax the child completely, and thus prevent any muscular contraction. The child was thereupon given apomorphine and vomiting was provoked, whereby the peanut kernel was dislodged and coughed up.

Dr. W. W. Keen, of Philadelphia, spoke in relation to puncture of the lungs. The points which he emphasized were the means of obtaining adhesions where none existed in puncturing the lung and the safety of a very large suture of lung tissue to the chest wall. In the first case the speaker made his incision parallel to the ribs for about two inches, carefully dissecting the muscles, separating them as he went down, until he reached the pleura. It was very easily recognized and the muscles were very readily separated from it. The other was the case of a woman who had a sarcoma of the chest wall, reaching from the outer border of the breast nearly all the way back to the vertebral column.

The Indications for Operation in Calculous Nephritis and Urethritis.—Dr. Charles L. Leonard, of Philadelphia, in a paper thus entitled, brought out the facts as follows: Recent advances in the diagnosis of calculous conditions of the kidneys and ureters showed that more than half the calculi that originated in the kidneys passed into the ureters before they occasioned sufficient symptoms to make their presence known, and the Röntgen-ray method of diagnosis had shown the greater frequency of ureteral calculi. Their detection did not, however, constitute an indication for operation. The distinction between the cases that demanded an operation and those suitable for palliative treatment was based on the use of the Röntgen-ray method of diagnosis. Its accuracy had been confirmed in 165 cases which the author had examined by this method. The author dwelt at some length upon the symptomatology, as well as the radical, conservative, and expectant treatment. While exploratory operations were valuable in many cases, yet the actual incision into the kidney was now only justified by the previous detection of a calculus by the Röntgen-ray method or some macroscopical pathological lesion. Ureterolithotomy had been successfully performed in many cases. One of the greatest problems of renal surgery was the determination of which kidney or ureter was the one upon which to operate, and at what point.

Acute Infective Cholangeiitis and Cholecystitis as a Complication of Gall-stones.—Dr. Daniel N. Eisendrath, of Chicago, in a paper thus entitled, referred especially to the formation of stones produced by the colon and typhoid bacillus. These infective agents set up a catarrhal condition in the gall-bladder and bile-ducts. Gall-stones might remain in the gall-bladder for years without giving rise to the least suspicion of their presence. Whenever pus was present in the gall-bladder, especially if the symptoms had been acute, the prognosis should be guarded. There should never be delay in the treatment of an empyema of the gall-bladder complicating gall-stones.

Dissecting Abscesses of the Abdominal Wall, Producing Symptoms Similating Pott's Disease of the Spine.—Dr. James B. Bullitt, of Louisville, read a paper in which he reported an illustrative case following typhoid fever, six weeks after the subsidence of the fever (kyphosis). Careful examination showed deformity due to a collection of pus beneath the abdominal wall and extraperitoneal. The lumbar kyphosis was entirely compensatory. The abscess finally ruptured externally at the umbilicus and continued to discharge indefinitely a thin pus. The author gave a résumé of six cases collected from literature, with remarks.

Experimental and Clinical Observations on the Therapeutics of Abdominal Surgery.—This was the title of a paper by Dr. George W. Crile, of Cleveland, in whose absence and that of Dr. Howard A. Kelly, Dr. Frank D. Smythe, of Memphis, opened the discussion. He reported a case of cystitis and kidney stone for which both cystotomy and nephrectomy had been performed, the kidney showing signs of gonorrhœal infection. He said that jaundice was not a contraindication to a surgical operation in his experience.

Dr. McGowen discussed the efficacy of the x ray in the diagnosis of the kidney or ureter, and mentioned two serious burns that had occurred in his experience.

Dr. Thomas, of Pittsburgh, mentioned a case of stone in the kidney in which an x-ray picture had failed to show the presence of the stone. The kidney, however, was incised and the stone discovered.

Dr. Crane, of Vermont, who had had considerable experience in x-ray work, said that the shadow cast was dependent on the atomic weight of the substance. As regarded examinations for stone, different kinds of stone cast shadows of varying density. The oxalate-of-calcium stone would cast a dense shadow as compared with that of the uric-acid stone. He thought the danger of x-ray work came entirely from the length of exposure at too short a distance from the Crookes's tube. Asked by a member what he considered the proper distance and length of exposure Dr. Crane replied: "Within two or three inches from the tube and an exposure of not more than three minutes. A longer exposure should be with a correspondingly increased distance from the tube."

Dr. Means, of Columbus, believed that the bile-passages normally contained micro-organisms. He said it was a dangerous statement to make that gall-stones might be in the gall-bladder for years or for an indefinite period and produce no symptoms.

Dr. Davis, of Omaha, spoke of the "clumping" of the typhoid bacillus, which constituted a nucleus around which the stones formed.

Dr. Rodman, of Philadelphia, was very optimistic as regarded the production of burns by the Röntgen rays, believing that in proper hands there was no cause for alarm.

Dr. Bloodgood, of Baltimore, spoke of acute hæmorrhagic pancreatitis; also of cases in which there was a history of gall-stone colic, with or without jaundice, and yet, when he operated, he found no stones in the gall-bladder or ducts, but an indurated pancreas or chronic interstitial pancreatitis, and he found such cases were relieved by temporary drainage of the gall-bladder.

Fracture of the Femoral Neck was the subject of a paper by Dr. C. E. Ruth, of Keokuk, who recited many cases, particularly that of a man, seventy-two years of age, who sustained a fracture of the femoral neck at that time, and died eighteen years afterward, at the age of ninety. Dr. Ruth exhibited this specimen, which showed that bony union had taken place.

Dr. Thomson, of Scranton, exhibited an x-ray specimen of fracture of the neck of the femur in a miner who had been under his care. The patient had eventually died from heart trouble.

Letters to the Editor.

ABSORBENT COTTON FOR HÆMOSTATIC TAMPONS.

NEW YORK, *May 20, 1901.*

To the Editor of the New York Medical Journal:

SIR: In regard to the criticism of Dr. Edwin R. Chadbourne, of Pasadena, Cal., on page 876 of your *Journal,* about the use of absorbent cotton (soaked in a two-per-cent. solution of carbolic acid) in the case of uterine hæmorrhage, of which I wrote you, and my account of which appeared in your *Journal,* on page 698, I will state that if the packing is done in the proper manner, compressing the several discs sufficiently, thereby making the tampon as solid a mass as the patient is able to stand, no obstetrician need have any fear of the result. I respectfully refer Dr. Chadbourne to H. Marion Sims, on the hæmorrhage of premature labor, and Braun, of Vienna, on the hæmorrhage of placenta prævia. I am glad to see my distant brother physician take such an interest in my little case, and would ask him to kindly give through the *New York Medical Journal* his diagnosis of the case, as originally requested.

P. M. MILLER, M. D.

HEREDITY AND APPENDICULAR DISEASE.

61 AUBURNDALE PLACE,
CINCINNATI, *June 10, 1901.*

To the Editor of the New York Medical Journal:

SIR: I am trying to establish the fact, which I believe to be true from my own personal observation (see *Lancet-Clinic,* June 8th), of an inherited tendency or predisposition to *appendicitis.* If the readers of your *Journal* will kindly look into the history (family) of their cases and report to me I shall be under very many obligations.

W. H. DEWITT, M. D.

Book Notices.

Obstetric and Gynæcologic Nursing. By EDWARD P. DAVIS, A. M., M. D., Professor of Obstetrics in the Jefferson Medical College of Philadelphia, etc. Illustrated. Pp. 3 to 402. Philadelphia: W. B. Saunders & Company, 1901.

THE author has collected in this volume his lectures to nurses on the subjects embraced in the title. The duties of the nurse in all phases of obstetric practice and in the care of normal and abnormal infants are dwelt upon at length and in detail in the first section of the book. The second portion of the work is devoted to gynæcologic nursing, and includes such themes as the posture of patients, douches, preparations for operations, remote and immediate, and a very ample and excellent chapter on the after-care of patients. While the book contains, we think, much more than the average trained nurse need know, it is written in accord with the present-day belief in the education of nurses, that they should be instructed very much as though they would some time be physicians. This is not said so much in criticism as to emphasize the full detail which one finds recorded. The rich experience of Dr. Davis has been called into requisition by him, and his book abounds in instructive material. The excellent illustrations and effective making of the book increase its value. After a very careful perusal of the book, we can cordially recommend it to training schools for the use of their pupils; it would be hard to find anything better.

La peste d'Alexandrie en 1899 au point de vue clinique, épidémiologique, etc. Par le Dr. A. VALASSOPOULO, Médicin en chef de l'Hôpital grec d'Alexandrie. Avec figures et cartes dans le texte. Paris: A. Maloine, 1901. Pp. 3 to 164.

THIS monograph, dealing with the epidemic of bubonic plague in Alexandria, Egypt, received honorable mention from the French Academy of Medicine. It describes the first cases in that city, the subsequent development of the epidemic and its decline. The clinical aspects of the disease are satisfactorily presented, as are its anomalous forms and varieties. The bacteriology and morbid anatomy of the disease find sufficient mention. The monograph is interesting and valuable to students of epidemiology.

BOOKS, ETC., RECEIVED.

Surgical Experiences in South Africa, 1899-1900. Being Mainly a Clinical Study of the Nature and Effects of Injuries Produced by Bullets of Small Calibre. By George Henry Makins, F. R. C. S., Surgeon to St. Thomas's Hospital, London, etc. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xvi-493. [Price, $4.]

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, other than Drug-giving, Useful in the Treatment of the Sick. Edited by Solomon Solis-Cohen, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic, etc. Volume II, Electrotherapy. By George W. Jacoby, M. D., Consulting Neurologist to the German Hospital, New York, etc. In Two Books. Book II, Diagnosis—Therapeutics. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xii-17 to 323.

Lectures on the History of Physiology during the Sixteenth, Seventeenth, and Eighteenth Centuries. By Sir M. Foster, K. C. B., M. P., M. D., D. C. L., Sec. R. S., Professor of Physiology in the University of Cambridge, etc., London: H. K. Lewis. New York: Macmillan & Company, 1901. Pp. 310.

How to Cook for the Sick and Convalescent. Arranged for the Physician, Trained Nurse, and Home Use. By Helena V. Sachse, Graduate of the Philadelphia Cooking School. Philadelphia: J. B. Lippincott Company, 1901. Pp. xvi-7 to 239.

The Practice of Charity, Individual, Associated, and Organized. By Edward Thomas Devine, Ph. D. (Penna.), General Secretary of the Charity Organization Society of the City of New York. New York: Lentilhon & Company, 1901. Pp. x-186.

Year-book of the United States. Department of Agriculture, 1900.

Compendium der Physiologie des Menschen. Für Studirende und Aerzte. Zweite, verbesserte und vermehrte Auflage. Von Dr. Paul Schultz, Privatdocent und Assistant am kgl. physiologischen Institut der Universität Berlin. Mit 47 Abbildungen im Texte und einer lithgr. Tafel. Berlin: S. Karger, 1901. Pp. 364.

Kurzes Lehrbuch der Gynäkologie. Herausgegeben von Dr. Otto Küstner, o. ö. Professor, Direktor der Universitätsfrauenklinik in Breslau, etc. Mit 260 Abbildungen im Texte. Jena: Gustav Fischer, 1901. Pp. x-465.

Die Hypertrophie der Rachentonsille. Eine Monographie. Von Professor Dr. G. Gradenigo, in Turin. Mit 3 Tafeln und 45 Abbildungen im Texte. Vierter

Band. Viertes Heft. Jena: Gustav Fischer, 1901. Pp. 181 to 392.

Geburtshilfliche Operationslehre. Für Studirende Aerzte. Von Dr. Felix Skutsch, a. o. Professor an der Universität Jena. Mit 145 Abbildungen im Texte. Jena: Gustav Fischer, 1901. Pp. x-348.

Einführung in das Studium der Malariakrankheiten mit besonderer Berücksichtigung der Technik. Ein Leitfaden für Schiffs- und Colonialärzte. Von Dr. Reinhold Ruge, Kommandirt zum Institut für Infektionskrankheiten in Berlin, etc. Mit 2 photographischen Sowie einer lithographischen Tafel, 19 Abbildungen und 27 Fieberkurven im Texte. Jena: Gustav Fischer, 1901. Pp. 139.

Die Gicht-therapie in Karlsbad. Nach Neueren Grundsätzen. Dargestellt für die Aerztlische Praxis. Von Dr. Richard Sachs, Brunnenarzt, Kurarzt des oesterr. und deutschen Eisenbahnbeamtenverbandes in Karlsbad. Berlin: S. Karger, 1901. Pp. 48.

Topographischer Atlas der Medizinisch-chirurgischen Diagnostik. Von Dr. E. Ponfick, o. ö. Professor und Direktor des pathologischen Instituts zu Breslau. Erste Lieferung. Jena: Gustav Fischer, 1901.

Physikalisch-diätetische Behandlung der Magenkrankheiten in der Praxis. Mit Anhang; Kochrecepte. Von Dr. Albert Wittgenstein, Cassel. Leipzig: C. G. Naumann, 1901. Pp. vi-127.

Miscellany.

Blows on the Head and the Respiratory Centre.—Dr. W. N. Bullard (*Journal of Nervous and Mental Diseases,* November, 1900) reports some experiments performed at the physiological laboratory of the Harvard Medical School.

The experiments show that the normal brain pressure, as evidenced by the bulging of the uninjured brain of an etherized cat through an opening left after removal of dura and bone, unless pressure is applied to keep it in place, is increased by every factor increasing the general blood pressure. A cry (raising thoracic pressure), any general muscular movement, stimulation of the sciatic nerve, the administration of ether (increasing the heart's action), all demand a stronger pressure to keep the brain level. Pulsations after hæmorrhage are increased, but the actual brain pressure is less. After heavy blows on the skull, the pressure needed to prevent the brain from bulging is greatly increased. Experiments thus far fail to show that there is any increase of general arterial pressure to account for the greater brain pressure after injury. No observations have, as yet, been made to ascertain if the increase is to any degree dependent on increased cerebral *venous* pressure.

The practical application of these experiments lies in the confirmation of the views of Kramer, Polis, and Horsley, that the *respiratory centre is the first to be affected after a blow on the head.* Many times when respiration has ceased, artificial respiration for a few minutes has been followed by normal breathing which has continued for hours.

Hydatid Disease of the Heart.—Dr. A. Jeffreys Wood (*Intercolonial Medical Journal,* March 20th) says that cases of hydatid disease of the heart are of sufficient rarity to be classed as pathological curiosities, and therefore puts on record the case of a man, twenty-eight years of age, a worker in a roller flour mill, who was riding his bicycle slowly down a gentle slope, when he was noticed to suddenly fall forward on to the handles. The bicycle stopped and toppled over to the left; the rider did not put out either leg or arm to save himself, and fell with the bicycle between his legs. A bystander ran to his assistance, pulled his bicycle away, and carried him to the footpath. Two ineffective gasps were given, when the pulse ceased, and the man was dead. His wife stated that her husband had enjoyed excellent health during the eight years they had been married, and during that time had only been away from work for a week, when he had an attack of influenza. During the seven months previous to his death he had complained of pains in his back at times, and had consulted two medical men, who both warned him not to ride a bicycle. He had never apparently been short of breath, or suffered from fainting. His fellow workmen said he was a very active fellow, and used to get off and on to the lift in very quick time.

At autopsy, August 27, 1900, twenty hours after death, the body was found to be of slight build, and the pallor of skin suggested death from hæmorrhage. On opening the thoracic cavity, the heart, closely covered by the pericardium, was seen to occupy the greater part of the chest, neither of the lungs being visible. The pericardium, though closely adherent to the surface of the heart, was with a little force easily detached; but, toward the base of the heart on the left side, a white patch showed through the pericardium, and as the covering was lifted from this part, a daughter-cyst, the size of a large marble, escaped from a large mother-cyst in the left ventricular wall. In removing the heart, about a dozen daughter-cysts escaped, two of them being as large as bantam's eggs. The right ventricle was very small, but the left ventricle was much hypertrophied. The heart weighed twenty-eight ounces and contained a little dark fluid blood, with a few very small clots. Each lung was lying at the back of the thoracic cavity, firmly adherent to the posterior part of the chest by old pleuritic adhesions. The right lung, on section, showed white frothy fluid on pressure; but the left lung was almost fœtal in structure, bearing evidence of considerable pressure, and showing no froth on pressure. The liver presented a small retrograding cyst, the size of a large walnut, on the edge of the right lobe; and a small cyst about the same size, also containing pultaceous material, was found in the centre of an adhesion running between the lower edge of the liver and the duodenum. No other hydatid cyst was found; the rest of the organs were quite healthy.

Pneumonic Herpes.—M. Talamon (*Presse médicale,* April 24th) says that, between herpes zoster and pneumonia, there is more of a relation than a coincidence; the two affections have certain microbic connections, demonstrable by numerous examples. It is evident that the vesicle of zona is not produced directly by the pneumococcus, but is an expression of trophic trouble of the skin, the consequence of irritation or inflammation of nerve filaments. If the zona is intercostal and is superposed on the pneumonia, it may be supposed that there is propagation by extension of the pneumonic infection from the lung to the nerve. But if the herpes appears at a distance, only the action of the pneumotoxine on the nervous system can be blamed. M. Talamon, therefore, thinks it necessary to reverse M. Fernet's recent proposition and, instead of saying that pneumonia is a herpes of the pneumogastric, to say that zona is in certain cases a pneumococcic infection of the skin.

Original Communications.

RABELAIS AS A PHYSIOLOGIST; REFLECTIONS SUGGESTED BY HIS DESCRIPTION OF THE PRODUCTION AND MOVEMENTS OF THE BLOOD, IN 1546.

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It is difficult to put oneself in a position to appreciate, with a reasonable degree of accuracy, the condition of knowledge common to scientific men of the period upon any one subject, at a time so remote as three and a half centuries; yet I have attempted to do this in respect to knowledge of the movements of the blood, in the middle of the sixteenth century. One can hardly imagine an accurate and useful knowledge of the physiology of nutrition, absorption, digestion, respiration, or secretion as existing before the discovery of the circulation by Harvey, in 1616; and this discovery was so momentous in its influence upon the science of medicine that its history anterior to the publication of the *Exercitatio anatomica de motu cordis et sanguinis* (1628) has been, perhaps, the most interesting chapter in the literature of physiology. Not only did this great discovery mark one of the most important epochs in human knowledge, but it indicated a method of observation of phenomena, and of reasoning from such observation, that has been of inestimable value to all succeeding generations. Flourens, in his history of the discovery of the circulation, says that "this little book of an hundred pages is the most beautiful book in physiology." Harvey's book was nearly contemporaneous with the *Novum organum and Advancement of Learning* of Bacon and with the immortal studies of humanity by Shakespeare. Did Harvey, as a disciple, follow the methods of inductive science founded by Bacon or did Bacon formulate a method suggested by the researches of Harvey, or were these two great minds independent of each other? These are questions that cannot be satisfactorily answered. All that can now be said is that the great investigator and discoverer illustrated the scientific method indicated by the great philosopher.

In the history of the development of the doctrine of the circulation, everything relating to the blood and its movements is of interest. Perhaps the most exhaustive and accurate account of knowledge of physiology anterior to the time of Harvey is in the encyclopædic work of Milne Edwards (*Leçons sur la physiologie*, Paris, 1858-1881), in twenty-four volumes, from which I have taken many citations.*

It is said by a writer in the fifth century that venesection was practised by the surgeons of the army of Agamemnon in the siege of Troy. The tradition is that Troy was besieged for ten years and fell 1183 B. C. (Eratesthenes); one writer, however, fixes the date at 1335 B. C., and another at 1149 B. C. In the time of Hippocrates (460-377 B. C.) bleeding was practised from several different veins, the situations of which were well known. Aristotle (384-322 B. C.) was the first to show that the vena cava and the aorta communicated with the heart, and that the aorta carried blood. It is said, however, that the distinction between the arteries and veins was known before the time of Hippocrates and was described by Diogenes of Apollonia in the fifth century B. C.

It is somewhat difficult to ascertain exactly the notions of Aristotle in regard to the arteries. In his work, called in translation *History of Animals,* he describes the passing of air from the lungs to the heart; while in his work, *On Parts of Animals,* he describes two vessels arising from the heart, which, as well as the heart, are filled with blood. The two works referred to are generally accepted as authentic. Milne Edwards cites the following from the work, *History of Animals,* as expressing the idea of Aristotle: "Vessels arise from the heart which go to the lungs, the branches of which divide like those of the trachea. . . . These branches have no communication with these vessels, but, by reciprocal contact, the vessels which come from the heart receive the air and pass it to the heart, where their trunks open." Milne Edwards says that Hippocrates, Aristotle, Herophilus, and Erasistratus (300 B. C.) distinguished between the arteries and the veins; that on examining dead bodies the veins are generally found gorged with blood, while the arteries are almost empty; and this circumstance had led all physiologists to think that the veins were the only blood-vessels and that the arteries were designed to carry air. Aristotle considered the latter tubes as forming, with the trachea, a vast system of pneumatic conduits. Hippocrates, however, was the first to describe the pulse; Aristotle recognized that the pulse was produced by the movement of blood. Herophilus studied the pulse more closely, established its synchronism with the heart, and distinguished clearly the two kinds of vessels which "connected" the lungs with the heart. Erasistratus noted the play of the valves of the heart. This state of knowledge and conjecture, with many contradictions, remained until the time of Galen (130-200 A. D). Galen noted that the arteries discharged blood when opened. He demonstrated experimentally the fact that the arteries carried blood by including a portion of an artery between two ligatures, opening the part of the vessel thus separated from the rest of the vascular system and finding that it contained blood only. Further observations led him to the conclusion that the liquid was not identical in the veins and arteries, although there were communications between the two systems of vessels which permitted the blood to pass easily from one to the other.

*Milne Edwards, *Leçons sur la physiologie*, Paris, 1858, tome III, p. 2, *et seq.*

It is easy to imagine the disastrous effect upon learning of the destruction of the great libraries of the School of Alexandria, which contained about 700,000 rolls, or volumes. The library in the Bruchium is said to have been destroyed by fire in the year 47 B. C., when Cæsar burned the fleet in the harbor, the flames accidentally extending to the library. Most authorities agree that the destruction of the Serapeum, ordered by Theodosius in 391 A. D., completed the work of extinction. Following the disappearance of this, the greatest existing collection of rolls, on all subjects and in all languages, there was a long period of decline of learning. One can hardly wonder, then, that a great interval separated the work of Galen from the next important date in the history of the physiology of the circulation—namely, the description of the pulmonary circulation by Servetus, in 1553. The literature of the Middle Ages, extending from the decline of the Roman Empire to the revival of letters, or, according to Hallam, from the beginning of the sixth to the end of the fifteenth century, is very meagre; and it is easy to understand the difficulty of ascertaining the extent of common knowledge of physiology during the first half of the sixteenth century.

It is certain, however, that, with the exception of the work of Servetus, the precursors of the discovery of the general circulation were almost entirely anatomical. In 1543 the great anatomist, Vesalius, corrected the error of Galen, who supposed that there were openings in the sæptum between the two ventricles of the heart. The valves of the veins were described by Étienne (1545), Cannanus (1551), Eustachius (1563), Piccolhominus (1586), and Fabricius (1603). Fabricius demonstrated the valves in the veins to Harvey, probably in 1601 or 1602. In a copy of Harvey's original work (1628), which I presented to the Astor Library, is the following manuscript note by a former owner: "The valves in the heart and veins, the famous Dr. Harvey told me, gave him the first hint of his grand discovery. —Boyle."

François Rabelais (1490?-1553) universally recognized as "the greatest of French humorists and one of the few great humorists of the world" (Saintsbury), in the third book of his collected works (the second book *Treating of the Heroic Deeds and Sayings of the Good Pantagruel*), gives an account in Chapter IV. in which "Panurge continueth his discourse in praise of borrowers and lenders," of the nourishment of the microcosm and its members by the blood. In the collected works of Rabelais there are but two passages in which reference is made to movements of the blood; but these are so striking, in view of the work of Servetus, published in 1553, that it has seemed to me important, in connection with the history of the discovery of the circulation, to study these passages closely and critically. The book referred to was published in 1546, seven years before the date of the *Christianismi restitutio* of the unfortunate Servetus; and I find no reference to this by any writer on physiology. The remarkable passage, which I shall give in full further on, is in one of the curious discourses of Panurge, the principal character in the books relating to Pantagruel. The writings of Rabelais, as they have come down to us, are works of quaintly extravagant and humorous fiction, in language which at the present day might be regarded as gross and even obscene; but, measured by the standard of the sixteenth century, they might not be so considered. As appearing in a work of fiction, it is hardly to be expected that great care as to accuracy of scientific statement would have been exercised, as probably was the case in the serious work of Servetus; but it must be borne in mind that Rabelais was a physician, had a thorough knowledge of the Latin and Greek languages and had given public lectures in 1531 on Galen and Hippocrates. In 1532 he edited the *Aphorisms* of Hippocrates and the *Ars parva* of Galen; in 1537 he lectured on the Greek text of Hippocrates, and in 1538 he made a public anatomical demonstration. Saintsbury, who has given, probably, the best brief account of the works and character of Rabelais, writes as follows: "With an immense erudition representing almost the whole of the knowledge of his time, with an untiring faculty of invention, with the judgment of a philosopher and the common sense of a man of the world, with an observation that let no characteristic of the time pass unobserved, and with a tenfold portion of the special Gallic gift of good-humoured satire, Rabelais united a height of speculation and depth of insight and a vein of poetical imagination rarely found in any writer, but altogether portentous when taken in conjunction with his other characteristics."

The beginning of the sixteenth century was also the beginning of the revival of letters. At the period when Rabelais and Servetus wrote, the accumulated learning of the world handed down to that time was to be found in a few works written in hardly more than two languages, Latin and Greek, and this is eminently true of scientific knowledge. The description of the pulmonary circulation by Servetus, in 1553, is certainly the most important event in the progress of physiology which led to the discovery of the circulation in 1616. I have endeavored, in my study of the literature, to ascertain how far Servetus was in advance of the scientific knowledge common to the learned men of his time. Where could I find this condition of knowledge more faithfully represented than in such portions of the works of Rabelais as referred to the subject under consideration?

The following are the passages in the works of Rabelais in which reference is made to the movements of the blood. I have endeavored to present a literal translation from the original old French, and have made but little use of the well-known translation by Urquhart and Motteux, which, though admirable and most faithful, is not exactly word for word:

"La vie consiste en sang; sang est le siège de l'ame; pourtant un seul labeur poine ce monde, c'est forger sang continuellement. En ceste forge sont touts membres en office propre; et leur hiérarchie telle, que sans cesse l'un de l'aultre emprunte, l'un à l'aultre preste, l'un à l'aultre est debteur. La matière est métal, convenable pour estre en sang transmué, est baillée par nature: pain et vin. En ces deux sont comprinses toutes espèces de aliments. Et de ce est dict le companage en langue Goth. Pour icelles trouver, préparer et cuire, travaillent les mains, cheminent les pieds et portent toute ceste machine: les yeulx tout conduisent. L'appétit, en l'orifice de l'estomach, moyennant de mélancholie aigrette, que lui est transmis de la ratelle, admoneste d'enfourner viande. La langue en faict l'essai; les dents la maschent; l'estomach la recoit, digère, et chyiifie. Les vènes mésaraiques en succent ce qu'est bon et idoine, delaissent les excréments, lesquells par vertus expulsive sont vidés hors par exprès conduicts; puis la portent au foye: il la transmue derechef, et en faict sang. Lors quelle joie pensez-vous estre entre ces officiers, quand ils ont vu ce ruisseau d'or, qui est leur seul restaurant? Plus grande n'est la joie des alchimistes quand après longs travaulx, grand soing et despense, ils voient les métaulx transmués dedans leurs fourneaulx. Adonc chascun membre se prépare et s'estvertue de nouveau à purifier et affiner cestui thrésor. Les rognons, par les vènes émulgentes, en tirent l'aiguosité, que vous nommez urine et par les uretères la découllent en bas. Au bas trouve réceptacle propre: c'est la vessie, laquelle en temps opportun la vide hors. La ratelle en tire le terrestre et la lie, que vous nommez mélancholie. La bouteille du fiel en soubstraict la cholère superflue. Puis est transporté en une aultre officine, pour mieulx estre affiné: c'est le cœur, lequel, par ses mouvements diastoliques et systoliques, le subtilise et enflambe, tellement que par le ventricule dextre le met à perfection, et par les vènes l'envoye a touts les membres. Chascun membre l'attire à soi, et s'en alimente a sa guise: pieds, mains, yeulx, tout; et lors sont faicts debteurs, qui paravant estoient presteurs. Par le ventricule gausche il le faict tant subtile, q'on le dict spirituel, et l'envoye a touts les membres par ses artères, pour l'aultre sang des vènes eschauffer et esventer. Le poulmon ne cesse avecques ses

"Life consisteth in blood: blood is the seat of the soul; thus a single labour resteth upon this microcosm (*monde*), it is to make blood continually. In this workshop all the members are in proper function; and their hierarchy is such that incessantly the one borroweth from the other, the one lendeth to the other, the one is debtor to the other. The material is matter suitable to be converted into blood, is given by Nature: bread and wine. In these two are comprehended all kinds of aliments. And from this is said *companage* in the Gothic tongue. To find, prepare, and cook these, the hands work, the feet walk and carry the entire machine: the eyes conduct all. The appetite, in the orifice of the stomach, by means of the sourish black humour, which is sent to it by the spleen, admonisheth it to shut in the meat. The tongue maketh the first trial of it; the teeth chew it; the stomach receiveth, digesteth and chylifieth it. The mesenteric veins suck from it that which is good and fit, leaving behind the excrements, which by expulsive faculty are emptied out by special conduits; afterward it is carried to the liver: it there changeth once again, and of it is made blood. Then what joy, think you, is amongst these officers, when they have seen this rivulet of gold which is their sole restorative? Greater is not the joy of alchemists when, after long labours, great care and expenditure, they see metals transmuted in their furnaces. Then every member prepareth itself and striveth anew to purify and refine this treasure. The kidnies, by the emulgent veins, take from it the aquosity which you call urine and by the ureters run it down. Below is found the proper receptacle: this is the bladder, which in convenient time emptieth it out. The spleen draweth from it the earthy part and the dregs, which you call black bile. The gall-bladder subtracteth from it the superfluous gall. Then is it transported to another workshop, in order to be better refined: this is the heart, which, by its diastolic and systolic movements, subtilizeth and heateth it, to such a degree that by the right ventricle it putteth it in perfection, and by the veins sendeth it to all the members. Every member attracteth it to itself and nourisheth itself from it in its own fashion: feet, hands, eyes, all; and then are made debtors, those which before were lenders. By the left ventricle it maketh it so subtile, that it is called spiritual, and sendeth it to all the

lobes et soufflets le refraischir. En recognoissances de ce bien, le cœur lui en départ le meilleur, par la vène artériale. Enfin, tant est affiné dedans le rets merveilleux, que, par après, en sont faicts les esperits animaulx, moyennant lesquels elle imagine, discourt, juge, résoult, délibère, ratiocine, et rémemore."

* * *

Œuvres de François Rabelais, Paris, 1857, Livre III, Chapitre iv, page 152.

"Les philosophes et médicins afferment les esprits animaulx sourde, naistre et practiquer par le sang artérial purifié et affiné à perfection dedans le rets admirable, qui gist sous les ventricules du cerveau." *Ibid.*, Chap. xiii, page 159.

members by its arteries, in order the other blood of the veins to warm and winnow. The lung ceaseth not with its lobes and bellows to refresh it. In acknowledgement of which good, the heart distributeth to it the best of it, by the arterial vein. Finally is it so much refined within the *rete mirabile*, that, thereafter, are made of it the animal spirits, by means of which it imagineth, discourseth, judgeth, resolveth, deliberateth, ratiocinateth, and remembereth."

* * *

"The philosophers and physicians affirm that the animal spirits spring from, have their origin in, and operate through the arterial blood purified and refined to perfection within the *rete mirabile*, which lieth beneath the ventricles of the brain."

If it be assumed that Panurge, in this part of his discourse, represented ideas in regard to physiology that were generally accepted by learned men in the middle of the sixteenth century, it is seen that some of their notions were nearly correct.

He says that life consists in the blood and that through the blood there is a passage of material from one part of the body to another; that the material suitable to be converted into blood is food ("bread and wine; in these two are comprehended all kinds of aliments"); that the tongue tastes it, the teeth chew it, the stomach receives, digests, and chylifies it, which is a fair summary of knowledge of these processes, even up to the second quarter of the nineteenth century; that the mesenteric veins take up the nutritive constituents of the food, and that the residue is discharged from the body; that it (the food) is carried to the liver and there changes ("and of it is made blood"—the nutritive matters are actually changed in the liver, but, of course, blood is not made in the liver); that the kidneys separate the urine from the blood, which is passed by the ureters to the bladder and is discharged "in convenient time"; that the spleen takes away the earthy parts and dregs, and the gall-bladder "the superfluous gall"; that in the right ventricle the blood is "put in perfection," and by the veins the blood is sent to all the members; that every member takes the blood and "nourisheth itself from it in its own fashion"; that the left ventricle makes the blood so "subtile, that it is called spiritual, and sendeth it to all the members by its arteries, in order the other blood of the veins to warm and winnow"; that the heart distributes the best of the blood to the lungs by the pulmonary artery (the arterial vein); that out of the blood the animal spirits are made in the chorioid plexuses. (In the second passage quoted it is evident that by the "*rete mirabile*, which lieth beneath the ventricles of the brain," is meant the chorioid plexuses; Servetus speaks of the chorioid plexuses and of their producing the animal spiritus from the vital spiritus).

In brief, as regards the movements of the blood, Rabelais, in 1546, thought that the materials for the production of the blood were absorbed by the mesenteric veins from digested food and carried to the liver; that these matters were changed and made into blood in the liver; that the blood is brought to perfection in the right ventricle and is sent by the veins to all parts of the body for their nourishment; that the blood is subtilized in the left ventricle (in which part the vital spiritus is formed) and is sent by the arteries to "all the members" in order to warm and otherwise modify the blood sent to them by the veins; that the blood is sent to the lungs by the pulmonary artery; that the vital spiritus is changed into animal spiritus in the chorioid plexuses, by means of which (animal spiritus) the operations of the mind are conducted.

This was undoubtedly the condition of general knowledge of the movements of the blood up to the time of Harvey (1616). Vesalius, in 1543, three years before Rabelais, denied the existence of openings in the interventricular sæptum; but he made no notable physiological deductions from this most important anatomical observation. If this had been recognized in connection with the movements of the blood, knowing that the blood is carried to the lungs by the pulmonary artery, it would have been evident that the blood could reach the left side of the heart by no other way than by the pulmonary veins. Galen, in the second century, had shown that the arteries carried blood only and not air; which was well known to Rabelais and to some of the learned men of his time. As a matter of fact, the idea of the uses of the valves of the veins, which indicated the direction of the flow of blood in these vessels, was the idea which rendered it impossible to describe the movements of the heart and blood (*motus cordis et sanguinis*) in any other way than as was described by the immortal discoverer of the circulation. The correction of the ancient error which admitted openings in the interventricular sæptum made the passage of blood through the lungs a logical necessity; and the discovery of the valves of the veins made the general circulation an unavoidable logical sequence; yet the importance of the anatomical description of the heart by Vesalius was not thoroughly comprehended by investigators for seventy-three years (1543 to 1616); and the uses of the valves of the veins remained unknown for more than half a century.* The writings of Servetus had absolutely no influence on the discovery of the circulation; the physiological passages in the *Christianismi restitutio* were unknown until long after the publication of the *Exercitatio anatomica de motu cordis et sanguinis,* in 1628.

Michael Servetus (Michael Seruetus, Miguel Serveto, Michael Villanovanus, or Miguel de Villeneuve) was born in Tutella, in Navarre, in 1511, and died in 1553. The history of Servetus, with his tragic death at the stake, is too well known to call for extended repetition here. He met Calvin in Paris in 1536 and had some discussion with him on theological questions concerning which Servetus had written in 1531 and 1532 (*De Trinitatis erroribus*). He corresponded with Calvin in 1545 and 1546. In January, 1553, he published the *Christianismi restitutio,* of which but two perfect copies are known to be in existence. This book earned for Servetus the relentless enmity of Calvin. In March, 1553, he was interrogated by the inquisitor-general at Lyons, having been arrested on the charge of heresy. Early in April he escaped from his prison. In August he was arrested in Geneva. On October 26th he was convicted and sentenced to be burned alive. The sentence was carried out October 27, 1553. It is said that copies of his book were burned at the same time.

The medical history of Servetus is important as bearing upon his authority as a scientific writer. It is recorded that he studied medicine in Paris, in 1536, under Günther, Dubois,* and Fernel. He succeeded the great anatomist Vesalius as assistant to Günther. Günther describes him as a man of high culture, specially skilled in dissection and with a profound knowledge of the works of Galen. In 1540 he entered the medical school at Montpellier. He acted as the private physician to Paulmier, archbishop of Vienna, from 1541 to 1553. He wrote a number of books on various subjects and among them a work containing six lectures on digestion and the composition and use of syrups. The first edition of this book was published in 1537, the fifth and last edition bearing the imprint: Venice, 1548. According to Alexander Gordon (*Encyclopædia Britannica,* Article, Servetus), "the passage describing the pulmonary circulation is first noticed by W. Wotton, in *Reflections upon Ancient and Modern Learning,* 1694."

I give here the original and a translation of the celebrated passage in the *Christianismi restitutio.* The original Latin was reprinted by Flourens and afterward by Milne Edwards.† I have never seen a complete trans-

*The history of the discovery of the valves of the veins is somewhat obscure. The best information in regard to it is that Étienne described valves in branches of the portal vein in 1545; Lucitanus, in 1551, published a letter from Cannanus in which he described (probably in 1547) valves in certain veins; Eustachius described valves in the coronary vein in 1563, and Piccolhominus published a clear account of the valves of the veins in 1586. Fabricius published accurate descriptions and delineations of the valves in 1603.

* Dubois is known in literature as Jacobus Sylvius.

† In the *Encyclopædia Britannica,* Sir William Turner, the writer of the article *Anatomy,* reprints, in the original Latin, what purports to be the entire passage from Servetus. This reprint, however, is incomplete. Nearly one fourth of the passage—the last portion, which is important—is omitted. Also, there are many important variations from the text as given by Flourens and Milne Edwards. In addition, the extraordinary error is made of crediting the passage to a work, *De Trinitate* (probably *De Trinitatis erroribus*) instead of to the *Christianismi restitutio.* These errors may be due to the fact that there are but two copies of the *Christianismi restitutio* known to be in existence, one in the National Library in Paris and the other in the Imperial Library in Vienna. I have never seen it stated that a copy is to be found in the British Museum. There is said to be an imperfect copy in Edinburgh, partly reprinted.

lation into English. The translation here given I believe to be absolutely literal and accurate as regards anatomical terms. In its preparation I have been more than assisted by Mr. Montgomery Schuyler, an accomplished scholar and eminent littérateur, of New York:

"Vitalis spiritus in sinistro cordis ventriculo suam originem habet, juvantibus maximè pulmonibus ad ipsius generationem. Est spiritus tenuis, caloris vi elaboratus, flavo colore, ignea potentia, ut sit quasi ex puriori sanguinis lucidus vapor, substantiam in se continens aquæ, aeris et ignis. Generata ex facta in pulmonibus mixtione inspirati aeris cum elaborato subtili sanguine, quem dexter ventriculus cordis sinistro communicat. Fit autem communicatio hæc, non per parietem cordis medium, ut vulgo creditur, sed magno artificio à dextro cordis ventriculo, longo per pulmones ductu, agitatur sanguis subtilis: à pulmonibus præparatur, flavus efficitur, et à vena arteriosa in arteriam venosam transfunditur. Deinde in ipsa arteria venosa inspirato aeri miscetur et expiratione à fuligine repurgatur. Atque ità tandem à sinistro cordis ventriculo totum mixtum attrahitur, apta supellex, ut fiat spiritus vitalis.

"Quòd ità per pulmones fiat communicatio et præparatio, docet conjunctio varia et communicatio venæ arteriosæ cum arteria venosa in pulmonibus. Confirmat hoc magnitudo insignis venæ arteriosæ, quæ nec talis, nec tanta facta esset, nec tam à cordæ ipso vim purissimi sanguinis in pulmones emitteret, ob solum eorum nutrimentum, nec cor pulmonibus hac ratione serviret; cum præsertim anteà in embryone solerent pulmones ipsi aliumdè nutriri, ob membranulas illas, seu valvulas cordis, usque ad horam nativitatis nondum opertas, ut docet Galenus. Ergò ad alium usum effunditur sanguis à corde in pulmones hora ipsa nativitatis, et tam copiosus. Item, à pulmonibus ad cor non simplex aer, sed mixtus sanguine mittitur per arteriam venosam: ergò in pulmonibus fit mixtio. Flavus ille color à pulmonibus datur sanguini spirituoso, non à corde. In sinistro ventriculo non est locus capax tantæ et tam copiosæ mixtionis, nec ad flavum elaboratio illa sufficiens. Demum, paries ille medius, cum sit vasorum et facultatum expers, non est aptus ad communicationem et elaborationem illam, licet aliquid resudare possit. Eodem artificio, quo in hepate fit transfusio à vena porta ad venam cavam propter sanguinem, fit etiam pulmone transfusio à vena arteriosa ad arteriam venosam propter spiritum. Si quis hac conferat cum iis quæ scribit Galenus, lib. vi et vii, *De usu partium*, veritam penitus intelliget, ab ipso Galeno non animadversam. Ille itaque spiritus vitalis à sinistro cordis ventriculo in arteriis totius corporis deindè transfunditur, ità ut qui tenuior est superiora petat, ubi magis adhuc elaboratur, præcipuè in flexu retiformi, sub basi cerebri sito, in quo ex vitali fieri incipit animalis, ad propriam rationalis animæ sedem accedens. Iterum ille fortius mentis ignea vi tenuatur, elaboratur, et perficitur, in tenuissimis vasis seu capillaribus arteriis, quæ in plexibus choroidibus sitæ sunt, et ipsissimam mentem continent. Ili plexus intima omnia cerebri penetrant, et cerebri ventriculos internè succingunt, vasa illa secum complicata et contexta servantes, usque ad nervorum origines, ut in eos sentiendi et movendi facultas inducatur.

"Vasa illa miraculo magno tenuissime contexta, tametsi arteriæ dicantur, sunt tamen fines arteriarum, tendentes ad originem nervorum, ministerio meningum. Est novum quoddam genus vasorum. Nam, sicut in transfusio à venis in arterias est in pulmone novum genus vasorum, ex vena et arteria, ità in transfusione ab arteris in nervos est novum quoddam genus vasorum, ex arteriæ tunica et meninge: cum præsertim meninges ipsæ suas in nervis tunicas servent."

Milne Edwards, *Leçons sur la physiologie*. Paris, 1858, tome III, p. 17.

"The vital spiritus has its origin in the left ventricle of the heart, the lungs in the greatest degree aiding its generation. This spiritus is attenuated, elaborated by force of heat, of yellow color, of fiery power, so that it is, as it were, a clear vapor from the purer blood, containing in itself the essence of water, air, and fire. It is generated from an admixture made in the lungs of inspired air with elaborated subtile blood, which the right ventricle of the heart communicates to the left. Indeed this communication is not made through the middle wall of the heart, as is commonly believed, but by great ingenuity from the right ventricle of the heart, by a long passage carried through the lungs, the subtile blood is put in motion: it is prepared by the lungs, is made yellow, and is transfused from the vena arteriosa to the arteria venosa. Thereupon, in the arteria venosa itself, it is mixed with the inspired air and by expiration is purged of its dark substance. Also in this wise at last from the left ventricle of the heart the whole admixture is drawn, material is adapted, so that it makes vital spiritus.

"Since the communication and preparation is thus made through the lungs, it teaches a manifold conjunction and communication of the vena arteriosa with the arteria venosa in the lungs. The remarkable magnitude of the vena arteriosa confirms this, which would be made neither such, nor so great, nor would it thus send out from the heart itself a force of the purest blood into the lungs, for the purpose of their nourishment alone, nor would the heart for this purpose supply the lungs; especially since previously in the embryon the lungs themselves were accustomed otherwise to be nourished, on account of these little membranes, or valvules of the heart, not yet opened even to the hour of birth, as Galen teaches. Therefore for another purpose, the blood is poured out from the heart into the lungs at the very hour of birth, and in such abundance. Likewise, air not simple, but mixed with blood, is sent to the heart from the lungs through the arteria venosa: therefore the mixture is made in the lungs. This yellow color is given to the sanguis spirituosus by the lungs, not by the heart. In the left ventricle there is no capacious place for so great and such copious admixture, nor is there elaboration sufficient for the yellow. Indeed, that middle wall, since it lacks vessels and facilities, is not adapted to communication and that elaboration, even if it could exude anything. By the same arrangement by which transfusion is made in the liver from the vena porta to the vena cava through blood, a transfusion is also made in the lung from the vena arteriosa to the arteria venosa through spiritus. If one will compare this with that which Galen writes, lib. vi et vii, *De usu partium*, he will thoroughly understand the truth not observed by Galen himself. This vital spiritus accordingly is transfused from the left ventricle of the heart and then into the arteries of the whole body, so that what is of greater tenuity seeks the superior, where it is still more elaborated, especially in the flexus (plexus) retiformis, situated under the base of the brain, in which from the vital begins to be made the animal, approaching to the proper seat of the rational soul. Again, this is more strongly attenuated, elaborated, and perfected by the fiery power of the mind, in the thinnest vessels or capillary arteries, which are situated in the chorioid plexuses, and contain the very mind itself. These plexuses penetrate all intimate parts of the brain, and gird from below inwardly the ventricles of the brain, preserving these vessels complicated and entwined with each other, as far as the origins of the nerves, in order that the faculty of feeling and of moving may be imparted to them.

"These vessels most delicately in a very miraculous manner interlaced, although they are called arteries, are nevertheless the ends of arteries extending to the origin of nerves, for the service of the meninges. It is a certain new kind of vessels. For, as in transfusion from veins to arteries there is in the lung a new kind of vessels out of vein and artery, thus in transfusion from arteries to nerves there is a certain new kind of vessels, out of the tunic of the artery and the meninx: especially as since the meninges themselves preserve their own tunics in the nerves."

In the first sentence of the extract from Servetus, he says, like Rabelais, that "the vital spiritus has its origin in the left ventricle"; Rabelais says that the left ventricle makes the blood so subtile that it (the blood) is called spiritual and the left ventricle sends it to all the mem-

bers by the arteries to warm and "winnow" the blood of the veins. Servetus says that the lungs "in the greatest degree" aid in the generation of the vital spritus; that it (the vital spiritus) is attenuated and elaborated by force of heat, is of a yellow color (*flavo colore*) and of fiery power, and is, "as it were, a clear vapor," containing the essential parts of water, air and fire.* "It (the vapor) is generated from an admixture, made in the lungs, of inspired air with elaborated subtile blood, which the right ventricle of the heart communicates to the left." This communication is not made through the middle wall of the heart, as is commonly believed, but from the right ventricle, "by a long passage carried through the lungs, the subtile blood is put in motion." It is prepared by the lungs, is made yellow and is passed from the pulmonary artery to the pulmonary vein.† The blood is mixed with the inspired air in the pulmonary artery "and by expiration is purged of its dark substance." In this wise the whole admixture is drawn from the left ventricle, "material is adapted, so that it makes vital spiritus."

Here is a description of the passage of dark blood through the lungs, from the right to the left side of the heart. In the lungs the blood is purged of "dark substance," which is thrown off in expiration, and is changed into vital spiritus, described as a clear vapor, of yellow color. This is the idea of the pulmonary circulation given by Servetus.

Rabelais thought that the blood was made so subtile in the left ventricle that it was called spiritual and was sent by the left ventricle to the parts to "warm and winnow" the venous blood; which latter was also sent to the parts for their nourishment, but by the right ventricle. Rabelais also spoke of the heart as distributing its best blood to the lungs by the pulmonary artery. He indeed came very near a description of the passage of blood through the lungs; and he actually did say that spiritual blood was sent by the left ventricle through the arteries "to all the members."

The arguments of Servetus to sustain his theory of the passage of blood through the lungs are most interesting. He says that since the communication and preparation of the vital spiritus is thus made through the lungs, there is a manifold conjunction and communication in the lungs of the pulmonary artery with the pulmonary vein; and that this is confirmed by the great size of the pulmonary artery, this vessel carrying too much blood to the lungs simply for their nourishment. He speaks of the lungs of the fœtus as "accustomed otherwise to be nourished," on account of valvules of the heart "not yet opened even to the hour of birth, as Galen teaches"; "the blood is poured out from the heart into the lungs at the very hour of birth, and in such abundance; the yellow color is given to the *sanguis spirituosus* by the lungs, not by the heart; the left ventricle is not sufficiently capacious for so great an admixture of air with the blood; the arrangement for the passage of blood in the lungs from the pulmonary artery to the pulmonary vein is the same as for the passage of blood in the liver from the vena porta to the vena cava. Indeed, in his argument, Servetus quite closely describes the changes in the pulmonary circulation which take place at birth.

It is not germane to my purpose to follow either Servetus or Rabelais through their speculations in regard to the generation of animal spiritus from vital spiritus. Servetus speaks of the animal spiritus as elaborated and perfected in the flexus retiformis under the base of the brain and as still more strongly attenuated, elaborated and perfected in the chorioid plexuses, describing the tunics of the vessels of these plexuses as uniting with the meninges to form nerves. Rabelais speaks of the animal spirits as made in the *rete mirabile* out of the spiritual blood: "The philosophers and physicians affirm that the animal spirits spring from, have their origin in, and operate through the arterial blood purified and refined to perfection within the *rete mirabile*, which lieth beneath the ventricles of the brain."

One can hardly study closely the passages quoted from Rabelais without appreciating how near philosophers and physicians in the middle of the sixteenth century were to a knowledge of the pulmonary circulation. As regards the systemic circulation, the notion seems to have been that blood was made in the liver out of nutritive matters of food absorbed by the mesenteric veins, was transported to the heart to be further refined, and was sent to the parts by the veins; that the left ventricle sent arterial blood to the parts for some indefinite purpose. It remained to show that the blood could move in the veins in only one direction and could not pass from the right ventricle to the periphery, to give the key to knowledge of the general circulation. This was done when the great anatomist, Fabricius, demonstrated the valves in the veins to the great physiologist and philosopher, the immortal Harvey.

The work of Servetus was not a factor in the discovery of the circulation, because it was unknown, it is said, until 1694. It might be said that the cruel burning of Servetus and the practical destruction of his work, in 1553, delayed the discovery of the circulation for more than half a century; but the history of physiology shows that Realdus Columbus, of Cremona, a disciple of Vesalius, wrote, in 1559, that blood did not pass through the interventricular sæptum, but was carried from the right ventricle to the lungs by the pulmonary artery and then passed with air into the left ventricle by the pulmonary vein. Cæsalpinus, in 1583, wrote that the veins carried nutritive matters to the heart and that the arter-

*Further on, Servetus calls this "*sanguis spirituosus*."

†At the time of Rabelais and Servetus the general notion was that there was but one pulmonary vein. Eustachius made his celebrated *Anatomical Engravings* in 1552; but he was unable to publish them, and they were practically buried in the papal library until 1714, when they were made public by Lancisi. In *Tab.* XXVII, *Fig.* 13 is a very exact representation of the four pulmonary veins. (Sprengel, *Histoire de la médecine*, Paris, 1815, tome IV, p. 35.)

ies distributed these matters to the parts. He noted that when a vein was ligated, the vessel became swollen below and never above the point of ligature. He also wrote that the blood *circulated* in the lungs to pass from the right to the left side of the heart; but he had a vague idea only of the general circulation and adhered to the ancient error that there were openings in the interventricular sæptum through which the blood passed freely between the two sides of the heart.* How far, then, a general knowledge of the description of the pulmonary circulation by Servetus would have hastened the discovery of the general circulation, if at all, it is impossible to determine.

The idea of this article suggested itself to me in reading the passage that I have quoted from Rabelais. After much study and bibliographical research, I have attempted to give an idea of the progress of actual knowledge in regard to the movements of the blood, up to the grand epoch in physiology marked by Harvey, and especially the knowledge that prevailed in the middle of the sixteenth century.

NOTES ON RINGWORM.

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TINEA TONSURANS, herpes tonsurans, trichophyties, in one word ringworm, comprehends several affections of the epidermis and its appendages, hair and nails, which recognize as their cause the presence of a parasite known under the name of trichophyton. A few years ago it was believed that trichophyton was only one kind of parasite, the one and the same which in 1844 had been discovered and described by Malmsten. But since the patient and classic studies made by Sabouraud on this subject we have been compelled to change our views somewhat.

The question of the plurality of the trichophytons has been reviewed in a masterly manner by Malcolm Morris in his interesting work, *Ringworm and the Trichophytons,* from which I take a few points.

In 1891 Furthmann and Neebe† maintained the plurality of the fungus in the ringworms, but the new positive observations begin with the researches of M. Sabouraud,‡ who, in 1892, gave his first account to the scientific world of the results obtained, and in 1894 gave the final report in his work, *Les Trichophyties humaines.*

His conclusions are that, under the name of tinea tonsurans trichophytina, have been confounded two diseases which, although they have some similarity of appearance, yet are different on account of the different parasite from which they are derived. According to Sabouraud, one kind of affection is the result of a parasite which was discovered by Gruby over fifty years ago and named *Microsporon Audouini.* This causes the kind of ringworm most contagious and most refractory to treatment, which is often seen in the schools in France. The microscopical characteristics are the smallness of the spores of the parasite, and the clinical are that it is limited to children and attacks the scalp only. The other disease is caused by the real trichophyton, which shows large spores. Sabouraud divided them into two groups, according to the location of their spores inside or outside of the hair, calling the first endothrix, and the second ectothrix. The former attack principally the scalp, and only at times the hairless parts, tinea circinata; the latter attack the skin, occasionally the scalp in children, and are nearly the sole cause of ringworm of the beard. The endothrix is spread from man to man; the ectothrix is the result of a direct inoculation from animals, such as the horse, the cat, etc. Of both these varieties of large-spored fungus there are numerous species, and Sabouraud explains the polymorphism of ringworm by the multiplicity of the species. They have one objective characteristic in common, namely, the circinate outline of the epidermic lesions.

Benignity is a distinguishing feature of trichophytic ringworm of animal origin. Sometimes it lasts two or three months, sometimes longer. Suppurative lesions, kerion, and sycosis are caused by a special ectothrix fungus derived from the horse.

The cultures of the small-spored fungus have always the same characters, but those of the large trichophytic fungi differ among themselves. When taken, however, from the same case, they are always reproduced the same.

Bodin, studying the ringworm fungi which infest the horse, pointed out the habitat of the trichophyton, which, as in man, is circumpilar and intrapilar. The trichophytons of the horse, from the manner of their fructification, are divided into two groups, of which one has the ordinary conidia in bunches, and the other which he calls faviform, on account of the resemblance to favus. He thinks, therefore, that there are diseases in man and in animals resulting from fungi which cannot be clinically distinguished, but mycologically are somewhat allied to the achorion; as a consequence he thinks it impossible at present to draw a line of distinction between trichophytosis and favus.

Leslie Roberts does not believe much in the morphological and in the cultural test, but he thinks that the criterion by which to distinguish the trichophytic fungus is the degree of power to digest horny tissues. He thinks that light hair, on account of lack of pigment, is more susceptible to attacks by ringworm than dark-pigmented hair. He makes two varieties of fungi, one kind which digests both the cuticle and cortical substance of the hair, and a variety that digests the cortical substance first, leaving the cuticle unaffected. He does not, however, accept Sabouraud's doctrine that tinea tonsurans is a disease of two definite types, produced by distinct classes of fungi. In the same way Rosembach, Mibelli, and Charles J. White have all referred to different kinds of trichophyton, which, however, seem to be only varieties.

*Milne Edwards, *op. cit.*, tome III, p. 19.
†*Monatshefte für praktische Dermatologie*, 1891.
‡*Annales de dermatologie*, 1892.

Kroesing* opposed the distinction of ringworm fungi into small- and large-spored, maintaining that the size of the spores was variable in the same fungus and in the same culture. Clinically, he maintains that the same fungus may cause deep and superficial lesions, sycosis, and tinea circinata, and that it is impossible to diagnosticate what fungus has caused a case of ringworm.

Moulds belonging to the class of the *Mucedineæ* form a large group of natural families. Among them is the *Sporotrichum Botrytis* (Link and Lanardo). The character of these moulds is to have their spores external, pediculated in bunches on their hyphus. The trichophytons belong to this family of sporotrichum, which in their parasitic vegetative life show mycelium filaments and endospores in a chain, and when cultivated show large external spores in bunches, as can be seen from Fig. 1.

For many years it has been maintained that the species of the groups of the *Mucedineæ* in certain favorable conditions can produce fungi of a kind superior to those from which they had their origin. Sabouraud showed many cultures of the non-parasitic sporotrichum which, on account of the different culture media, showed forms similar to the *Sporotrichum nellercum,* and this last in other cultures took on a dry, granular appearance as a form of chetomium. If these changes take place in the non-parasitic sporotrichum, it is quite reasonable to admit that the parasitic sporotrichum (trichophyton) can change in appearance according to the different culture media and to the physicochemical conditions. The more or less azotized properties of the culture medium, the degree of temperature to which the culture is exposed, and also the way the culture tube is closed may have some influence on the growth of the parasite. In fact, in these cultures you will find a great difference of appearance; in the young cultures you see the parasite growing in the form of small granules, recalling the structure of the ringworm of the skin, in the old cultures you see a mouldy appearance of the whole culture. In the centre you see tufts of a new and different parasitic vegetation which have no resemblance to the first young culture from which it took its origin.

From these observations the school of Prague came to the conclusion that there was only one trichophyton indefinitely multiform. This assertion has been strongly opposed by Sabouraud, who maintains that there are nearly twenty species of trichophytons which have always maintained their individuality. Of course we must have the greatest regard for the assertions of so distinguished a mycologist, who has given the most complete study to this subject; but from the clinical standpoint I must say that these distinctions are not of much interest, as I have seen in all my examinations the same trichophyton consisting of mycelium and spores producing different morbid phenomena. In my cultures I have found that the parasite taken from the hair or from the scales has always produced in the end the same mouldy white appearance, such as you see in these cultures which I show to you.

From the illustration you can see that the fungus results from long cells connected together end to end, forming a kind of tubes ramified together; this forms the vegetative part of the fungus (Fig. 1), the so-called thallus, or mycelium. The round cells are the fructifying element of the fungus, the so-called spores, or conidia, which are the essential part for distinguishing the fungi. The spores are the fruit and the seed, which, falling on the skin or on a substance capable of giving them nutrition, develop mycelium and reproduce the fungus. On account of the way the spores are grouped and disposed in the organ of fructification, the fungi are distinguished into *penicillium,* in which the spores are disposed in the form of a brush, *mucor,* in which the spores are inclosed in a kind of capsule, and *aspergillus,* in which the sporangeia are round, in globular form.

In the *Mucedineæ* the reproduction takes place oftenest by conidia, which are groups of cells growing directly from the tubes of the mycelium, without a definite organ of fructification. This you find to be the fact with the trichophyton, which is the subject of our study.

It is scarcely necessary to say that in 1860 Lowe tried to demonstrate that the trichophytons were the result of a modification of favus (*Achorion Schoenleinii*) and that both took their origin from a kind of aspergillus. Hebra, in 1854, was rather inclined to believe the possibility of the same origin of both fungi. He experimented with the application of the powdered crusts of favus on a wet cloth to the skin, which resulted in the production of rings apparently from trichophyton. Furthermore, the discovery made by Tulasne of the polymorphism of the fungi seemed to support this theory. From my observations I can state, as all dermatologists agree, that achorion, trichophyton, and microsporon are three distinct forms of *Hyphomycetes,* and there is no common origin among them. I make this statement for the reason that to-day some still insist on the possibility of some similarity between favus and ringworm, and Bodin asserts that it is hard to distinguish to what class some peculiar forms must be referred.

The anatomical tissues attacked by the dermatophytes are the epidermis, the hair, and the nails, on which they have a peculiar digestive property; they penetrate into them, making those tissues their habitat. They detach the epidermic cells from one another, and, by digesting the hard membrane, appropriate their elements as nutrition for the fungus. The fungus in the epidermis either by its presence causes mechanical irritation or by its chemical products produces an inflammatory process which is revealed by redness, scaliness, vesicles, pustules, and at times abscesses, as a result of their presence.

The affections resulting from the presence of the fungus in the epidermis have naturally a chronic evolution, as it is entirely subordinate to the vegetative power of the fungus, and it is only when a treatment succeeds in de-

*Archiv für Dermatologie und Syphilis.

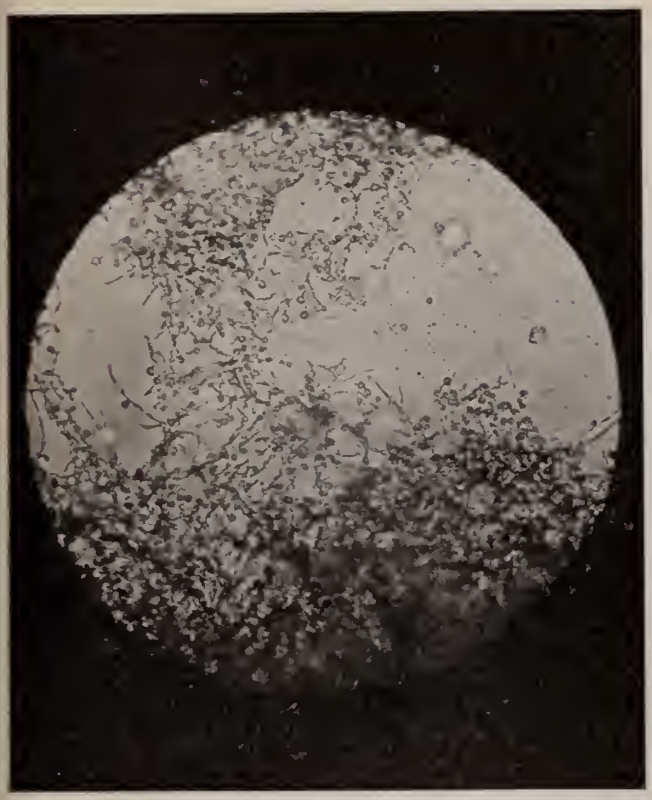

Fig. 1.

Fig. 2.

stroying its vegetative power or removing the fungus itself that we obtain recovery from the dermatomycoses.

These affections are carried from man to man or from lower animals to man. Trichophytons are widespread among horses, cats, dogs, and also fowls. These fungi have different forms when cultivated from the different animals, but when inoculated on man they have the same effects, the same appearance, and when cultivated again from man they give as a final result this white mould which you see vegetating in these bottles.

Sabouraud laid great stress on a distinction of the trichophytons as ectothrix, endothrix, and endoectothrix, the first vegetating outside of the hair, on the epidermis, in patches, the second vegetating in the hair, the third vegetating either in the hair or outside. I beg to call your attention to our microphotograph (Fig. 2.) where you can see a quantity of spores on some filaments of mycelium, vegetating outside of the hair, and groups of spores vegetating and disposed in lines between the fibres of the hair. You can easily be persuaded that there is no

Fig. 3.

difference between them, and that the same fungus vegetates in the fibres of the hair and in the scales of the epidermis. Furthermore, in a large number of cases in which the hair has been affected the epidermis had been affected first and then it spread to the hair. Of these two cultures, which look exactly alike, one is the result of the inoculation of an epidermic scale from a ringworm patch, and the other from a hair taken from another patient. For these reasons, although I admire the studies of Sabouraud, and I consider his classification highly scientific, yet I consider it of not much interest clinically, when I find that the same identical fungus vegetates inside of the hair and in the epidermis as endothrix and ectothrix.

What I wish the student to be able to establish without hesitation is the diagnosis of ringworm, which he can easily do from the clinical characters, a scaly patch in a circular form with stumps of broken hair, and from the positive observation by finding the fungus in the scales or in the hair. Kaposi* expresses his opinion by saying that all the different forms of herpes tonsurans which he points out are only varieties of the same disease on account of the different anatomical regions or simple complications due to the same identical fungus, trichophyton.

The difference in the appearance of the eruption of the hairy scalp and of the skin without hair is to be found in the peculiarity that the fungus vegetates in the hair follicles. This causes the obstinacy of the disease, because the fungus growing in the follicles is concealed and protected from the action of the remedies applied. The same condition occurs in the cases of herpes tonsurans of the back of the hands, where the small red points are the opening of the hair follicles invaded by the fungus.

Fig. 4

Herpes tonsurans sometimes spreads to a great extension; at other times it remains circumscribed to a certain area, without growing, for years, but I have seen it in some cases invade the whole scalp. Subjective symptoms are limited to a moderate pruritus. The disease remains limited to the epidermis and in consequence does not produce deep alterations in the tissues of the skin, and so leaves no scar or permanent alopecia.

On the general surface of the skin herpes tonsurans shows itself in the form of red spots or scaly round patches or vesicles, and also bullæ. From the occurrence of these lesions it has taken the names of herpes tonsurans maculosus, squamosus, vesiculosus, and bullosus. In these cases the eruption has a tendency to an acute course, showing the irritating qualities of the fungus capable of producing inflammation and pus formation.

Concerning the treatment, this consists in the local application of almost any substance capable of producing the casting off of the epidermis. Tincture of iodine, a mixture containing chysarobin or resorcin, or pyrogallic acid, etc., a solution of bichloride of mercury, all have given good results. When the epidermis is removed by inducing desquamation, the parasite goes off together with the necrosed epidermic scales, and it is not difficult to get rid of it. The difficulty is when it has affected the hair and the hair follicles, where the fungus finds itself protected, and in these cases we must resort to epilation, so that removing the hair we also remove the parasitic elements. The old Wilkinson's ointment modified by Hebra has always given in my hands very gratifying results in nearly all forms of trichophyties. For cases of tinea trichophytina of the scalp a mixture of crude coal oil and olive oil has been rubbed daily on the scalp of the children by means of a strong painting brush. This application is sometimes the cause of pustulation of the scalp, which is rather beneficial, causing the destruction of the parasitic elements in the hair follicles. I must mention a method which I have used for several years in obstinate cases, which was at first proposed by H. J. Reynolds, of Chicago, at the International Medical Congress at Washington. It consists in utilizing the continuous electric current running from the positive to the negative pole so as to introduce the remedy into the follicles of the hair. When a sponge impregnated with an antiparasitic solution is attached to the positive pole and applied on the diseased patch, and the negative is applied at some distance, the fluid will penetrate much more deeply into the tissues than it would without the help of the electric current. A one-per-cent. solution of bichloride of mercury is the ordinary antiparasitic liquid which I use, but other solutions can also be used. The duration of the application will not exceed thirty minutes, and it can be made once a day. I have used these applications in cases of tinea tonsurans of the scalp and also of the body, and I have always obtained gratifying results. This method has been also employed by E. Charon* in his clinic in Brussels.

In regard to prophylaxis, it is necessary to call attention to the contagiousness and to the frequency of this disease. In my twenty years of practice in Cincinnati I have met with only three cases of favus, showing that this

*Pathology and Treatment of the Diseases of the Skin.

*Western Medical Reporter, February, 1888.

disease, on account of the sanitary regulations for immigrants, has a tendency to disappear. Trichophyties, however, is spreading, on account of its contagiousness. In fact, the scales of the epidermis containing parasitic elements are continuously cast off, and when placed on the skin or on the scalp they are reproduced. It seems to me that for the reproduction of tinea tonsurans there is always required a direct contact of the different wearing apparel or utensils. In families in poor circumstances, in which several children are placed together in the same bed, we find that nearly all are affected with this disease. In the same way, by using towels, combs, and brushes the disease is easily spread. In the City Hospital, in Ward B, I have constantly from three to six cases of tinea tonsurans capillitii in children for treatment which are sent from the Children's Home. They are kept together with other children convalescent from other diseases, and in many years I have never seen a case of tinea tonsurans inoculated in the ward. The nurses are very careful to keep separate the towels and the other articles of the little patients with tinea tonsurans, and after they have been cleaned and dressed they wear a cap, which they cannot remove. The rapid spreading of tinea tonsurans can be easily checked by the antiseptic rules used in dressing and treating children.

The *chronic* character of the disease and the long time which is required for the treatment of tinea tonsurans of the scalp are points against keeping children out of school. Furthermore, the parents, on account of the little or no complaint of the children, do not give any attention to their treatment, leaving the disease alone. In the same way children which we have discharged from the hospital as cured, after a few months have been brought back with the scalp covered again with new patches of tinea tonsurans. The relapse could have been easily avoided by some cleanliness and by rubbing the scalp once a day with an antiseptic solution. I think, therefore, that it is a great mistake in public hygiene to order children affected with tinea tonsurans out of school and allow them to go around in the streets. On the contrary, they ought to be sent to school, where they should be kept in a separate room for children affected with tinea tonsurans. The teacher ought to be trained in the treatment of this disease, and the children ought to be treated every day according to the directions of the physician.

Another place where the disease is freely spread among grown persons is the barber's shop. The use of the same utensils for all the customers is dangerous and likely to cause infection with the trichophyton. Barbers ought to be compelled to have a basin of boiling water in which to plunge their razors, brushes, and combs after having attended to a customer. The utensils ought to be metallic, with metallic handles, so that they can be boiled without spoiling them.

Everybody ought to be cautioned not to use combs and brushes hanging in public places, in the railroad cars, etc., but carry in his pocket a small comb, avoiding in this way the use of the comb used by others.

The roller towels in public offices, factories, etc., where everybody wipes his or her hands and face, are also dangerous for the spreading of the ringworm. In the same way patients affected with herpes tonsurans of some part of the face very often infect the whole face, scalp, and neck by rubbing their face with the towel after washing, spreading the scales and the crusts filled with spores to other places which had not before been affected. It is necessary, therefore, to caution our patients not to rub when wiping their face affected with this disease, in order to prevent further spreading of the affection.

In conclusion, I can say that with some attention and with some care tinea tonsurans can be easily diminished and prevented from spreading.

HYPERACIDITY (SUPERACIDITY, HYPERCHLORHYDRIA, SUPERACIDITAS CHLORHYDRICA); A CLINICAL STUDY.

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(Concluded from page 1034.)

As illustrative of what has been set forth, the following histories of a few of the cases are appended.

Case I.—June 22, 1895. Miss B. E., American, æt. thirty-seven (but does not look a day over twenty-five; I was greatly surprised when she told me her age); five feet four inches tall; weight, from 120 to 125 pounds; organist; she also assists her mother, who keeps a boarding house, with her household work. She says that she is very nervous; that her mother also is a very nervous woman; that it is not a matter of inheritance with either of them (as they were never nervous in the days of their prosperity), but that they were made so by the cares and vicissitudes of their life (after the loss of their fortune). Formerly she was much troubled with chills, and shivers running through her body. Her hands would suddenly become very cold. Of late this has not been so frequent or so marked. Her general health (except as to dysmenorrhœa and the trifling complaint above mentioned) had always been good up to four years ago. At that time her stomach began to trouble her and has continued to do so, more or less, ever since. She complains of indigestion. It seems to her as if her food remained long in her stomach; she has a sense of fulness in her throat, as if some foreign body were lodged there; at times it seems as if it were a ball. Occasionally she has a pain that shoots from her stomach to her left ear. What distresses her most now is a *burning in her stomach.* She takes much sodium bicarbonate to relieve this. Her bowels are regular. She does not sleep well; she rarely sleeps the night through; most frequently she will wake

out of her first sleep and remain awake for two or three hours, then sleep by cat-naps until it is time to rise. She has been under treatment with a number of physicians, and has taken all sorts of remedies—alkalies, acids, bitters, etc., and has been dieted in various ways.

Examination.—Teeth good. Tongue clean. She is in fair flesh. Stomach normally located. No splashing. Liver and spleen normal.

Stomach Chemismus.—Test breakfast, Ewald and Boas. Reaction to blue litmus +; reaction to Congo + (strong, characteristic); reaction to resorcin (Boas) + (strong). Total acidity, 72. Rennet +; pepsin +.

Diagnosis.—Hyperacidity, of nervous origin.

Treatment.—Dietary rules as already stated. To eat full meals; a good breakfast, a good lunch, and a regular dinner. Eggs, hard boiled, cold, and meats to constitute the main element of the various meals. To take a meat sandwich or a cup of milk with a cracker before retiring for the night.

Medication.—Vichy (French), half a glass t. i. d.; Fowler's solution, two drops, three times a day.

Other Measures.—A cold, moist compress* over the stomach at night.

July 2d.—She is feeling much better. The burning is very much ameliorated, and all the other symptoms have entirely disappeared. She has a good appetite, and enjoys her meals very much. As she has taken a bottle of Vichy daily for the last five or six days, I asked her to reduce the quantity to what I had advised her, namely, half a glass three times a day.

She was under treatment but a very short time. A few months later—early in the fall—I met her physician, who had referred her to me, and was then informed that Miss E. was completely cured of her stomach trouble.

CASE II.—Nov. 3, 1898. L. D., æt. thirty-four; height, five feet three inches; weight, 115 pounds (never weighed more when at his best than 123 pounds); married; one child; travelling salesman; smokes and drinks (both in moderation, he says). He has been troubled with his stomach for the last ten years. He *gets a pain in his stomach* which travels upward under his sternum. It comes on mainly about 5 P.M. Very frequently he also gets a pain in the morning about 10 or 10:30. The morning pain, he says, is different in character from that of the afternoon. It begins higher up under the sternum, about at the third intercostal space, and is a *shooting* pain. It does not interfere with his walking, does not compel him to stop if it happens to come on while he is walking, though on the whole he does not feel very much like moving about when he has the pain. He prefers to sit quiet. The afternoon pain is a "*dull, dead* pain." The pain is never felt in the back. It is always relieved by the ingestion of food. Sometimes the pain is attended with pyrosis. Occasionally, about once a month, he has seen the fluid thus discharged flecked with blood. He has never had a hæmorrhage. He has been under treatment with eminent men, has taken much medicine, has been dieted much, but has not as yet found relief.

His *bowels* were regular up to within a month. Since then he has been constipated. The stools were, as a rule, formed. His appetite is poor, and he eats very little. Sleeps well.

Examination.—The face is drawn somewhat; it has an expression of suffering. Teeth good. Tongue clean. No tenderness in the epigastrium; none in the abdomen. No pressure spots *(Druckpunkte)*. Stomach normally located. Tone of gastric muscle good.

Examination of Stomach Chemismus.—Test breakfast, Ewald and Boas. Strong characteristic responses to tests for hydrochloric acid. Total acidity, 87. *Rennet* (Boas) 1 to 30, rapid reaction; pepsin + (rapid digestion).

Diagnosis.—Hyperacidity.

Treatment.—On the lines laid down. For the pain I prescribed:

℞ Tincture of aconite root..... 6 drops;
Tincture of belladonna.....25 "
Distilled water. ..... 2 ounces.

M. Sig.—Take a teaspoonful on arising in the morning, and follow with a second dose in half an hour; then no more for that day.

Vichy, half a glass in the morning. In the afternoon, half an hour before the setting in of the pain, sodium bicarbonate. For the constipation, massage, etc.

November 10th.—Has had no pain for the last two days. Feels good; can eat well and enjoys his food. Weight, 118 pounds. Continue on as before directed. Take a third dose of the aconite and belladonna mixture at the same interval.

20th.—No pain since the last record. Bowels regular. Complains that his bladder is weak, that he cannot hold his water. Stopped the aconite and belladonna mixture. Gave him some tablets of strychnine sulphate, $\frac{1}{100}$th of a grain each; to take four a day.

Dec. 18th.—He is well. He says he has gained two inches in his girth and an inch and a half in his chest measure.

Discharged from treatment.

I saw him in 1900, and he then informed me that he had not been troubled with his stomach, though he had, some months before, resumed smoking (in moderation) and taken a drink as before.

CASE III.—February 5, 1899. S. W., æt. thirty-five, a merchant, residing in a far Western city; height, five feet eight inches; weight, 125 pounds; single. Drinks three or four whiskeys a day, occasionally more. Smokes between five and ten cigars a day. He has had trouble with his stomach for many years, and has had many physicians without benefit. He complains of a "*cramp or dry pain*" in his stomach, which may or may not be followed by diarrhœa. He is very much worse in summer; then the cramp seizures are more violent, more frequent, and more often followed by diarrhœa. (In winter he may go two or three weeks without a seizure; in summer he has one or more every week.) Occasionally pyrosis. Appetite never anything to boast of. Last month he had no taste for food at all. Bowels (in the intervals between diarrhœal attacks) regular, open daily. Sleeps well.

Examination.—Teeth good. Tongue coated with a light white fur. From the ensiform cartilage to the umbilicus, 13½ centimetres. At 7 centimetres from the ensiform cartilage (downward) there is in the median line a very tender spot. In fact, the whole epigastrium is somewhat tender to percussion. The *pain* is always located in the epigastrium, 6 centimetres above the umbilicus. It is never around the navel. Otherwise, there is nothing abnormal either to inspection or palpation. *Stomach* normally located. No splashing. Water, 8 ounces. No splashing (even with the knees drawn up and the mouth slightly open). Liver and spleen normal.

March 5th.—Test breakfast, Ewald and Boas, one

*As to this, see Illoway, *Constipation in Adults and Children*, etc.

hour. Removed 85 cubic centimetres of stomach contents. On standing, it separated into two layers, water at top, bread at bottom. The latter, again, divisible into two layers; the upper and larger finely ground up, more like a very fine powder; the lower, coarser, like fine grits. The appearance of the whole, as ordinarily.

Reactions to tests for hydrochloric acid, strong, characteristic, rapid. Total acidity, 94. *Rennet* (Leo) +, thirteen minutes. Twenty centimetres milk, reaction in less than twenty-five minutes. *Pepsin* (hard-boiled white of egg) +.

Diagnosis: Hyperacidity.—More than probably there is a chronic congestion of the gastric mucous membrane, perhaps a subacute inflammatory condition of mild type, present. This latter would account for the marked anorexia.

Treatment.—On the lines already indicated.

Medication.—Vichy twice or three times a day, as may be necessary. For the pain particularly, the aconite and belladonna mixture as described in Case II. Strychnine sulphate, $\frac{1}{100}$th of a grain three times a day as a general tonic.

19th.—Feeling much better. Cramps and pains have been but slight. Has no appetite. Continue the aconite and belladonna mixture as before, and, as there is still some tenderness in the epigastrium, to take bismuth subnitrate, 10 grains, twice a day. For the anorexia, nux vomica in small doses.

23d.—He is feeling very much better. Leaves for home.

Several months later I heard from him. He felt well, had gained greatly in flesh, and was about to get married.

Case IV.—H. S., November 5, 1899. The first part of the history has already been given.

She gets dizzy spells. Is afraid to trust herself on the street alone. Has headaches; at times her head is so dull that she does not comprehend what is said to her. She has a feeling of fulness in her stomach. After eating she must keep herself in the erect position for a while, as she regurgitates some of her food if she sits or lies down. It takes nearly six hours (her statement) for the food to pass out of her stomach and till she is again comfortable. There are no eructations. Her appetite is fair. When she is hungry she gets a pain in her stomach. Sometimes she gets a pain there during eating, which will last for a while. What she complains of most is a *burning and heat* in her stomach, which sets in shortly after she has finished her meal and continues for a long time. Sometimes this burning is exceedingly distressing. She eats very little, a little milk or oatmeal in the morning, a little soup and a small bit of meat for dinner (noon), and a soft-boiled egg or two, with a little milk and a small slice of bread, for supper. She drinks much Seltzer water (artificial) through the day. Bowels very costive; stools very little and in the form of scybala, and she must press much and hard to discharge them—not more than two or three at a time. Much flatulence. Sleeps very badly; she sleeps with her mouth open, and the drying of her mouth and throat wakes her up at frequent intervals.

Examination.—Teeth good. Tongue coated with a light white fur. Nothing abnormal about the abdominal organs. Stomach apparently normally located. Both nares obstructed.

6th.—Test breakfast, Ewald and Boas, one and a half hour. Removed 100 cubic centimetres of bread and fluid; ordinary appearance. Settled, on standing, into two layers, bread well worked up. Strong and characteristic reaction to tests for hydrochloric acid. Total acidity, 93. Rennet +; pepsin +.

Diagnosis.—Hyperacidity, with some degree of atony.

Treatment.—Along the lines laid down. By reason of the constipation, much stress was laid upon the dietary regulations for this, and upon the drinking of a proper amount of water—plain, ordinary hydrant water. Vichy at 11 A. M. (about three hours after breakfast) and at 5 P. M. Massage. Electricity. To have polypi removed.

14th.—She is being treated for her nose, has had several of the polypi removed. She breathes much better. Her dizziness and headaches have almost entirely disappeared, she sleeps much better, and she is feeling much improved in every way. She has had no burning at all in the last four days. The hard-boiled eggs are well digested and she feels good after them. She likes them very much.

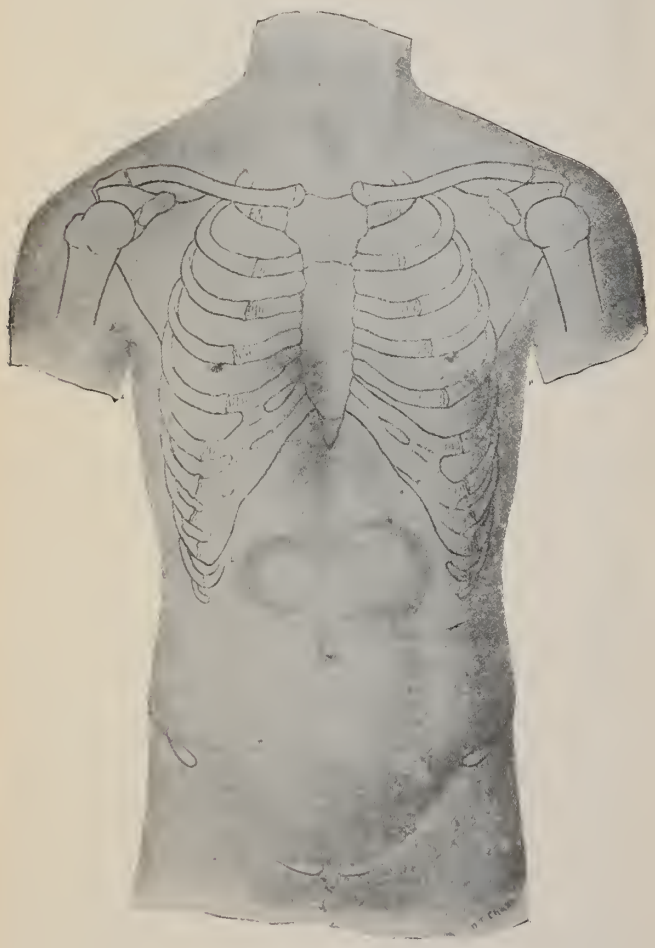
23d.—Continues to do well. Bowels acting satisfactorily. Comes up alone now.

She was under treatment but a short time longer (a few weeks) when an attack of influenza set in, which laid her up for some time. I have not seen her since, but have been told by a friend that she has not since had any trouble with her stomach.

Case V.—December 25, 1899. J. B., a boy, æt. twelve, Polish-Jewish, four feet three inches tall, very spare in flesh. Has a good-sized head and appears a bright, intelligent lad. He goes to school and is well up in his studies, astonishingly so for a boy not many years in this country. After school he romps about in the street with other boys for a time and then goes in to study. His grandmother, who brought him to the clinic, said that he had a frightful temper, *that he was easily enraged and then would act like one possessed, breaking things and throwing things, whatever he could lay his hands on, at the persons about him. At such times he became actually dangerous to the family.* It was said he would not eat. When questioned, he said he could not eat, because, if he ate like other persons, he suffered great pain and would have to vomit much. Even as it was, he had some pain after eating and vomited some. More definitely stated, the history of his trouble and its character is as follows: He was perfectly well up to a year ago. Quite some time previous to that period *his mother became mentally deranged* (a sort of melancholia, I should judge from what I was told), and after she had been treated here without benefit it was determined to send her to her people in Poland. Her passage was secured and the boy was sent with her as guardian. He brought his mother safely to her destination, to her people in Poland, and remained with her for six months, and then, not being satisfied, determined to return to America. He got to Hamburg without any difficulty, but there was refused passage over on account of sore eyes (a chronic blepharitis marginalis is still in evidence). He cried bitterly and would not be comforted. Finally some kind-hearted sailors of the ship's crew took pity on him and smuggled him into the steerage, where he remained and sailed with the vessel. His bowels had always been regular and he had been able to eat anything and everything, but on the boat he became constipated. He asked the ship's surgeon for some medicine, but for some reason or other could not get any. His bowels remained constipated, pain set in in his stomach, and he began to vomit. Gradually, after three or four days, his

bowels moved somewhat and he felt relieved a little, but shortly thereafter, and particularly after landing, he again became constipated, obstinately so, the pain in the stomach became more marked, and the vomiting grew more frequent. The pain was particularly severe after eating ordinary food, and so he gradually reduced his diet until it consisted almost entirely of bread and coffee or bread and tea.

The pain is felt in the epigastrium; it is both a pain and a sense of pressure. After vomiting he feels relieved. Usually the quantity vomited now is not more than one or two tablespoonfuls; occasionally, and particularly if he should eat something out of the usual, he may vomit all that he has taken. He said that, if he wished to, he could control the vomiting, that is, he



CASE V.—When the stomach was filled with air, the Traube triangle was rounded out and the epigastrium presented this appearance.

could hold in, but then he would have to suffer the pain. He, therefore, preferred to press out a small quantity of what he had taken in and get relief at once.

Examination.—Teeth good. Tongue clean. From the ensiform cartilage to the umbilicus, 14 centimetres. Nothing abnormal on inspection or palpation except tenderness to pressure in the epigastrium, more marked in the left than in the right half. Stomach normally located, normal. Other organs normal.

26th.—Came with a test breakfast, Ewald and Boas. By reason of the distance he had to come, it was nearly an hour and a half before the tube was introduced; nothing but a little frothy mucus was obtained. *Second test breakfast:* after three quarters of an hour the tube was introduced and 50 cubic centimetres of stomach contents were removed. The bread appeared as in flocculi, not well worked up. The fluid was of the ordinary appearance. Reaction to blue litmus +; reaction to Congo + (strong); reaction to resorcin (Boas) + (strong); total acidity, 57.

The diagnosis was not very clear. The large flocculi of the bread I attributed to hasty eating, and he acknowledged that he always ate very fast, so that he might get away quickly to school or to play out in the street. The obstipation I looked upon as due to the lack of proper food. I advised his grandmother to give him but little fluids (so as to avoid any undue distention of the stomach) and more solids; particularly, for his lunch and dinner, to have broiled meat and some little vegetables or stewed fruit.

31st.—He could not adapt himself to the solid food, and, as he did not get the other, he starved somewhat. Prescribed a diet of oatmeal, milk, and meat broths. Prescribed a powder of bismuth subnitrate, cerium oxalate, and rhubarb, to be taken four times daily (for the pain in the stomach and the constipation).

January 3d.—He reported himself as doing well. He has not vomited since he was here, and for the last two days he has eaten meat, raw apples, etc. The epigastrium seems somewhat protuberant, and he complains of some pain there, from 4 to 6½ centimetres from the ensiform cartilage (downward).

7th.—Inflated his stomach. When it was filled with air, the Traube triangle was rounded out; the epigastrium presented the appearance shown in the accompanying illustration.

To the left of the median line there was loud resonance down to within one half centimetre of the umbilicus. On the right of the median line there was some prominence, as shown, with resonance of nearly the same tone as on the left.

14th.—Does not vomit now, though occasionally a very little of the food is regurgitated. His bowels are still costive, and he must strain very much, and sometimes this makes him vomit. He says that since the inflation he has had less pain in his stomach.

21st.—His aunt, who came with him to-day, said he still ate very fast and inordinately much. When he regurgitates, it is mainly water, sometimes there is a little bread with it; very rarely does any meat come up. Massage (abdominal).

28th.—Vomited three times last week—Wednesday evening, some tea; Thursday, very little; Saturday, most of his dinner. The bowels have been costive and irregular, the movements being either very hard or loose and watery (after a laxative).

February 11th.—Test breakfast taken in my office. One hour afterward, 60 cubic centimetres removed; usual appearance. Rapid reaction to tests for hydrochloric acid. Total acidity, 81. Free hydrochloric acid (after Mintz), 33.

The diagnosis was now clear. It was a case of hyperacidity. (The reason for the difference in the results of the two examinations is apparent and need not be dilated upon.)

March 1st.—When his bowels move, then his symptoms subside; as soon as they become costive again, all his complaints are renewed. He has noticed that warm tea, particularly, taken after lunch or dinner, will cause him to vomit. He complains of a *burning* and a *sourness* in his stomach. To take Vichy (French), half a glass, three times a day; glycerin, one third of a teaspoonful,

three times a day. There is much trouble about his diet. He has not had it as it was directed, even from the beginning—whether from poverty or from carelessness, I do not know. Thus, he has no egg for breakfast, nothing but bread and weak coffee. He thinks, perhaps, they cannot afford eggs now. To tell his grandmother his diet must be attended to.

May 13th.—The same old story. The same complaints on his part, and the same complaint as to his awful temper and carrying on by his aunt. He had himself weighed at the drug store; weighs 70 pounds—a gain of 5 pounds over last summer's weight. Massage.

27th.—Bowels moving satisfactorily. Test breakfast as before. Total acidity, 76; free hydrochloric acid, 23. Massage.

June 10th.—Bowels moving fairly. Now weighs 72 pounds. Still complains of some pain in his stomach. Bryonia.

17th.—Bowels continue regular. Complains of acidity. Had to reprove him about dietary matters and as to drinking water. To take Vichy.

July 22d.—Bowels not so regular; move every other day only, and the fæces are like pap. Vomits but very rarely. Weight now, 76 pounds.

August 5th.—He says he has not felt so well for a long time. Bowels act regularly.

26th.—Same as at last report. Weight, 78 pounds.

September 16th.—Bowels again somewhat costive for the last few days; they move every other day, but only very little. Has vomited some since. He thinks they will *right themselves* shortly. Massage.

December 9th.—He came in to see me to-day, as I had sent for him, being desirous of knowing how he had got along. He feels well. Has no pain in his stomach any more. His bowels act regularly every day. He does not vomit except after a fit of anger, and then only very little. He can control himself much better now and does not quarrel so much with his grandmother. He weighs now 80 pounds. Looks taller. He has stopped school and is going to work.

There is only this to be added: From the period noted in the history, massage was given with greater frequency than previously, and, with the constant admonitions as to diet, was very effective in bringing about a soluble state of the bowels. A malt preparation prescribed was, I think, of some service, both in promoting a better digestion of the carbohydrates (thereby restricting the amount of flatus developed) and in influencing the intestinal peristalsis.

There can be no question, I believe, that the constipation was here the direct cause of the hyperacidity, though undoubtedly the neurotic substratum in the boy was in a measure responsible both for this and for the obstinacy of the constipation.

Case VI.—November 14, 1900, Z. L., æt. twenty-six; single; Russian; a portrait artist (crayon and pastel); five feet four inches in height; weight (without overcoat), 115 pounds. Smokes; formerly ten cigarettes a day, now four cigarettes and two cigars a day. No drinker. Up to four years ago, he was perfectly well. Since that time he has had trouble with his stomach, and it is growing worse and worse. He complains of pain in his stomach, of great burning therein. He has no appetite; he cannot eat, and when he does eat it does not agree with him; it lies heavy in his stomach and the burning comes on. He is growing thinner day by day. Bowels very constipated for the last four years; must always take something to move them.

Examination.—Teeth fairly good. Tongue coated in the posterior two thirds with a light white coat. From the ensiform cartilage to the umbilicus, 15 centimetres. No tenderness in the epigastrium.

Stomach.—Left thoracic region, gastric resonance, and over the left epigastrium down to the crease. Left epigastrium from 6 centimetres below the ensiform cartilage down to 21 centimetres, resonance, then dulness. Right epigastrium dull to the crease, then resonance, which continues to 20 centimetres. Some splashing noticed to the left and near the line of the umbilicus. Water, 8 ounces. With the knees drawn up and the mouth open, no splashing in the epigastrium. Liver and spleen normal.

Test breakfast; 357 cubic centimetres of fluid and half a water roll. An hour afterward I removed 260 cubic centimetres of bread and fluid (mainly fluid—four fifths fluid, one fifth bread). Reaction to tests for hydrochloric acid, strong and characteristic. Total acidity, 61. Free hydrochloric acid (after Mintz), 35. Sp. gr., 1.015.

Diagnosis.—Hyperacidity.

Treatment.—Mainly dietetic. For the constipation, certain modifications of diet. Water. Massage.

29th.—Doing nicely. Bowels acting regularly. He eats very much, as he expressed it, almost wolfishly, and then feels heavy. Told him to make four meals rather than three, and not eat so much at one time.

January 20, 1901.—He is doing very well. He has gained 5 pounds in weight. His bowels have been acting regularly. He has worked steadily from 9 to 4 from early in December, something he has not been able to do before since the beginning of his illness.

March 11th.—Weighs 127 pounds now. Bowels regular, move daily and freely. Came with a test breakfast to-day. Total acidity, 51. Free hydrochloric acid, 17.

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CONGENITAL MALFORMATIONS OF THE UPPER EXTREMITY.

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The great scientific and practical value of the Röntgen rays is evident in the study of congenital malformations of the bones. Skiagraphy of the extremities especially has given more valuable information than dissection. The exact anatomical diagnosis which it enables

us to make informs us whether surgical interference is possible, and, if so, outlines clearly our *modus operandi* beforehand. The ingenious operations of Bardenheuer (division of the ulna for carpal implantation), and von Eiselsberg (transplantation of a toe), and the work of Kirmisson, Vulpius, Middleton, Pagenstecher, von Bardeleben, Joachimsthal, Schede, Lambert, and Grunmach furnish most brilliant testimony to our progress in this direction.

Fortunately, the most frequent abnormity is the one which can easiest be remedied, namely, *polydactylism.* If there is but a rudimentary finger attached loosely by a pedicle and not containing any phalanges at all, removal is very simple.

Case I (skiagraph Fig. 1) illustrates this type. The patient is a boy four months of age. The family history

FIG. 1.—Polydactylism, showing rudimentary fingers loosely attached by a pedicle and not containing any phalanges.

is good. The parents came here from Roumania seven years ago. The child is the first born. Removal was naturally easy. It is of interest to note the partial fusion of the third and fourth metacarpal bones, a condition which would hardly have been diagnosticated without the Röntgen rays.

But when, as it is the rule, there is a true supernumerary digit articulating with another phalanx or the head or side of a metacarpal bone, the site of exarticulation must be well known before the operation. Otherwise the better-developed phalanx may be sacrificed.

Case II, illustrated by Fig. 2, represents this type in a new-born girl. In this instance the family history is good. The parents are healthy, and came here from Russia five years ago. The child is the first born. Both hands show supernumerary digits, each one containing three well-developed phalanges. Exarticulation was

FIG. 2.—Supernumerary digits, each one containing three well-developed phalanges.

done three weeks after her birth, under the guidance of the Röntgen rays.

Case III, illustrated by skiagraph No. 3, represents the same type in a much more important light, since the supernumerary digit is attached to the thumb and articulates with the first metacarpal bone. The patient, a boy of six weeks, is the second child. The family history reveals nothing of interest. The parents are in good health, and came here from Austria two years ago. The supernumerary digit was separated from the first phalanx of its fellow and exarticulated.

Syndactylism, while not so frequent as polydactylism, also represents a large group of cases of malformation of the upper extremity, and is likewise well amenable to operative interference.

FIG. 3.—Supernumerary digit, articulating with the first metacarpus.

FIG. 4.—Syndactylism.

Case IV (Fig. 4) illustrates the complicated type of syndactylism in a boy four months of age. The family history also shows nothing abnormal. The child is the first born; the parents are in good health and came here from Hungary eight years ago. The second, third, and fourth digits appear to be fused together, each one of them, however, possessing its own nail. The skiagraph, Fig. 4, shows fusion of the first and second phalanges of the third and fourth digits, while their third phalanges are free. The little finger is more developed than the slightly deformed thumb. The carpus is not ossified yet, and shows no shade therefore. Under the guidance of the Röntgen rays it was easy to divide the phalanges. The middle finger was protected by a large longitudinal flap taken from the dorsum manus. The two other fingers were covered by their own integument, longitudinal flaps being formed from the palmar surface for the second finger and another one from the dorsal aspect of the fourth. The final result is good.

FIG. 5.—Skiagraph of Fig. 4, showing fusion of the first and second phalanges of the third and fourth digits and deformed thumb.

Case V, illustrated by skiagraph No. 6, shows congenital exostosis in the second phalanx of the index finger of a boy who was born in Germany nine years ago. The family history shows nothing abnormal. The Röntgen rays demonstrated the character of the osseous growth clearly. In view of the presence of functional disturbance, removal with the chisel was undertaken.

Congenital *deficiencies* are naturally much less amenable to correction. But that even in desperate cases of this kind surgery is not without resources is made evident by the transplantation of a toe to the hand, successfully undertaken by von Eiselsberg.

FIG. 6.—Congenital exostosis in the second phalanx of the index finger.

In a case of *brachydactylism* combined with *ectrodactylism* the Röntgen rays are also of great value. In Case VI, for instance, that of a boy of three months, there were five rudimentary fingers (Fig. 7). The skiagraph (Fig. 8) shows the presence of one phalanx of the thumb and of two phalanges of each of the other fingers. The child was the first born of German parents, who came here five years ago; the mother is healthy; the father was suffering from tuberculous knee at the time of the birth of the child, and died from general tuberculosis a year afterward.

Under the guidance of the Röntgen rays I performed a flap operation, on the principles set forth in Case III, between the first and second finger-rudiment. Thus a

FIG. 7.—Brachydactylism and congenital constriction.

fairly good thumb was created. The case, however, offers two more points of interest. In the first place, there was congenital fracture of the ulna and radius at

FIG. 8.—Skiagr ph of Fig. 7, showing the presence of one phalanx of the thumb and of two phalanges of each of the other fingers and fracture of radius and ulna.

FIG. 9.—Consolidation of fractured ulna and radius (Case Fig. 8) after extraction of the wire and unison of the muscular separation at the upper portion of the arm.

their lower third, as illustrated by skiagraph Fig. 8. The forearm could also be bent easily at the seat of the fracture. After wiring the fragments, as illustrated by Fig. 9, union became perfect.

FIG. 10.—Total congenital constriction of upper portion of humerus.

There was, furthermore, congenital constriction (Fig. 10) at the region of the surgical neck of the humerus, where a deep furrow encircled the whole circumference of the arm. Palpation was unable to detect any soft tissues between integument and bone. An exploratory incision revealed the presence of the fragments of the biceps, triceps, and deltoid muscles. Their edges were refreshed and united with catgut. For relaxation, two deep wire sutures were introduced from without.

FIG. 11.—Congenital club hand, associated with absence of radius and ulna.

The result is fair, according to the last report, fourteen months after the operation.

It may be added that the otherwise well-developed right hand shows a moderately deep constricting furrow near the metacarpophalangeal junction of the middle finger, which did not seem to demand surgical interference.

FIG. 12.—Skiagraph of Fig. 11, showing absence of radius and ulna and of two metacarpi and digits.

Case VII (Fig. 11) is a case of congenital *club-hand*, associated with absence of the radius and ulna. That there are only three fingers is shown by the photograph, and that but three metacarpal bones are present becomes evident by the skiagraph No. 12. The patient is a boy, six weeks of age, born in New York. The family history is good. The parents came here from Italy two years ago. The father is sixty-six and the mother forty-one

FIG. 13.—Formation of thumb from the first metacarpus. (Compare Figs. 11 and 12.)

years old. Both are in good health. There are three previous children, all of whom are well.

The left arm of the boy is normal, with the exception of the thumb, which is partially ectrodactylic, like the

thumb reproduced in skiagraph Fig. 1. I attempted to improve this deplorable condition by creating a thumb after the principles carried out in Case VI. For this purpose a dorsal incision was made first, down to the first metacarpal bone, which I divided longitudinally, thus making a kind of bifurcation. The phalangeal end was severed entirely, but the carpal end, after being fractured longitudinally, was left in slight connection with the metacarpal bone. Thus a new bone was obtained, which was surrounded by dorsal as well as palmar flaps. There was little trouble during the after-treatment. How far this new fourth finger can be utilized cannot, of course, yet be known, the child still being under treatment. The skiagraph Fig. 13 shows its position.

The treatment of the club-hand will be attempted later on. Reginald H. Sayre (A Contribution to the Study of Club-hand, *Transactions of the American Orthopædic Association,* 1893, page 208) has obtained very good results in correcting club-hand by resection.

Case VIII, which was observed before the discovery of the Röntgen rays, may be added in view of its rarity. It represents congenital absence of the arms and forearms (Fig. 14), the head being fairly well developed. The patient, a boy, born in New York, was ten months old

FIG. 14.—Congenital absence of arms and forearms.

when the photograph was taken. The parents came here from Germany fifteen years before the birth of the child. Both are fairly well, but poorly nourished. One sister died from meningeal tuberculosis. Two brothers and one sister are alive and healthy. The patient died from dysentery when one year old.

It may be noticed that not one of these eight deformed children was born of American parents.

The operative procedures recommended must, of course, be done under the most rigid aseptic precautions.

THE MENTAL DISEASES OF CHILDHOOD.

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DIFFERENT authors have made various attempts to classify in a satisfactory manner the different epochs and periods of a child's life from birth to adolescence. Christopher, in an article in the *Child Study Monthly,* 1897, calls attention to three critical periods in a child's life: First, infancy (the first three years), with the gastro-intestinal tract as the place of least resistance; second, the fatigue period (seven to nine years), when fatigue occurs most readily, when the heart is most liable to be injured, when "general laziness" and certain other characteristic symptoms occur; third, the period of puberty (twelve to fourteen years).

So far as concerns the maldevelopment or diseases of the brain and nervous system, the first period is chiefly associated with the appearance of idiocy and the more gross nervous symptoms, principally of a motor nature, such as convulsions, muscular twitching, or possibly paralysis. In the majority of cases these nervous symptoms are due directly to trouble in the gastro-intestinal tract or to allied conditions of faulty nutrition, such as rhachitis.

So great are the dangers of any mistakes in the feeding of infants that even the most ignorant parents make some efforts to follow the advances of medical knowledge in dietetics, and pay close attention to the food given during the first years of infancy. But when the child begins to attend school, the close attention paid to diet and hygiene is relaxed, and the first real strain on the child's nervous system begins. These two reasons make this "fatigue period" of from seven to nine years no artificial distinction, but a genuine factor in the evolution of the neurotic child.

The nutrition of a child is not an unvarying or constant factor. Digestion itself varies with the condition of the stomach, the food, and the exercise of the child, and these in their turn are modified in their effect by the weather, the season, and domestic economy. Growth may be expressed in height or weight or, in the terms of histology, may chiefly exert itself on the development of muscle, bone, or fat or in the more indefinite physical and mental activities.

A careful study of the "fatigue period" emphasizes the fact that the growth of the child, both mental and bodily, is more or less rhythmical in its nature. Some authors have devoted much attention to this periodical, or rhythmical, element in ways that often seem rather fanciful, and yet the underlying fact is undeniable. The development of the whole body, as well as of each individual organ, takes place with continual alternation of activity and rest. Every extensive intellectual advance corresponds with a retrogression in bodily relations. Strong advance in one intellectual activity carries with it

corresponding depression of other internal activities. External and internal causes hasten or retard the periodical recurrence of action and reaction. Siegert, in a study of this subject, has pointed out that such periods occur in the first year of school life, again in the third and fourth years, and later in the sixth or seventh year of school.

As a result of such a period of retrogression, the following symptoms may occur: Fatigue, dulness, carelessness of all sorts in work, slovenliness, and a general reversal of the ordinary characteristics of the child.

In the earlier period of infancy the usual disturbances of the nervous system are largely motor. In an infant of neuropathic organization the convulsive movements or general eclampsia may readily occur, the tendency to which may persist to later life as epilepsy. The onset of the acute infectious diseases of childhood is marked in many cases by a convulsion. Not only this convulsion, but the fever that follows it, is dependent to a large extent on the impressible nervous system. In many children an elevation of a few degrees of temperature is always followed by a delirium, often quite out of proportion to the height and duration of the fever. This may be called the earliest tendency to acute mental disturbance to be seen in childhood, indicating the same degree of instability of the higher brain centres that the convulsion shows of the lower brain or spinal centres. It is usually considered a definite stigma of a degenerate heredity to react in this way.

In the "fatigue period" (seven to nine years), in place of the tendency to convulsions, a different set of motor symptoms appear, such as twitching of single muscles or groups of muscles, of which the choreiform movements are the most familiar type. Chorea and the tics and certain other rarer conditions showing similar movements, but more purely reflex in their nature, occur at this time. Some, like tetany, are caused by infection; others are more distinctly hereditary. The minor degrees of choreiform movements are not so very different from the movements of simple restlessness of a child, which school teachers note are always increased near the close of school hours on cloudy days, in the spring, and when the child has been without exercise. All through infancy and during the earlier years of childhood, purely sensory symptoms are rather rare, with the exception of occasional headaches or pains of a more or less reflex nature.

The uncertainty of the sensory symptoms of a young child are familiar to any one who has tried to trace to their source the reflex sensory disturbances that occur so frequently in children. Nocturnal enuresis, the symptoms due to intestinal parasites, adenoids, enlarged tonsils, eye-strain, and the earlier forms of masturbation are often sensory in their nature, though the reflexes caused by them are chiefly motor. Perhaps the earliest sign of temporary or permanent sensory weakness in the nervous system of a child is failure to sleep properly, sleep in a baby standing next only to nutrition in its effect on the health and development of the child. After early infancy has passed, the study of sleep becomes even more interesting.

While most of the mental faculties characteristic of adult man are present before the third year, it is the exaggeration of some mental faculties and the slight development of others that distinguish a child psychologically from an adult. Imagination during early childhood will be at its highest point. Not only such individual mental characteristics as fear, love, selfishness, vanity, generosity, jealousy, grief, or anger may be strongly developed, but the most rapid variations from one to the other may occur and are certainly not pathological. In its play, a child's imagination stops little short of hallucination. These mental traits may be brought under control to some extent as the months pass by, but it is curious to note how the earlier traits reappear during sleep, especially in nightmare and mild delirium. A child who is fearless by day may become frantic with fear by night. Free as the imagination may be by day, at night it often seems to run wild with all sorts of queer ideas and fancies. Given the toxæmia of a poorly digested meal or a little fever, and this superexcitability of the brain and special senses becomes very marked. In a child with a definite neurotic heredity, nocturnal delirium is caused by the slightest febrile disturbance, just as convulsions easily occur in younger children of the same sort under the same conditions.

Pavor nocturnus, or night terrors, though not associated with an elevated temperature, in many cases may be said to be the relic of some previous febrile delirium as a sort of brain habit, just as the convulsion recurs from habit in some children after a first attack. Pavor nocturnus may be considered, like the temporary delirium of a degenerate child and the mental disturbances from intoxication already referred to, as the type of transitory psychosis to be met with during early childhood.

The causes of night terrors are numerous. Their close relation to abnormal conditions of the nasopharynx are emphasized by authorities on the nose and throat, who lay stress on adenoids and enlarged tonsils as ætiological factors in most of these cases. But these abnormities of the lymphatic tissues are usually closely dependent on the narrowed, deformed palate so common in the degenerate child. The relation to epilepsy and mental weakness is evident in many cases. Some authorities believe that pavor nocturnus is really a transitory hallucination of sight due to increased irritation of the brain cortex. It may be a loss of the higher functions and an exaltation of the lower cerebral functions. Soltman believes the visual hallucinations indicate over-activity of the central sensory areas, such as the pulvinar of the optic thalamus, the corpora geniculata and quadrigemina, or the cortex of the occipital lobe and optic tract.

The following case of pavor nocturnus indicates the variety of ætiological factors that may exist:

CASE I.—Michael McN., aged twelve years, treated at the Demilt Dispensary in 1897 and occasionally since. His father was alcoholic. He had a convulsion when eleven months old. He has had a slight left hemiplegia since the convulsion, only perceptible at the present time from slight spasticity and weakness of the arm. From eight to twelve years of age he suffered from night terrors, occurring two or three times a week. He wakes up with a scream and seems to have had a dream or a vision. He gets up and walks around in a somnambulistic condition, from which it is difficult to rouse him. He has occasionally attacks of morbid fear by day. Without any noticeable exciting cause, this condition develops, lasts a few minutes, and then disappears. In physical condition he is anæmic, thin-chested, the physical examination being negative. Examination of the eyes shows hypermetropia and astigmatism. Appetite poor. In this case there is a strong hint of an epileptic history in which, as a result of the old condition of hemiplegia, occasional mental attacks of an epileptic nature are substituted for the ordinary motor convulsion. The most common causes of pavor nocturnus were absent in this case. Treatment by iron and a little bromide would promptly stop the symptoms, which occasionally returned whenever the boy became overworked. In the subsequent history attacks of fear by day are noted. He has also had chorea twice. He is practically well at present.

The most common result of over-strain during the fatigue period will be a breakdown in the general health. An average child at this age will show his diminished power of resistance as a rule by succumbing more readily to the infectious diseases. If the motor or sensory neurone is the weakest place, a nervous disease may appear.

The period from seven to eleven has been characterized as the period of coordination of motion and emotion. Chorea, epilepsy, asthma, somnambulism, migraine, myopia, and converging strabismus may be mentioned as neuroses of this period. The period of puberty is the third critical period of a child's life and is of preeminent importance in a study of the development of his nervous diseases. Viewed as a study of personality alone, it is one of the most instructive studies for a psychologist to consider. The mental growth of a child makes no sudden jumps from the time of birth to puberty, though the first eighteen months rapidly develop the majority of the mental faculties to a point at which they can at least be recognized. Without attempting to define consciousness and personality, the fact of personality becomes evident enough in the case of an individual child at an early period. It is not expected that any sudden change will occur in the personality of this child. If it could occur, the condition would be something of the nature of insanity, of which early childhood gives only rarely an example.

In conditions of perfect health the personality is something continuous, uniform to the extent of maintaining an equilibrium. That the ego must change and is always changing, we all realize. Personal identity depends on the states that are fixed being greater and more powerful than the states added to or detached from the stable group. Normal variations are familiar to the self-consciousness of every one. A normal individual may frequently in a single day change from cheerfulness to despondency, and change in a decided way. Such changes are much more frequent in a child. The explanation is that, even in these cases of ordinary variation, the variable parts of the personality have exceeded the normal ratio to the unchangeable parts. The stable elements have been impaired temporarily, but have not disappeared. While it is natural and normal for a child to be happy, as a matter of fact, the opportunities for unhappiness are often greater than in adult life. While real sorrows have not yet been experienced and the struggle for existence has not yet begun, this variation of temperament and of personality itself is more rapid and frequently repeated than in an adult. The stable part of the mind has not yet been fixed; the variable is the chief factor and is controlled only by the discipline of home and school and whatever inherited power of self-control may exist. During the fatigue period these variations of the personality are often marked, but do not, as a rule, persist for any length of time. But when for any reason this temporary change of personality becomes fixed and persists, a new mental and physical condition has developed. Such a sudden and permanent change is physiological at one period of life only, and that is during the period of puberty. At an earlier and a later period a rapid change of personality which persists is pathological, and may rightly be termed a psychosis or mental derangement. The mental changes of the period of puberty are not less marked than the physical. The period of early infancy, when the personality of the young infant is related to nutrition with its original comfort and discomfort, desires, and aversions, has passed. The slow, almost imperceptible growth of all that pertains to personality has been going on from year to year. At puberty a new group of sensations, emotions, and ideas is developing. This afflux of unaccustomed psychical states tends to modify profoundly the constitution of the ego. It feels undecided. The minor variations of the earlier years become more frequent and pronounced. Latent discontent is felt, and discomfort, the cause of which is unknown. Gradually the new elements are assimilated by the old ego, and enter into it, but at the same time make it different. The ego has changed, a partial alteration of the personality has been accomplished, the result of which has been to constitute a new type of character, the sexual character. The most common traits of this period may be summed up as follows: 1. Frequent and causeless change of moods. 2. Expression of "Weltschmerz," or universal mental depression, during the jolliest hours. 3. Sudden changes of the habitual line of thought or incoherence of normal

thought. 4. Talkativeness, echolalia, mimicry, and extravagance. 5. Impulsiveness in action. 6. A sense of exaltation and ambitious delusions of greatness alternating with feelings of depressive unworthiness. In a child with poor heredity and unhygienic surroundings the period of puberty is almost certain to develop some organic or functional disorder. Among the organic troubles associated with this period may be mentioned chlorosis, menstrual defects, certain skin diseases, such as acne, hay fever, acute rheumatism, tuberculous disease, and arrested or excessive growth; of nervous diseases, epilepsy, chorea, and hysteria; of moral or temperamental changes, incompatibility of temper, perversion of the moral sense, unfounded aversion to relatives or friends; of mental diseases, certain psychoses which we will study in detail later.

A close analogy exists between the normal mental characteristics of the period of puberty and the symptoms of hysteria. Hysteria not only occurs fairly frequently in childhood, but it is one of the expressions of the fatigue period and later of the period of puberty and adolescence. While the motor and sensory symptoms of hysteria are so common as to be pathognomonic, the mental symptoms are perhaps even more constant in their presence. Loss of will power, or perverted will power, is more frequently an evidence than the classical sensory stigmata of hysteria so much emphasized in adults. Loss of normal inhibition underlies mental and bodily symptoms alike. Apart from the more familiar motor, sensory, and mental symptoms of hysteria, the following symptoms of a mental nature are sometimes seen and were described first by Henoch: 1. Complete or partial loss of consciousness, sometimes as a fainting fit, sometimes akin to somnambulism. 2. Attacks of drowsiness of long duration. 3. Delirium, including pavor nocturnus. 4. Hallucinations and morbid ideas of various sorts, especially of a religious nature. 5. Catalepsy, consciousness being suddenly lost or weakened, the child standing with a fixed or staring look or gradually sinking down. This is a condition closely allied to *petit mal* or the dream state. 6. Mental symptoms alternating with such motor symptoms as hysterical convulsions or stamping on the ground or other movements expressing passion; hysteria major, or hystero-epilepsy. 7. Mental and sensory symptoms combined. Severe headache and pains in various parts of the body, or zones of hyperæsthesia.

Innumerable as the variations of hysteria in childhood seem to be, these mental symptoms, admitting the rarity of some of them, are of decided importance because they represent certain mental conditions which parents and medical advisers might easily mistake for genuine insanity. It is to emphasize the comparatively innocent nature of many of these psychoses of childhood that the condition needs emphasis. The following cases illustrate this:

Case II.—H. R., aged twelve years, was attending, at the time I saw him, a small private school and later a large boarding school for boys. When thirteen years old he became subject to mental depression and had frequent crying spells. He said that the other boys hated him. He accused himself and others of what might be interpreted as masturbation. He was unwilling to mingle with the other boys, and misinterpreted their casual remarks as cruel or insulting. He had at times choreiform movements, but never genuine chorea. His letters home were filled with the most heart-rending statements of his misery, but his family found that he was greatly exaggerating the relations between himself and the other boys. This general condition lasted two years and finally disappeared. The family history was as follows: His father was a brilliant man of business, of poor health (probably tuberculous), and had been subject to attacks of mental despondency at about the same age that his son had it. In both father and son the mental condition never returned. In every other respect the family history was negative. The boy had no symptoms or stigmata of degeneration, except a certain amount of eccentricity.

This case is to be classified as a definite psychosis of puberty. It certainly was characterized by a temporary change of personality of the type already described. Hysteria could only be a sufficient diagnosis in the sense of the mental variety of hysteria. But it is well to note that most of his symptoms were merely an exaggeration of the physiological symptoms of puberty. The prognosis was fairly good instead of gloomy.

The next case is somewhat similar.

Case III.—Sidney G., aged thirteen years, treated in the Demilt Dispensary in 1898. Heredity negative. Typhoid fever and diphtheria several years before. In April, 1897, he was treated for restlessness, attacks of crying, anæmia, and insomnia. He had masturbated and would talk in an obscene way before his mother. He complained that the other boys abused him. Later, he complained of headache, pains and ringing in his ears, and mental depression. He cried frequently, because he believed "everybody was making fun of him." He was hyperæsthetic and had a sensation of globus and "ovarie." He had grown taller and was more reserved in his manner than at first and would not own up to former bad habits. He had slight choreiform movements. He recovered completely after six months.

This case belongs to the same class of cases of mental changes of the period of puberty. It is more distinctly of the nature of hysteria than the previous one.

In sharp contrast to these cases of a more or less hysterical nature, characteristic of the period of puberty, and representing simply an exaggeration of the physiological symptoms of the period, the following case is of interest as representing a type of genuine insanity:

Case IV.—Walter B., aged fifteen years, treated at the Demilt Dispensary in 1897. His father has melancholia and at the time of this history was confined in an asylum. His brother was under treatment for some form of mental trouble. Walter had attended school until the previous month, when he began to act queerly. He had been growing rapidly and gave a history of mas-

turbation. When first seen, he was suffering from a partial loss of memory and was violent at times. He had a little fever and chilly sensations occasionally. When seen at his house, a few days later, he had become violent and tried to "knife" some one of the family. He was sent to an insane asylum, where he recovered in a week. He suffered later from headache, vertigo, and poor eyesight. Physical examination showed a high-arched palate, adenoids, thick ears, large hands and feet, and a narrow forehead.

This case is a typical example of an acute mental trouble in a boy who was of a distinctly degenerate type, with a definite family history of insanity and marked stigmata. His mental derangement was closely connected with the coming of puberty. There was possibly a malarial element, which may have been an exciting cause. Note how easily his will power was overcome by an insane homicidal impulse. Definite fixed ideas were not found.

In this case the dangerous heredity is the important ætiological factor. It will certainly render him liable to insanity whenever he is exposed to the ordinary strain of minor sickness, overwork, or mental worry. Such cases of insanity may be produced at the period of puberty if the heredity is bad and if to the heredity is added anæmia, mental or bodily strain, acute infection, or sexual excess. Nearly all known psychoses may occur during this period, the dementia hebephrenica of Kahlbaum being the only form occurring exclusively at puberty and adolescence. This is a form characterized by a change of superficial emotional conditions, beginning with mental depression, followed by odd, fantastic delusions, eccentric, silly behavior, and intense motor activity, and resulting often in a rapid or gradual passage into chronic dementia or into the condition of catatonia. Frequently the ordinary types of insanity that may occur at this time are strongly tinged or modified with a coloring of hebephrenia.

Of genuine acute psychoses occurring at the period of puberty the following may be mentioned:

1. Melancholia, either simple, passive, or active, with excitement or stupor.

2. Mania, which may be simple, irritable, or of the nature of catatonia.

3. Mental confusion.

4. Hallucinatory madness, hallucinations being possible even in a young child, because sensory impressions become early fixed.

The following progressive psychoses occur:

1. Dementia of puberty (dementia hebephrenica).

2. Simple precocious dementia.

3. Very rarely, general paresis.

Of psychoses resulting from mental degeneration, there are:

1. Paranoia, which is very rare because delusions cannot appear in a child until systematized concepts or logical thought begins.

2. Periodic insanity, intermittent or circular, which is more common.

3. Phobias, obsessions, and *folie du doute,* which are not uncommon.

4. Kleptomania and dipsomania.

5. Sexual aberration.

6. Impulsive insanity; imperative conceptions, suicidal or homicidal.

7. Moral insanity.

There are also the following combined psychoses or neuropsychoses:

1. Neurasthenia, more especially cerebral neurasthenia.

2. Hypochondria, most commonly of a sexual nature.

3. Hysterical insanity.

4. Choreiform insanity (the mental equivalent of chorea).

5. Epilepsy appearing as a chronic psychosis or a spasmodic dementia, or an acute psychosis as the psychical equivalent of epilepsy.

Lastly, there may be psychoses by intoxication, either of the nature of (1) auto-intoxication, (2) intoxication following infectious disease, (3) alcoholic intoxication.

In closing, it will be well to emphasize that insanity is rare before adolescence, but that the less pronounced psychical disturbances that occur in young children are often the first manifestation of a train of symptoms that are to end only at the development, some years later, of one of the definite clinical forms of adult insanity. There is no sharp dividing line between the symptoms of a neuropathic child and a psychopathic adult.

Symptoms and diseases of a mental nature are better understood by one who has made himself thoroughly acquainted with the special physiology and psychology of a child or adult than by one who limits his knowledge to the elaborate classification of the clinical forms of insanity met with in the text-books.

28 West Sixty-first Street.

Therapeutical Notes.

For Toothache.—Under the name of Swedish toothache drops, the *Ohio Dental Journal* for June quotes the following from the *Oesterreichische Zeitschrift für Pharmacie* of unnamed date:

℞ Clove oil,	of each	10 parts;
Cajeput oil,		
Chloroform,	of each	5 "
Acetic ether,		
Menthol		3 "
Camphor		1 part.

Dissolve. For application to the tooth.

THE

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THE OLIVER WENDELL HOLMES OF THE MIDDLE AGES.

AT first sight it may seem far-fetched to liken Rabelais to the Autocrat of the Breakfast Table, but the feeling of incongruity will subside, we think, on a little reflection. Rabelais, though originally trained for a monastic life, and though he finally resumed ecclesiastical work and died a curate, was much attracted to medicine early in his career. After his suspension from a monastic order he studied medicine regularly, was admitted into the profession, and became a lecturer in the faculty of Montpellier. That he took up medicine not in a spirit of dilettanteism, but as a subject to which he genuinely bent his energies, is abundantly evident from Dr. Flint's account, published in this issue of the *Journal*, of his remarkable conceptions concerning certain physiological problems; and it is further evident from his zeal in mitigating the physical ills of his flock after his resumption of clerical duties.

Holmes, too, did not forsake medicine. Though he was a practitioner for but a very short time, he made several notable contributions to the advance of medical knowledge, and he continued as a professor in the Harvard Medical School until he was an old man. Truly, when once the study of medicine has thrown its charm around a man of parts, he never deserts it. Neither Rabelais, the greatest humorist of France, nor Holmes, the prince of American humorists, ever ceased to study medicine. And it is not a little remarkable that in their humorous writings each of them should have dealt with medical matters at times.

Of course, we have all known in a general way that Rabelais was a physician, but few of us, if any, have had the slightest conception of the depth of his thought in physiology, and the profession as a whole stands indebted to Dr. Flint for his very clear exposition of the facts, founded as it must have been on laborious and painstaking research. It is a notable contribution to the history of medicine.

ARSENIC AS A STIMULANT OF NUTRITION.

THE recent great "epidemic" of chronic arsenical poisoning in England has at least served the good purpose of supplying a large field for the study of the effects of arsenic on healthy persons, and the literature of the drug has in consequence been notably enriched. Among the articles that have appeared, we recall none more valuable than that contributed to the April number of the *British Journal of Dermatology*, by H. G. Brooke, physician to the Manchester and Salford Hospital for Skin Diseases, and Leslie Roberts, honorary dermatologist to the Liverpool Royal Infirmary. These gentlemen deal with the subject systematically, and their article is well worthy of careful study in its entirety. Except for one aspect of it, that in which the action of arsenic on nutrition is considered, our restricted space forbids our attempting to summarize it, although we may call attention to two general statements of interest, namely, that female patients predominated among those who sought hospital treatment, although the women of the lower laboring class in the district consume less beer than the men of the same class, which tends to show that women are more susceptible than men to the action of arsenic; and that the poisonous effects upon the nervous system and those upon the integument were rarely well marked in one and the same individual.

As to the action of arsenic on nutrition, the authors think it stimulates that of certain cells beyond their capability of endurance, so that they perish. They think their observations afford strong evidence in support of the view, put forth by Binz and Schulz, that the physiological effects of arsenic are due to the development of ozone within the system. The arsenic-eating habits of many of the Styrian Highlanders, they remark, afford an excellent instance of the tolerance of arsenic by man. The drug is said to improve the complexion of the women and to maintain the strength and spirits of the men under severe physical exertion. In countries where arsenic is found native, they point out, it has long been customary to administer white arsenic to horses with their food, and, so it is stated, with much benefit to their coats and their general condition. It is added that sheep are reputed to be very tolerant of arsenic. Arsenic kills some micro-organisms, but to others it seems to impart new life. The writers mention the readiness with which

mould fungi grow in a solution of potassium arsenite, a fact which has led to the addition of spirit of lavender in the official preparation. They point also to Giess's observation that young rabbits to which small amounts of arsenic were administered regularly grew to an extraordinary size. The restorative properties of arsenic in certain nervous derangements are well known, and perhaps it may find a place in therapeutics as an actual restorer of tissue elements.

SCARLET FEVER IN THE CAT.

OUR attention is being drawn more and more in recent years to the lower animals as disseminators of infectious disease. Although most writers on comparative pathology doubt the existence of scarlet fever in the cat, observations are occasionally put on record that would lead one to think these authors in error. One of the arguments put forward by the skeptical is this: The domestic cat comes into such intimate contact with its human companions that, if it were susceptible to the disease, it ought often to become its victim. But, says Dr. E. Rapin (*Progrès médical,* May 4th), it may well be that scarlet fever occurs frequently in the cat, but is not recognized. The most noticeable manifestation of the disease in this animal, according to M. Rapin, is loss of the hair. Now, almost everybody regards a cat that is losing its hair as "mangy" and to be got rid of as soon as possible; therefore cats that lose their hair in consequence of scarlet fever are lost sight of without any adequate observation of them having been made. Furthermore, he argues, it may be that only very young kittens are susceptible.

M. Rapin states that in 1894 he showed at a meeting of the Medical Society of Geneva a little white kitten that he believed to be in the desquamative stage of scarlet fever. It was only a few weeks old, and it belonged to a family in which it had been the inseparable companion of two little girls who were suffering from the disease. It was soon seen to be very sick, and for three or four days it gave incessant little plaintive cries and was manifestly feverish, its body being of a burning heat, its skin rosy, and its tongue of a bright red. But the author's attention would not have been attracted to the poor little animal but for its abundant loss of hair, which was much the most pronounced on the posterior parts, so that at one time the kitten looked like a miniature lion. The exposed epidermis looked branny, but there was no positive exfoliation. This kitten finally died.

If we accept the theory that the cat may have scarlet fever, it seems we must admit that in some instances the new growth of hair that takes place after recovery is of much finer appearance than the original coat. M. Rapin tells us that he once found in the room of a patient to whom he had been called a black and white cat with long and abundant hair of striking beauty. Upon his commenting on the fact, the mistress of the house said: "He took on that fine look after his scarlet fever." And she then gave him the history of her little girl's having had the disease and of the cat's having been evidently ill, and subsequently lost its hair. In this instance the process of desquamation ran a course of several weeks' duration.

In the light of such accounts as these, it may be well for practitioners to be on the lookout for "mangy" kittens in families in which there has been scarlet fever. If such kittens are found, it would be interesting to observe what happens to them and to endeavor to inoculate other kittens from them. But the most important point would be, of course, to prevent them from conveying the disease to susceptible human beings.

THE MUSTARD BATH IN FUNCTIONAL CYANOSIS OF THE NEW-BORN.

IN all probability many a practitioner has resorted to the mustard bath in cases of sudden depression in infants, from whatever cause. Cyanosis, with death imminent, to all appearances, is an accident that sometimes happens to a new-born infant, and that, too, in the opinion of Dr. Adrien Besson, without atelectasis of the lungs or other organic disease. At a recent meeting of the Lille Anatomoclinical Society (*Journal des sciences médicales de Lille,* May 11th) he reported three cases in which the mustard bath had proved promptly efficient and the dangerous condition had not recurred. It is always well to bear simple remedies in mind.

OUR SUBSCRIBERS' DISCUSSIONS.

IN our last issue we published a number of answers to our first monthly prize question, What is the best way of treating the stump of the umbilical cord? By the wide attention paid to the question, as well as by numerous letters that we have received from subscribers, we are assured of the great interest felt in this new department of the *Journal.* The other questions already announced are as follows: What is the best way of prescribing calomel as a purgative (answers due July 10th)? and, How do you treat Colles's fracture of the radius (answers due August 12th)? The following additional question is now announced: Which form of vaccine do you prefer, dried lymph or "glycerinated" lymph? Give your reasons without mentioning producers' names. Answers to this question should reach us on or before September 9th. The conditions of the competition were stated in our issue for May 4th, on page 774, in an article headed Special Notice to our Subscribers.

News Items.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera and plague, were reported to the surgeon-general during the week ending June 22, 1901:

Small-pox—United States and Insular.

San Francisco, California	June 2-9	1 case.	
Key West, Florida	June 5	1 case.	
Chicago, Illinois	June 8-15	4 cases.	
Evansville, Indiana	June 8-15	1 case.	
Michigan City, Indiana	June 10-17	2 cases.	
South Bend, Indiana	June 8-15	1 case.	
Clinton, Iowa	June 8-15	1 case.	
Wichita, Kansas	June 8-15	3 cases.	
Lexington, Kentucky	June 8-15	1 case.	
New Orleans, Louisiana	June 8-15	11 cases.	
Fall River, Massachusetts	June 8-15	1 case.	
New Bedford, Massachusetts	June 8-15		3 deaths
Worcester, Massachusetts	June 8-15	8 cases.	2 deaths
Detroit, Michigan	June 8-15	33 cases.	1 death
Sault Ste. Marie, Michigan	June 16	Prevalent.	
Minneapolis, Minnesota	June 8-16	17 cases.	
Winona, Minnesota	June 8-15	1 case.	
St. Louis, Missouri	June 2-9	37 cases.	1 death
Omaha, Nebraska	June 8-15	12 cases.	
Manchester, New Hampshire	June 8-15	6 cases.	
Jersey City, New Jersey	June 8-16	2 cases.	
Newark, New Jersey	June 8-15	3 cases.	
Plainfield, New Jersey	June 8-15	1 case.	
New York, New York	June 8-15	102 cases.	11 deaths
Yonkers, New York	June 7-14	5 cases.	
Cincinnati, Ohio	June 7-14	5 cases.	
Cleveland, Ohio	June 1-15	45 cases.	
Dayton, Ohio	June 8-15	1 case.	
Toledo, Ohio	June 8-15	1 case.	
Portland, Oregon	May 1-June 5	23 cases.	
Philadelphia, Pennsylvania	June 8-15	3 cases.	1 death
Pittsburgh, Pennsylvania	June 8-15	2 cases.	
Providence, Rhode Island	June 8-15	3 cases.	
Memphis, Tennessee	June 1-15	26 cases.	2 deaths
Nashville, Tennessee	June 8-15	1 case.	
Salt Lake City, Utah	June 8-15	9 cases.	
Rutland, Vermont	June 8-15	1 case.	
Hoquiam, Washington	June 10	1 case.	
Wheeling, West Virginia	June 8-15	1 case.	
Green Bay, Wisconsin	June 8-16	6 cases.	
Milwaukee, Wisconsin	June 8-15	3 cases.	1 death
Manila, Philippines	Apr. 20-May 11.	18 cases.	

Small-pox—Foreign.

Prague, Austria	May 25-June 1	4 cases.	
Antwerp, Belgium	May 25-June 1	2 cases.	
Colombo, Ceylon	May 4-11		5 deaths
Hong Kong, China	Apr. 26-May 11.	5 cases.	2 deaths
Panama, Colombia	June 3-10	6 cases.	
Paris, France	May 25-June 1		10 deaths
Gibraltar	May 24-June 2	1 case.	
Glasgow, Scotland	June 1-7	35 cases.	1 death
Liverpool, England	May 25-June 1	2 cases.	
London, England	May 25-June 1	1 case.	
Bombay, India	May 14-21		8 deaths
Calcutta, India	May 11-18		31 deaths
Karachi, India	May 12-19	4 cases.	2 deaths
Madras, India	May 4-17		22 deaths
Messina, Italy	May 25-June 1		1 death
Naples, Italy	May 26-June 2	169 cases.	30 deaths
Moscow, Russia	May 18-25	25 cases.	1 death
St. Petersburg, Russia	May 18-25	15 cases.	
Warsaw, Russia	May 11-18		4 deaths
Corunna, Spain	May 25-June 1		1 death
Singapore, Straits Settlements	Apr. 1-30		3 deaths
Geneva, Switzerland	May 18-25	5 cases.	
Beirut, Syria	May 18-25	A few cases.	

Yellow Fever.

Havana, Cuba	June 1-8	1 case.	

Cholera.

Bombay, India	May 14-21		3 deaths
Calcutta, India	May 11-18		77 deaths
Madras, India	May 4-17		6 deaths

Plague—Insular.

Cavite, Philippines	May 2	1 case.	
Cebu, Philippines	May 2	1 case.	
Manila, Philippines	Apr. 20-May 11.	94 cases.	79 deaths
Santa Rosa, Philippines	May 2	1 case.	

Plague—Foreign.

Cape Town, Africa	May 4-18	463 cases.	209 deaths
Hong Kong, China	Apr. 27-May 11.	11,221 cases.	209 deaths
Bombay, India	May 14-21		224 deaths
Calcutta, India	May 11-18		79 deaths
Karachi, India	May 12-19	149 cases.	144 deaths

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the Seven Days Ending June 20, 1901:

BROWN, B. J., JR., Acting Assistant Surgeon. Granted leave of absence for fourteen days from June 20th.

CORPUT, G. M., Assistant Surgeon. Relieved from duty at the port of St. Louis, June 18, 1901. The leave of absence for one month, granted by the Bureau telegram of May 15th, is amended so that said leave shall be for twenty-one days only.

GARDNER, C. H., Passed Assistant Surgeon. Granted leave of absence for seven days from June 21st.

GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Granted leave of absence for two days.

MOORE, DUNLOP, Assistant Surgeon. To proceed to Port Townsend, Washington, and assume temporary charge of the service during the absence of Passed Assistant Surgeon C. H. GARDNER.

PECKHAM, C. T., Surgeon. Granted extension of leave of absence, on account of sickness, for thirty days from June 20th.

SCHLAAR, W. F., Hospital Steward. Relieved from duty in the Hygienic Laboratory, and directed to proceed to Key West, Florida, and report to the medical officer in command for duty and assignment to quarters.

SCOTT, E. B., Hospital Steward. Granted leave of absence for twelve days from June 24th.

WOODWARD, R. M., Surgeon. Granted extension of leave of absence for three weeks from June 5th.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending June 22, 1901:

FURLONG, F. M., Assistant Surgeon. Detached from duty at Guam and ordered to the *Solace* for transportation home.

KERR, D. B., Assistant Surgeon. Detached from the *Vicksburg* and ordered to the *Culgoa*, and to wait orders *en route*.

MCCLANAHAN, R. J., Assistant Surgeon. Detached from the *Culgoa* and ordered to the *Vicksburg*.

STOKES, C. F., Surgeon. Ordered to the *Solace*, upon arrival in the United States.

TOLFREE, H. M., Assistant Surgeon. Appointed assistant surgeon from June 14, 1901.

WILLIAMS, R. B., Assistant Surgeon. Ordered to the *Kearsarge*, June 24th.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending June 22, 1901:

DISEASES.	Week end'g June 15		Week end'g June 22	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever	28	8	60	4
Scarlet Fever	466	40	362	34
Cerebro-spinal meningitis	0	4	0	2
Measles	270	8	271	9
Diphtheria and croup	244	39	239	42
Small-pox	102	11	60	20
Tuberculosis	243	141	255	155

Changes of Address.—Dr. Louis A. S. Bodine, from New York to Moriches, N. Y.; Dr. H. A. Slocum, to No. 1900 Chestnut Street, Philadelphia.

Commencement Exercises.—The thirtieth annual commencement exercises of Trinity Medical College, Toronto, were held on June 1st at the University of Illinois Medical School. One hundred and sixty young physicians graduated on May 28th.——The annual commencement of the medical department of the National University, at Washington, D. C., was held on June 7th. There were eleven graduates.——The third annual commencement of Cornell University Medical College, New York, was held on June 5th. There were twenty-six graduates, of whom fourteen were women.

No Exemption of Taxes on Liquor Sold or Given Away in a Hospital.—The Comptroller of the Treasury has approved the decision of the Auditor for the Treasury declining to grant a refund of $62 paid by the German Benevolent Society of San Francisco as taxes and penalty on the business of a retail liquor dealer, under the war revenue act. The Commissioner of Internal Revenue recommended the refund, and transmitted his recommendation to the auditor, taking the position that the German Benevolent Society conducted a hospital for sick members of the society. He held that it was not a private institution conducted for pecuniary benefit, but a public institution founded and conducted for the general good. It was admitted that wines and liquors were given patients, and in cases charges were made therefor. In passing upon the question the comptroller says that the statute defines a retail liquor dealer as "every person who sells or offers for sale" liquors. It makes no exceptions of hospitals or charitable institutions.

A Health Official Indicted.—Dr. Obed. L. Lusk, deputy sanitary superintendent of the health department in the borough of Queens, was indicted by the Queens County Grand Jury on June 19th on a charge of neglect of duty. The indictment was based on the death of John Charlton of hæmorrhagic smallpox at Woodside on May 4th. Charlton's body was left in his apartments, which were in a thickly populated tenement house, for fifty-two hours after death. When the body was finally taken away in an open wagon, his family were driven homeless into the street. It was said that Charlton was ill for several days and that his case was reported to the health authorities, but he was not removed and died while his wife and children stood around his bed, hungry and ill. Besides the indictment against Dr. Lusk, the Grand Jury made a presentment to Justice Maddox, severely criticising the methods in vogue in the Queens health office and demanding that the board of health take immediate steps to stop the scandal in Queens.

The Livingston County (N. Y.) Medical Society has elected the following officers: President, Dr. E. C. Perry; vice-president, Dr. Burt; secretary, Dr. E. A. Sharp; treasurer, Dr. G. G. Jones.

The Clinton County (Ill.) Medical Society recently elected the following officers: President, Dr. W. P. Gordon; vice-president, Dr. T. Gaffner; secretary, Dr. M. Broening; treasurer, Dr. P. H. Leibrick.

The Otsego (N. Y.) Medical Society recently elected the following officers for the ensuing year: President, Dr. A. W. Cutler; vice-president, Dr. A. J. Butler; secretary, Dr. H. W. Boorn; treasurer, Dr. James Burton.

The Dorchester (S. C.) Medical Association has organized by electing the following officers: President, Dr. P. L. Horn; vice-president, Dr. F. Julian Carroll, of Summerville; secretary, Dr. J. B. Johnson; treasurer, Dr. P. M. Judy.

The Buffalo (N. Y.) Academy of Medicine.—The following officers were elected at the recent meeting of the Buffalo (N. Y.) Academy of Medicine: President, Dr. Charles G. Stockton; secretary, Dr. Francis W. McGuire; treasurer, Dr. Charles S. Jewett; trustee, Dr. M. D. Mann.

The Westchester County (N. Y.) Medical Society, which is now nearly 103 years old, has elected the following officers: President, Dr. P. A. Callan, of Yonkers; vice-president, Dr. R. T. Irvine, of Ossining; secretary, Dr. Daisy M. Orleman, of Peekskill; treasurer, Dr. R. T. Howe, of Mount Vernon.

The Harlem Medical Association, at its meeting on June 10th, elected the following officers: President, Dr. Joseph E. Lumbard; vice-president, Dr. Edmund L. Cocks; secretary, Dr. W. H. Luckett; treasurer, Dr. W. H. Stewart; trustees, Dr. Montrose R. Richard, Dr. Henry J. Wolf, and Dr. Henry W. Mooney.

The St. Charles County (Mo.) Medical Society has elected the following officers: President, Dr. A. W. Kennison, of O'Fallon; vice-president, Dr. J. T. Evans, of Wentzville; secretary, Dr. A. A. Gossow, of St. Charles. The next meeting will be held in St. Charles on November 9th.

The Society of the Alumni of St. Mark's Hospital.—At a recent meeting of the society the following officers were elected for the ensuing year: President, Dr. Nicholas R. Dann; vice-president, Dr. Conger F. Smith; treasurer, Dr. Ephraim K. Browd; secretary, Dr. Harry G. Watson.

The American Association of Life Insurance Examining Surgeons, at its second annual convention, elected the following officers: President, Dr. James H. Powell, of Chicago; vice-president, Dr. J. H. Reed, of Battle Creek, Mich.; second vice-president, Dr. Talbot Jones, of St. Paul, and secretary-treasurer, Dr. T. A. Stevens, of Caney, Kan.

The Indian Territory Medical Association, at its semi-annual session, elected the following officers for the ensuing year: President, Dr. G. M. West, of Eufaula; first vice-president, Dr. Louis Bagby, of Vinita; second vice-president, Dr. W. E. Harley, of Durant; secretary and treasurer, Dr. Frederick S. Clinton, of Tulsa. The next meeting will be held in Muskogee next December.

The Massachusetts Medical Society celebrated its one hundred and twentieth anniversary in Boston on June 12th. At the business meeting these officers were re-elected: President, Dr. F. W. Draper, of Boston; vice-president, Dr. W. W. Eaton, of Danvers; treasurer, Dr. E. M. Buckingham, of Boston; corresponding secretary, Dr. C. W. Swan, of Brookline; recording secretary, Dr. F. W. Goss, of Roxbury; librarian, Dr. E. H. Brigham, of Brookline.

The Association of Life Insurance Medical Directors has elected the following officers: President, Dr. George S. Shepherd, of Hartford; first vice-president, Edward H. Hamill, of Newark, N. J.; second vice-president, Morris L. King, of New York; secretary, Brandreth Symonds, of New York; treasurer, Frank S. Grant, of New York; executive committee, Edward Curtis, of New York; Oscar H. Rogers, of New York, and Granville M. White, of New York.

The Delaware State Medical Society, at its one hundredth and twelfth annual meeting, elected the following officers: President, Dr. E. S. Dwight, of Smyrna; first vice-president, Dr. Robert Ellegood; second vice-

president, Dr. H. G. Kollock; secretary, Dr. John Palmer, Jr.; assistant secretary, Dr. J. S. Bastian; treasurer, Dr. W. C. Pierce; councillors, for New Castle county, Dr. W. T. Skinner; Kent county, Dr. L. H. Bishop; Sussex county, Dr. W. P. Orr, Jr.

Medical Society of the State of New York.—The president, Dr. Henry L. Elsner, announces the appointment of his business committee for the ensuing year, consisting of Dr. Nathan Jacobson, chairman, 430 South Salina Street, Syracuse; Dr. George Ryerson Fowler, of Brooklyn, and Dr. William C. Krauss, of Buffalo. All letters and inquiries pertaining to papers and scientific communications for the semi-annual meeting, to be held in New York on October 15 and 16, 1901, and the annual meeting, to be held in Albany in January, 1902, should be addressed to the chairman.

The British Congress on Tuberculosis.—The American representative at the British Congress on Tuberculosis, which will be held in London during the week of July 22d, will be Dr. Allen T. Haight, of Chicago, who was sent by the Chicago Medical Society as delegate to the International Otological Congress, which was held in London in August, 1899. Dr. Haight, accompanied by Mrs. Haight, sailed on June 13th. At the congress he will deliver an address on Tuberculosis of the Eye. Many distinguished specialists from various parts of the world will read papers at the sessions of the body, but only the delegates from Great Britain and her colonies will be permitted to take part in the discussions. King Edward and Queen Alexandra will open the congress.

The Fifth International Congress of Criminal Anthropology.—The State Department at Washington has received a note from the minister of the Netherlands stating that the Fifth International Congress of Criminal Anthropology will be held in Amsterdam from the 9th to the 14th of September. The principal questions to be discussed are: First, the anatomical and physiological character of criminals, descriptive studies; second, criminal psychology and psychopathology, criminals and lunatics, theoretical considerations and practical measures; third, criminal anthropology in its legal and administrative application, principles to be followed, preventive measures, protective measures, penalties; fourth, criminal sociology, economic causes of crime, criminality and socialism; fifth, criminal anthropology and ethnology compared. Special questions, such as alcoholism, sexuality, juvenile criminality, senile criminality, hypnotism, criminal psychology in literature, etc., will also be considered.

The Mississippi Valley Medical Association's Meeting: Change of Dates.—It is announced that the dates of the next meeting of the Mississippi Valley Medical Association have been changed from September 10th, 11th, and 12th to September 12th, 13th, and 14th. This change has been made necessary because the dates first selected conflicted with another large association meeting at the same place.

The meeting is to be held at the Hotel Victory, Put-in-Bay Island, Lake Erie, Ohio, and the low rate of one cent a mile for the round trip will be in effect for the meeting. Tickets will be on sale as late as September 12th, good for returning, without extension, until September 15th. By depositing tickets with the joint agent at Cleveland and paying fifty cents the date can be extended until October 8th. This gives members an opportunity of visiting the Pan-American Exposition at Buffalo, to which very low rates by rail and water will be in effect from Cleveland.

Full information as to rates can be obtained by addressing the secretary, Dr. Henry E. Tuley, No. 111 West Kentucky Street, Louisville, Ky. Members of the profession are cordially invited to attend this meeting. Those desiring to read papers should notify the secretary at an early date.

A Million Dollars for Harvard Medical School.—J. Pierpont Morgan has agreed to erect new buildings for Harvard Medical School, the estimated cost of which is over one million dollars.

Smallpox.—Incoming ocean and coast steamships still bring an occasional case of smallpox here, while many cases develop in Greater New York. About the city, however, the most alarming conditions are reported from Astoria and Long Island City, where the Queens Borough School Board has decided to close the public schools at both places.——The epidemic has developed in a serious form in the Orange County Jail, at Goshen, N. Y., with the result that the jail has been vacated, the victims being removed to the isolation hospital and the prisoners to the Newburg Jail until danger of infection has passed.——The epidemic is somewhat more prevalent about Greater New York, and especially in Queens County, where the number of cases reported in one day recently was fifty-three. The Grand Jury of that county recently began an investigation at Long Island City into charges that the health officials about Astoria had been lax in their duty in fighting the spread of the disease.——Medical school inspectors of New York city are said to contemplate suing the municipality for their fees for vaccinating about 100,000 public-school scholars, at the rate of $1 each.——Smallpox has caused the closing of the churches at Plymouth, Pa., while other places where the epidemic has been in evidence lately are Yonkers, N. Y.; Rockland County, N. Y.; Parkersburg, W. Va.; the suburbs of Pittsburgh, Pa.; Bangor, Me., and Wood county, Wis.

Dedication of the Lewis Memorial Hospital.—The Lewis Memorial Cottage Hospital, at New Dorp, Borough of Richmond, which was erected and given to St. John's Guild by Mrs. Frederic Elliott Lewis in memory of her son, Frederick Chandler Lewis, has been formally dedicated. The ceremony was simple, consisting of addresses by William Sherer, president of the guild. The new hospital is intended for the reception of sick babies, and each of the two wards will accommodate eight babies. Only infants that are seriously ill will be received. The building is a wooden structure, 103 feet long and 34 feet 10 inches wide. The cost of building and equipping the hospital was $10,000.

The Movement for a Hospital for Consumptives in New York City.—The Board of Estimate and Apportionment of New York is seriously considering the advisability of the erection and maintenance by the city of a hospital for consumptives. A member of the board stated recently that there was a probability that the board would take action at some date in the near future and would issue bonds for the erection of the hospital, most likely to be on a site owned by the city. The board would most likely make an appropriation for the relief of consumptives in the budget for 1902, in addition to, or rather apart from, the appropriation allowed for the present year to private and semi-private institu-

tions. For this year the city of New York has set aside the sum of $70,010 for the maintenance of the consumptive poor. Of this amount, the Brooklyn Home for Consumptives received $6,000; St. Joseph's Hospital, One Hundred and Forty-third Street and St. Ann's Avenue, $34,010, and Seton Hospital, in the Bronx, $30,000. St. Catharine's and St. Peter's hospitals, Brooklyn, care for consumptives, but receive no special fund from the city. Last session the legislature appropriated $50,000 for a site for a Consumptive's State Hospital, and this coming session it is expected that $100,000 will be appropriated for buildings and maintenance. It is not believed that the city could build as cheaply, but taking the $70,000 annually appropriated heretofore into account, the additional expense would not be great.

A Big Sanitarium Planned for Chicago.—Details are under consideration for the construction of a magnificent hotel and sanitarium in Chicago at a cost of $400,000. The ground is owned by the Chicago University and fronts forty feet on the boulevard, with a depth of one hundred and sixty feet on the court. Among those who are interested are five of the leading physicians and surgeons of Chicago, including Dr. J. B. Murphy, Dr. Franklin H. Martin, Dr. Phineas I. Mulvane, Dr. Frank Billings, and Dr. Nicholas Senn. It is proposed to lease the ground for ninety-nine years. Plans have been completed for an eight-story building, on which construction will be commenced as soon as the details are arranged.

Hospital Buildings and Endowments.—The work of laying the foundations of the new hospital being built by the Sisters of St. Francis at Louisville, Ky., has been begun.——By the compromise of the will of Julius Adams, of Boston, the Carney Hospital, of that city, receives bequests of $56,250.——The children of Jacob and Hannah Rosenberg, of Chicago, have added $25,000 to the funds of the Michael Reese Hospital, of that city. The money will probably be made the basis of a fund for a new hospital building.——The contract has been awarded for the erection of the Frederick City Hospital, at Frederick, Md., at a cost of about $8,000.——The new La Crosse (Wis.) Hospital, completed at a cost of $50,000, was formally opened on May 14th.——The managers of the Free Hospital for Consumptives, Philadelphia, have bought land near White Haven, on the banks of the Upper Lehigh River, as a site for a sanatorium. It is expected that the State will appropriate $50,000 for the institution. Cottages will be erected on the site so soon as money can be obtained. Patients are cared for under a special arrangement in several local hospitals. ——The cornerstone of the new Jewish Hospital, to be erected in St. Louis, was laid with appropriate ceremonies on May 16th.——An agitation has been started for the establishment of a State hospital in Jackson, Miss., to be supported by legislative appropriation.——The New York Municipal Council has passed a resolution appropriating $7,000 for the construction of an emergency hospital at Coney Island.——Active work will soon be begun on a new hospital building to cost $40,000 and to take the place of the Peninsula General Hospital at Salisbury, Md.——The Bethesda Hospital at Cincinnati, Ohio, was dedicated on May 16th.——The contract for building the Charlotte Williams Hospital, Richmond, Va., has been awarded. The hospital will probably cost about $150,000.——Henry Hawthorne has sent word that he will aid in building the new Hospital for Incurables, in Albany, N. Y.——A site has been selected for the new Presbyterian Hospital at Atlanta, Ga.——The cornerstone of the new St. Anthony's Hospital, at Louisville, Ky., was laid on June 2d.——The following appropriation bills were recently passed in the Pennsylvania legislature: Pennsylvania Epileptic Hospital, $10,000; Rush Hospital, Philadelphia, $10,000; Adrain Hospital, $30,000; Gynecean Hospital, Philadelphia, $20,000; Kensington Hospital, Philadelphia, $5,000; Altoona Hospital, $15,000; St. Vincent's Hospital, Erie, $10,000; Eye, Ear, Throat. and Nose Hospital, Pittsburgh, $3,000.——A chapel, capable of seating 300, is being added to the General Hospital at the Presidio, San Francisco.——The will of Joseph Corbit, of New York, gives $2,000 to the Presbyterian Hospital, of that city.——The State Commission in Lunacy has approved the plans for a new group of buildings at the Rochester (N. Y.) State Hospital, to cost about $230,000. This will afford accommodations for 500 patients.——The general synod of the Lutheran Evangelical Church, of St. Paul, Minn., will finance a new thirty-bed non-sectarian hospital, to be opened about September 1st. A building and lot have been purchased for the purpose and the plans contemplate future additions as the institution prospers.——The cornerstone of the County Consumptive Hospital, at Buffalo, N. Y., was laid on May 31st.——Ground has been broken for the new hospital at Frederick, Md.——By the will of Dr. Marie J. Mergler, of Chicago, the Woman's Hospital, of that city, receives $3,000.——The municipal authorities of St. Paul, Minn., are to add a new contagious ward to the city hospital at a cost of about $25,000.——An addition to the German Hospital, at Chicago, to cost $40,000, is planned. The hospital now has accommodations for one hundred patients, and there is a demand for double the quarters available.——A Jewish hospital, to be known as the Mt. Sinai Hospital, will be erected in Boston. Several thousand dollars have already been subscribed.——James K. Mosser, of Allentown, Pa., has given $35,000 to pay for the erection of a wing to the Allentown Hospital.——Contracts for the hospital building to be erected in connection with the State Institute for Defectives at Faribault, Minn., have been let. ——The new Franklin Hospital, at Boston, was formally opened on June 6th.——The navy's new hospital, at Yokohama, is nearly completed, and a letter to Surgeon-General Van Reypen, at Washington, D. C., says that the building is greatly admired. The Japanese Government has given a lease in perpetuity for the site occupied by the hospital.——The new addition to St. Luke's Hospital, at Racine, Wis., was dedicated on May 31st with appropriate exercises. The building cost about $10,000. ——The sum of $56,000 has been subscribed toward the erection of a new private hospital at Kansas City, Mo. ——The Charles Hitchcock Hall of the University of Chicago, the cornerstone of which will shortly be laid, and which will cost $150,000, will contain a hospital. ——By the will of Mrs. Matilda B. Brown, of New York city, St. Vincent's Hospital is bequeathed $2,500. ——Ground was broken, on June 12th, for the extensive additions to the Providence Hospital, at Washington, D. C. The estimated cost is about $250,000.——An extension, 34 by 50 feet, three story and basement, is to be added to the building of St. Mary's Free Hospital for Children, at No. 407 West Thirty-fourth Street, New York. The annex will be occupied by additional wards and will have a handsome chapel. The improvements are to cost $45,000.——The will of Dr.

W. S. Caldwell provides that the Provident Hospital, of Chicago, shall receive the residue of his estate, estimated at $50,000. St. Francis Hospital, of Freeport, Ill., receives $10,000.——A civil hospital is to be established, partly by subscription and partly by government appropriation, on the island of Guam.——John Sweetzer, of Boston, has bequeathed $25,000 to the New England Hospital for Women and Children, following the death of his brother and sister, who are to enjoy the income meanwhile.——Mrs. Lewis H. Hyde, of New York, has contributed $5,000 to the erection of the Winchester (Va.) Memorial Hospital and will also endow two memorial beds in the institution.——The cornerstone of the new Borgess Hospital, at Kalamazoo, Mich., was laid on June 9th.——The trustees of the German Hospital, a semi-charitable institution maintained by the German Lutheran churches of Chicago, have decided to enlarge the present hospital building by an addition of seventy-five feet front. The improvement will cost $40,000.——The new Presbyterian Hospital, at Atlanta, Ga., will be formally opened on July 1st. ——The contract for the erection of the proposed Charlotte Williams Hospital, at Richmond, Va., has been let, and work will shortly be begun. The contract calls for the completion of the hospital by July 1, 1902. The hospital will be the largest institution of its kind in the South, with the exception of the Charity Hospital, of New Orleans.——Steps are being taken to enlarge the Denver (Col.) Jewish National Hospital for consumptives. At present the hospital accommodates sixty-three patients, at an annual cost of $26,000. When the new building is completed twice as many patients can be received, the estimated annual cost of maintenance being $60,000.——Two new wings are to be added to the Gowanda (N. Y.) State Hospital at a total cost of $150,000. Provision has been made in past appropriations by the legislature.——The General Hospital at the Presidio, San Francisco, which was damaged to the extent of $30,000 by fire on June 10th, will be rebuilt immediately.——The Wesley Hospital, Chicago, recently completed at a cost of $210,000, was informally opened on June 17th.——The cornerstone of the new Hospital of St. Mary, to be erected by the Sisters of the Family of Nazareth, at Chicago, was laid on June 16th. The building will cost more than $200,000 and will be finished within two years.——The laying of the cornerstone of St. Mary's Sanitarium, at Fond du Lac, Wis., took place on June 12th. Archbishop Katzer and priests from the various cities of the diocese were in attendance, together with the resident physicians, prominent citizens, and the Sisters of St. Agnes. The sanitarium is the gift of John T. Boyle, and is to be one of the finest in the Northwest, costing $50,000 complete.

The Death of Mr. Thomas Bond, F. R. C. S., took place in London early this month. Mr. Bond was one of the most prominent medico-legal experts in England, and has been concerned in most of the *causes célèbres* of recent years in England. He was also a recognized authority on railway injuries.

In Memory of Dr. Lazear. —A tablet to the memory of the late Dr. Jesse William Lazear, of Baltimore, who died from the effects of yellow fever contracted while experimenting on its communicability, was unveiled on June 18th, at the Trinity Hall Military School, Washington, Pa., of which institution he was an alumnus. Dr. Lazear graduated from Johns Hopkins University, and took his medical degree at the College of Physicians and Surgeons, New York, and subsequently studied abroad. While serving as assistant surgeon in the United States Army, he was detailed to serve on the yellow fever commission. He volunteered to permit yellow-fever-infected mosquitoes to sting him, and became thereby infected and died, a martyr to science.

Births, Marriages, and Deaths.

Married.

ARCULARIUS—DU BUISSON.—In Montclair, N. J., on Wednesday, June 19th, Dr. Philip Edward Arcularius, of New York, and Miss Marie Fermine Du Buisson.

CLARK—KELLY.—Kosciusko, Mississippi, on Wednesday, June 12th, Dr. Clifton Power Clark, of Washington, and Miss Alta Kelly.

DROHAN — SAXTON. — In Brockton, Massachusetts, on Wednesday, June 19th, Dr. James H. Drohan and Miss Margaret L. Saxton.

FLOYD—DELAFIELD.—In Riverdale, N. Y., on Thursday, June 20th, Dr. Rolfe Floyd, of New York, and Miss Emily Delafield.

HERTEL—HARTNAGEL.—In Belleville, Illinois, on Wednesday, June 19th, Dr. H. G. Hertel and Miss Lulu Hartnagel.

HOWARD—MORRISON.—In Salem, N. J., on Thursday, June 20th, Dr. A. L. Howard, of Washington, and Miss Anna R. Morrison.

HUMPHREY—BARBER.—In Warsaw, N. Y., on Thursday, June 20th, Dr. L. Hayden Humphrey, of Silver Springs, N. Y., and Miss Martha Barber.

JOHNSON—TAYLOR.—In Washington, on Wednesday, June 19th, Dr. Henry L. E. Johnson and Miss Eugenie Taylor.

JONES—TRIPP.—In New York, on Wednesday, June 19th, Mr. Joseph J. Jones and Miss Susan E. Tripp, daughter of Dr. William J. Tripp.

LEE—PIERSON.—In Jersey City Heights, on Tuesday, June 18th, Dr. Stephen G. Lee, of East Orange, N. J., and Miss Laura M. Pierson.

LEWI—WEIL.—In New York, on Thursday, June 20th, Dr. William G. Lewi, of Albany, and Miss Emma Weil.

MANN—FULTON.—In York, Pennsylvania, on Wednesday, June 19th, Dr. E. S. Mann, of Philadelphia, and Miss Mary A. Fulton.

MANN—SCOTT.—In Petersburg, Virginia, on Wednesday, June 19th, Dr. John Mann and Miss Nannie Scott.

MATLACK—JACKSON.—In Sedalia, Missouri, on Sunday, June 9th, Dr. James A. Matlack, of St. Louis, and Miss Edith Jackson.

MERCER—MORRISON.—In Virden, Illinois, on Wednesday, June 19th, Dr. William Harvey Mercer and Miss Grace Greenwood Morrison.

NOURSE—WINDSON.—In Darnestown, Maryland, on Wednesday, June 19th, Dr. W. D. Nourse, of Dawsonville, Maryland, and Miss Alice Windson.

SANDERS—WILKINS.—In Rochester, on Tuesday, June 18th, Dr. Llewellyn J. Sanders and Miss Grace Wilkins.

SCHWILK—MORSE.—In Albany, on Wednesday, June 19th, Dr. E. T. Schwilk and Miss Elizabeth Morse.

STEWART—LANGWORTHY.—In Pittston, Pennsylvania, on Saturday, June 22d, Dr. William Alvah Stewart, of Washington, and Miss Julia Elizabeth Langworthy.

STRONG—STONE.—In Swanton, Vermont, on Wednesday, June 12th, Dr. Chapman Edward Strong, of Astoria, N. Y., and Miss Florence Mary Stone.

Died.

ATHEY.—In Holly Springs, Mississippi, on Thursday, June 20th, Dr. J. Howard Athey, in the sixty-sixth year of his age.

BARTON.—In Alexandria, Virginia, on Wednesday, June 19th, Dr. Mary Barton, in the fifty-fifth year of her age.

GROESS.—In Black Rock, N. Y., on Tuesday, June 18th, Dr. Edward L. Groess.

HUDSON.—In Brooklyn, on Thursday, June 20th, Dr. William T. Hudson, in the fifty-ninth year of his age.

REYNOLDS.—In Pittsburgh, on Wednesday, June 12th, Dr. Benjamin F. Reynolds, in the sixty-seventh year of his age.

WAITE.—In New Bedford, Massachusetts, on Thursday, June 20th, Dr. E. E. Waite, in the forty-third year of his age.

WOODS.—In Abbeville, Louisiana, on Friday, June 14th, Dr. Lee Woods, in the forty-fifth year of his age.

Pith of Current Literature.

Medical Record, June 22, 1901.

Hernia of the Urinary Bladder. By Dr. W. S. Cheesman.—The author's conclusions are: (1) The principal cause of bladder hernia is direct traction exercised through the peritoneal coat by the weight of the hernial mass, or by pulling on the sac during ligation in operating for radical cure. (2) In one sixth of the cases symptoms occur sufficient to arouse suspicion, sometimes amounting to certainty, of the existence of the abnormity. (3) In about one fourth of the cases it may be possible during operation to recognize the bladder and to avoid injuring it; and after one hernial sac has been found, any structure resembling a second should be regarded as bladder until proved otherwise. (4) When the bladder is wounded, the best procedure is immediate suture by two layers of catgut, and closure of the hernial wound by Bassini's method; a small drain only being left leading to the bladder suture line. The bladder wall, when thinned, may be freely resected preparatory to closure. The catheter *à demeure* is not essential to primary union of wounds thus closed. (5) Urinary fistula nearly always closes spontaneously. (6) Injuries of the bladder have been directly responsible for death in only ten per cent. of the hernia cases in which they have occurred.

The "Nauheim Treatment." By Dr. H. Newton Heineman.—According to the author, no form of treatment in the range of medicine can show a larger number of improved patients. Failure to achieve the desired improvement sometimes results from the patient's indifference or inability or badly advised course in not repeating the treatment during the succeeding year. The author warns against the natural inclination to increase too rapidly the strength of the treatment in some cases, even upon subsequent visits or courses of treatment. The increasing severity must be determined by experience and a careful weighing in the given case of the probable after-effect as well as the immediate result. Experience alone can determine whether in a given case further improvement is best secured by a continuation of the same warm bath, or whether the simple general tonic effect of a cooler bath would add to the result. But the distinction between such kinds of treatment should always be kept clearly in mind, if increasing experience is ever to lead to definite scientific conclusions. A few cases are given.

On Nephrorrhaphy with Flap Fixation. By Dr. Arnold Sturmdorf.

The Boston Medical and Surgical Journal, June 20, 1901.

A Study of the Food Consumed and Digested by Four Members of the Harvard University Boat Crew in June, 1900. By W. O. Atwater and F. G. Benedict.—That athletes eat considerably more than people in ordinary life is what would naturally be expected. An especially interesting feature of the food of the athletes is the much larger amount of protein in proportion to the fuel value than is found in the food of people with ordinary muscular strain; that is to say, in increasing their food over the ordinary consumption, the athletes added much more proportionally to the protein than to the other nutrients (fats and carbohydrates). Why and to what extent this large proportion of protein represents a physiological necessity is not yet fully known. To the authors, however, it seems very natural that where great muscular strength and effort are needed, there should be corresponding muscular development, and this would be most naturally attained by the use of nitrogenous food. (*To be continued.*)

Puerperal Insanity. By Dr. Edward B. Lane.—The author objects to the use of the term "puerperal insanity" to define a distinct type of mental trouble, as he does not find any such in practice. A nomenclature not based on mental symptoms alone leads to hopeless confusion and is most unscientific. From an examination of Boston statistics, he arrives at the very interesting result that, as a matter of fact, insanity associated with childbirth occurs only half as often as it does among women in general at the child-bearing age.

The Home Treatment of Tuberculosis versus the Climatic Treatment. By Dr. Edward O. Otis.—As it is the very small minority who are willing or able to travel far afield for a resort in which to take the cure, and the majority, for one reason or another, must, if the hygienic cure is attempted at all, undertake it at home, the author believes it a source of gratification that the prospects of success in the home treatment appear so auspicious.

A Case of Marked Cyanosis, Difficult to Explain. By Dr. Sylvester F. McKeen.

Medical News, June 22, 1901.

Psychic Epilepsy, with the Report of a Case. By Dr. J. W. Courtney.—By psychic epilepsy we understand those peculiar pathologic alterations of consciousness and memory which may precede, accompany, follow, or even take the place of the epileptic fit. The exceeding infrequency with which the opportunity to personally observe an attack occurs, is the author's reason for this paper, in which a case is given in great detail.

The Medical Expert Evidence in the Case of the Davis Bellevue Hospital Homicide. By Dr. R. L. Pritchard.—The author takes issue with the district attorney and asserts emphatically that medical expert testimony is *not* a race among liars, with the case in question as an instance. He shows that medical expert testimony is more often defective from the manner of its presentation than from an assumed yielding of the expert witness to whatever opinion is desired of him. The medical expert who makes the possibilities of medical science his excuse for almost any opinion demanded of him, is not found in a trial of great public interest, where the medical witnesses are the foremost members of the medical profession.

Obstipation. By Dr. Sterling B. Taylor.—The author deals particularly with obstipation arising from hypertrophy of the normal rectal valves; with consequent interruption of lumen of canal and accompanying distortion of gut above obstruction, the latter condition begetting an atonic state. Such a condition begets "classic" symptoms which the author enumerates: (1) Chronic irregularity of bowel movement; (2) frequent partially successful attempts to evacuate the bowels; stool flattened laterally; (3) an inordinate desire for successful defæcation; (4) a feeling of distention over the course of the colon, more marked in the descending segment and at the colosigmoidal angulation; (5) inability to pass gas freely; (6) mucus—clear, dirty, or sanious in character; (7) evidence of self-intoxication. The radical treatment consists in division of the free border of the valve, or valves, affected. The operation is one of great delicacy. Palliative treatment in the shape of massage, enemata, diet, etc., is of some value.

A Study of some Complications and Sequelæ of Typhoid Fever. By Dr. H. A. Hare and Dr. H. R. M. Landis. (*To be concluded.*)

Journal of the American Medical Association, June 22, 1901.

The Cause of Diffuse Peritonitis Complicating Appendicitis, and its Prevention. By Dr. A. J. Ochsner.—The Chairman's address at the opening of the Section on Surgery and Anatomy at the St. Paul Meeting. See *New York Medical Journal,* June 8th, p. 1011.

The Address of the Chairman of the Section in Obstetrics and Diseases of Women at the St. Paul Meeting. By Dr. Henry P. Newman.—Will be abstracted in the report of the proceedings of the Section, in a forthcoming number.

Oral Manifestations and Allied States. By Dr. E. S. Talbot.—In this paper on scurvy, the author demonstrates the utility of the lower animals for its study. It is particularly frequent in dogs, and the description of the dental conditions found in these animals in this disease is interesting. The bacteriology of scurvy and the bacteria of pyorrhœa alveolaris are considered and the results of inoculation experiments are given. The article, which is illustrated, is to be continued.

Anthrax, with Report of a Case. By Dr. William Roush.—This case is interesting as confirming the experience of Vockresensy that the use of large doses of carbolic acid internally in this affection. He (Vockresensy) asserts that he has cured sixteen consecutive cases of malignant pustule, and in some the use of carbolic acid was not begun until the seventh day. In the author's case, though the carbolic acid was not used until the eighth day, improvement was noticeable within twenty-four hours.

Interesting Throat Paralyses in a Case of Locomotor Ataxia of an Irregular Form. By Dr. John Edward Rhodes.

The Diagnosis of Diaphragmatic Hernia. By Dr. E. Fletcher Ingals.

The Value of Calcium Carbide in the Treatment of Inoperable Carcinoma of the Uterus. By Dr. I. C. Chase.—In the author's opinion, acetylene has no effect on protoplasm sufficient to support a theory of any specific annihilative action on carcinomatous cells. It has no escharotic effect. It has no bactericidal action upon pathogenic bacteria or upon the bacteria of putrefaction. The principal action of calcium carbide results from liberated quicklime. Lime is not a rational caustic to select because of its superficial action, the character of the necrosis, and the tendency to promote hæmorrhage. The metallic salts are more styptic, and their action may be better graduated by proper selection. The amount of heat evolved may be sufficient to slightly cauterize the tissues. In most cases it has slight therapeutic effect save counteracting the tendency to hæmorrhage and promoting contraction. The heat of the actual cautery promises better results. Calcium carbide is open to the same dangers as other caustics when improperly or too zealously applied. The treatment does not reduce odor or hæmorrhage or give more comfort to the patients than other rational lines of treatment. In fine, there is no evidence in theory or practice warranting the conclusion that calcium carbide could ever cure a case of really inoperable cancer of the uterus.

Morphinism: An Unusual Case. By Dr. Wesley E. Taylor.—The cure of the habit in this case was accomplished by the patient *alone.* The habit was of long standing, and thirty grains a day were necessary for the patient's comfort. The use of the drug was stopped, absolutely and at once. The author suggests that it might be advisable to break away from the rule of a gradual diminution of dose, and he does not see why some of the burden should not thus be put upon physical, instead of all on the mental, resistance.

Spasm of the Glottis and Œsophagus in Adult Life. A Report of Two Cases. By Dr. L. D. Brose.—The author lays stress upon the possibility of such symptoms being due to pressure on the recurrent laryngeal and œsophageal nerves; and advises that a diagnosis be not arrived at until such pressure has been most carefully excluded.

Magnetic Foreign Bodies in the Eye. By Dr. E. Villiers Appleby.

The Importance of Instruction in Medical Schools upon the Modification of Milk for Prescription Feeding. By Dr. Andrew H. Whitridge.

A New Proctoscope and Sigmoidoscope. By Dr. William M. Beach.

Philadelphia Medical Journal, June 22, 1901.

Further Notes of a Case of Pernicious Anæmia Reported at the Meeting of the Association of American Physicians in 1900; with Remarks on the Diagnosis of the Disease. By Dr. Frederick P. Henry.—The diagnosis of pernicious anæmia is most firmly based upon the *tout ensemble* of signs and symptoms, both positive and negative. The presence of megaloblasts is confirmatory of, but not indispensable to, the diagnosis. They possess a prognostic, rather than a diagnostic, value, for they often appear in the blood in large numbers shortly before death, and are frequently absent for months during periods of remission. With reference to the statement that cases of anæmia with a hæmic unit of twenty-five, and a hæmoglobin percentage of thirty, are not rare and that they often end in recovery, the author states that during a continuous service in large hospitals for seventeen years, during which time he has been on the alert for cases of pernicious anæmia and conditions resembling it, he has had no such experience.

A Case of Severe Anæmia with Changes in the Spinal Cord. By Dr. William E. Hughes and Dr. William G. Spiller.

The Teaching of Chemical Pathology. By Alonzo Englebert Taylor.—It will never be possible to take each student over the whole field, just as it is not possible to give each student work in all the lines of physiology or to demonstrate all the lesions of morbid anatomy. The author does not believe it is necessary, for, if each student *works* through, and *thinks* through, a few of the conditions of disease, the mental training and the grasp upon the subject thus attained will be of high value, above and beyond the training in diagnosis. As for the latter development of the student's medical mind, the chief object of the course should be to teach the student to view disease as much from the functional as from the anatomical point of view, to correlate in his mind morbid physiology wth morbid anatomy, and to carry this association into practical and original work.

Theoretical and Practical Considerations on the Treatment of Jacksonian Epilepsy by Operation; with the Report of Five Cases. By Dr. James Jackson Putnam. (*Concluded*).

What I have Learned from One Hundred and Sixty-one Operations for the Relief of Senile Hypertrophy of the Prostate Gland. By Dr. Orville Horwitz. (*Concluded*).—From his results, the author sets forth the following conclusions: (1) Success following the Bottini operation depends on having perfect instruments; a good battery; the necessary skill, and the employment of a proper technique. (2) In suitable cases the Bottini is the safest and best radical operation thus far advised for the relief of prostatic hypertrophy. (3) It is often very efficacious in advanced cases of obstruction as a palliative measure, rendering catheterism easy and painless, relieving spasm, lessening the tendency to constipation, and improving the general health. (4) It is of special service in the beginning of obstructive symptoms due to hypertrophy of the prostate gland, and may be regarded as a means of preventing catheter life. (5) It is indicated in all forms of hypertrophy except where there is a valvular formation, or where there is an enormous overgrowth of the three lobes, associated with tumor formation giving rise to a pouch, both above and below the prostate gland. (6) Where the bladder is hopelessly damaged, together with a general atheromatous condition of the blood vessels, associated with polyuria, results are negative. (7) Pyelitis is not a contra-indication to a resort to the operation. (8) The character of the prostatic growth has no bearing on the results of the operation.

American Medicine, June 22, 1901.

The Treatment of Abdominal Aortic Aneurysm by a Preliminary Exploratory Cœliotomy and Peritoneal Exclusion of the Sac. Followed at a Later Sitting by Wiring and Electrolysis, with the Report of Two hitherto Unpublished Cases. By Dr. Rudolph Matas. (*To be concluded*).—To the author it is evident that there are many fallacies and unavoidable sources of danger in abdominal aneurysm which distinctly preclude the possible success of the method in a large proportion of the cases, no matter how perfectly the technique may be carried out. Nothwithstanding all the advantages of an exploratory laparotomy, many of the essential points in the diagnosis, such as the exact origin of the aneurysm, the part of the aorta in which the aneurysmal orifice is situated, the size of the orifice, the relation of important visceral branches to the sac, the condition of the walls of the sac, etc., must remain unknown. We really know nothing positively of what this procedure will accomplish in the living subject except, perhaps, the empiric and gross fact that the method has been instrumental in saving the lives of three out of fifteen recorded cases of abdominal aneurysm. It is not universally applicable, and it is much less justifiable in some cases than in others. Under these circumstances some effort should be made to define the indications for or against this operation in this class of cases.

The so-called Traumatic Neurosis. By Dr. Harold N. Moyer.—The author puts forth the following points for discussion: That concussion-neurosis, in all its various appellations, is an unfortunate and misleading term; that clearer understanding of functional nervous trouble renders such a term unnecessary; that pain and tenderness of the spine is rarely an evidence of change in the cord, but is usually due to fatigue of the spinal muscle, or to sprains and concussions of the column; that most of the symptoms of spinal concussion, as the term is commonly used, are cerebral in origin, and that a correct diagnosis and prognosis may usually be reached by analyzing all such cases in the same manner that we do functional nervous troubles having their origin in non-traumatic causes.

Resection of Superior Sympathetic Cervical Ganglion for Non-inflammatory Glaucoma. By Dr. Joseph Mullen.

The Bacteriologic Examination of Clinical Thermometers. By Dr. Randle C. Rosenberger.—It is possible for the thermometer to be laden with the usual flora of the oral cavity, and such bacteria may retain their capability of growth for an indefinite time—at least two months. Many pathogenic bacteria possess similar capabilities, and it is not unreasonable to assume that the transmission of bacterial disease by the thermometer is possible. Thermometers are easily disinfected, but, when possible, each patient should possess a thermometer as much his own property, and as sacred to his own use, as his toothbrush.

A Typical Pneumonia and Pulmonary Tuberculosis. By Dr. W. H. Bergtold.—The author is always suspicious of an atypical pneumonia and he believes that every such case should be suspected and put under surveillance until proved not to be tuberculous, and there is little excuse for allowing cases to go many weeks, even days, unrecognized.

Electrolysis in Diseases of the Skin. By Dr. F. E. Wisecup.

The Nervous Exhaustion Due to West Point Training. By Dr. Charles E. Woodruff.

Lancet, June 15, 1901.

The Chemical Side of Nervous Activity. (*Abstract.*) By Dr. W. D. Halliburton.—The first and second of the Croonian lectures for 1901. Will be abstracted on completion.

Standardization of Calmette's Antivenomous Serum with Pure Cobra Venom: The Deterioration of this Serum through Keeping in India. By G. Lamb, M. B., and W. Hanna, M. B.—The authors report the results of a number of experiments bearing upon the standardization of antivenomous serum, and its deterioration in warm climates. They find that more serum is required to neutralize pure cobra venom than has hitherto been supposed. The dose of serum to be injected in cases of cobra bite depends upon factors which cannot be directly experimentally determined — namely, (1) upon the amount of poison the snake has injected and (2) upon the amount of cobra venom which an average man can survive. In view of the fact, however, that in the treatment of any case of cobra bite we must always estimate the dose of antivenine to meet the possibility of the snake having injected the maximum quantity of poison possible, a dose of from 30 to 35 cubic centimetres of fresh serum, or its equivalent, should be given in every case. Their experiments show that antivenomous serum undergoes a progressive and fairly rapid deterioration when stored in hot climates, and that this deterioration is greater and more rapid the higher the mean temperature to which it is subjected. Tables are given which show the neutralizing power of various specimens of serum of different ages and sources of supply.

The Feeding of Diphtheria Patients, with Special Reference to Children and Severe Cases. By Dr. R. G Kirton.—Feeding in diphtheria may be carried out by (1) the mouth; (2) the nasal tube; (3) the rectum; and (4) subcutaneous injections. Although mouth feeding is the best, certain conditions render it impossible or in-

dvisable. Among these are: (1) inability to swallow ue to pain or swelling; (2) regurgitation; (3) entrance f food into the larynx, indicated by persistent coughing fter feeding; (4) struggling and the consequent exhaus-on; and (5) continued vomiting—(*a*) present from ie onset of the disease; (*b*) early vomiting from the econd week; and (*c*) late vomiting. In the early stages f diphtheria milk should be the chief food. Children ith regurgitation should be fed very slowly, and the quids given should be thickened. Where vomiting oc-ırs the food should be given in small quantities and ıore often; should the vomiting persist other modes of eding should be substituted. Brandy is preferable to hiskey where a stimulant is indicated, as it is less apt to ause vomiting. The following conditions render nasal eding advisable: (1) inability to swallow from regur-itation or paralysis; (2) coughing on feeding; (3) ıses where vomiting occurs on mouth feeding, but ot with feeding by the nose; (4) exhaustion; and (5) ıoral effect. All foods should be strained, measured, nd given warm. It is occasionally necessary to use a iff tube instead of the ordinary soft rubber one. Rec-ıl alimentation should be resorted to when feeding by ie mouth or nose fails or is insufficient. It is required here there is (1) vomiting; (2) great difficulty in pass-ıg the nasal tube; (3) harmful action of nasal feeding om fright, struggling, etc.; and (4) epistaxis caused by assage of the nasal tube. A funnel and soft rubber ıbe should be used; never a ball syringe, as it is impos-ble to regulate the pressure. The feedings should have s their basis peptonized milk, and often this is their nly constituent. Raw meat juice, white of eggs, and ccasionally the yolks of eggs, may be added. The mount depends upon the age of the patient; it should e given warm about every four hours. The bowels ıould be washed out every twenty-four hours to prevent iarrhœa, which is a troublesome and serious complica-on in these cases.

In addition to these forms of administering food, the ıjection of sterile horse serum into the subcutaneous ssues is to be recommended. From twenty to forty ıbic centimetres are as much as it is advisable to inject ıily. The only indication against the use of these in-ctions is hæmorrhage into the subcutaneous tissues ad-ıining the site of injection. Transient rashes have oc-ısionally been observed. In conclusion, the author re-orts four cases of diphtheria in which the feeding was serious and important question, and gives a long table ıowing the amount, nature, and method of administra-on of food in one especially difficult and severe case.

Scarlatinal Infection: An Inquiry and an Illustra-on. By J. B. Pike, M. R. C. S.—The author suggests ie possibility of scarlatinal infection being carried by ie pus from a middle-ear discharge. Certainly the iddle ear and mastoid cells form excellent quarters for ie germs to lie quiet in. If they can do so for a long indefinite time, our view of the infective period of arlet fever must be enlarged. Another interesting ıestion is whether a secondary self-infection is possible om scarlatinal poison lurking in the cavities of the tem-ıral bone. The author reports a very interesting case scarlet fever which illustrates the possibility of these ggestions.

Pure Urea in the Treatment of Tuberculosis. By r. H. Harper.—The author records his further exper-nce of the use of pure urea in the treatment of pulmon-y tuberculosis, and reports five cases in which its use as followed by the greatest improvement. Urea in-creases the toxicity of the body tissues and fluids toward the tubercle bacillus, thus acting as an antitoxine. There is a natural antagonism between gouty diseases and tu-berculosis, and gouty patients possess a natural anti-toxine against the tubercle bacillus. Numerous other examples are given to show the relative antagonism be-tween tuberculosis and conditions where the amount of urea in the system is increased.

Sulphur in the Treatment of Dysentery. By Dr. G. E. Richmond.—The author reports two cases of dysen-tery in which the administration of twenty grains of sublimed sulphur combined with five grains of Dover's powder, every four hours, brought about rapid recovery. The discharge of blood and mucus quickly stopped, and the movements became fæcal. The sulphur seems to act as a strong antiseptic and brings about a speedy healing of any ulcerated surfaces in the intestine. So far the author has not had a single failure in the treatment of dysentery by this method.

The Practical Choice of Climate in Phthisis. By Dr. W. Gordon.—After certain preliminary considera-tions of his subject, and after enumerating those cases of phthisis in which the patient should be kept at home, the author classifies the patients who should be sent away as follows: (1) Early, uncomplicated cases should go to the Swiss Alps, of which Davos may be taken as a type. (2) Early cases with recurrent hæmorrhages, and (3) early cases which have originated in pleurisy or pneumonia, should also be sent to the Alps. (4) Early cases in weakly persons, if they do not feel cold easily, should also go to the Alps, or to Egypt, the Riviera, or to Nordrach. (5) Post-influenzal cases with considera-ble irritation do well at the Riviera. (6) Catarrhal phthisis does well at Madeira. (7) Cases of scrofulous or (8) fibroid phthisis may be sent to the Riviera. (9) Bronchiectatic phthisis does best at the Riviera.' (10) In phthisis with emphysema, Egypt or the Riviera should be selected. (11) Laryngeal phthisis does best at San Remo or Mentone. (12) Elderly patients winter best in Egypt; (13) erethitic patients do well there also. (14) Anæmic patients and (15) those with heart or ar-terial disease should choose the Riviera.

The author, of course, looks at these various resorts from the point of view of their accessibility from Eng-land. He speaks highly of Colorado and Southern Cali-fornia. As to sea voyages, any advantage as to fresh air, etc., is outweighed by the disadvantages to an invalid at sea. Foreign climates for the poor are practically non-existent. Sanatoria do not supersede climatic treatment.

Four Cases of Perforation (Gastric and Duodenal) Successfully Treated by Operation. By Dr. A. C. Wil-son.

The Treatment of Puerperal Eclampsia by Saline Diuretic Infusions. By Dr. R. Sardine.—The author calls attention to the great value of saline diuretic infu-sions in the treatment of puerperal eclampsia. In twenty-two cases treated by him in this manner, only three patients died: a death rate of 13.64 per cent. Of the three fatal cases, one patient had a perforating duo-denal ulcer; a second, double pneumonia; and the third, marked degeneration of the liver. Of the twenty-two children, thirteen were born dead. The saline solution used consisted of one drachm each of sodium chloride and sodium acetate to the pint of water. From one to three pints were injected under the breast or into the abdominal wall.

British Medical Journal, June 15, 1901.

Hepatic Inadequacy and its Relation to Irregular Gout. By Dr. I. B. Yeo.—By "hepatic inadequacy" the author means such defect or disturbance of the functions of the liver as, while stopping short of causing actual disease of the liver, yet leads to impairment of the general health. He believes that many, if not all, of those cases known as "irregular gout" arise in this way. Uric acid does not cover the whole field of gout; indeed, it spreads widely over other pathological fields that have nothing to do with gout.

The beneficial effects of alkaline sodium solutions in cases of irregular gout are well known; they exert their remedial influence by acting on the gastric, intestinal, and hepatic functions, quite irrespective of any direct solvent action on the sodium biurate.

The symptoms referable to hepatic inadequacy presented by patients with irregular gout are pallor of fæces, constipation or diarrhœa, enlargement of the liver, muddiness of the complexion, yellowness of conjunctivæ, and anorexia. The urine is high-colored and of high specific gravity. On boiling and adding nitric acid, various shades of mahogany color are developed. The kidneys are not functionally diseased in these cases, but help in the process of elimination of excrementitious substances which normally pass out with the bile. Apart from individual peculiarities common to the gouty, the safest diet for these patients is the simplest diet. The pounded lean meat and hot-water diet is about the simplest that can be offered to the feeble digestive organs. A limited amount of simple food means digestive ease and freedom from goutiness. There is more in the quality and cooking of the food than in the kind of food. The best wine for patients needing a stimulant is a dry port, long in the wood; the more diuretic it is, the more suitable. The author is opposed to the view that most gouty patients need exercise; his experience has been that it is often difficult to get them to take sufficient rest. In the alkaline sodium salts we have the most valuable and indispensable of hepatic stimulants.

The Chemical Side of Nervous Activity. (*Abstract.*) By Dr. W. D. Halliburton.—The first and second of the Croonian lectures for 1901. They will be abstracted when completed.

A Report on 620 Cases of Typhoid Fever Treated in the Royal Victoria Hospital, Montreal, during the Seven Years Ended December 31, 1900. By Dr. J. Stewart.—Of the 620 cases of typhoid fever here reported, 34 ended fatally, giving a mortality of 5.4 per cent. In 93 per cent. of the cases the onset was slow, and was characterized by headache and *malaise*. In 7 per cent. the onset resembled that of pleurisy; in 5 or 6 cases, the onset resembled that of a sharp attack of appendicular inflammation. Epistaxis was an early symptom in 12 per cent. of the cases; but it was rarely an initial symptom. In only a very few cases were symptoms of meningitis met with. The percentage of deaths from the various causes was as follows: Perforation, 32 per cent.; intoxication, 29 per cent.; hæmorrhage, 26 per cent.; and miscellaneous causes, 13 per cent.

Out of the 11 cases of perforation an operation was attempted in 8, but in no instance with a successful result. Such operations should be performed within twelve hours after the accident. Little dependence can be placed upon the presence or absence of leucocytosis as diagnostic of perforation. A summary of the work of C. K. Russel upon this subject is given, and his conclusions confirm the author's view. Hæmorrhage occurred in 34 of the 620 cases (5.4 per cent.), proving fatal 9 cases. In the treatment of this condition the followi measures were carried out: quiet, elevation of the foot the bed, application of cold to the abdomen by means a Leiter's coil, opium internally, and restriction of di

Cholecystitis was met with in 7 cases, one of whi proved fatal. A relapse occurred in about 9 per ce of the cases, the average duration of which was 18 da In 7 cases the relapse was more severe than the prima attack.

The Widal test was employed in 370 cases, with positive result in all but 8. The earliest date on whi the reaction was found was the third day. One case typhoid without intestinal lesions was met with; typh bacilli were found in the tissues, and the blood gave t Widal reaction.

The routine treatment was hydrotherapy; it was us in about 83 per cent. of the cases throughout the ent course of the disease. The non-bathed cases include (1) Rebellious cases; (2) temperature not above 102. F. at any time during the course of the disease; (3) i perfect reaction following the baths; (4) cases admitt late in the course of the disease; and (5) the advent severe abdominal complications.

The Surgical Treatment of Typhoid Fever. By I T. J. Maclagan.—Opening the peritoneal cavity in ca of perforation of the bowel in typhoid fever is an ope tion which has been performed often enough, and wi sufficient success to give it the standing of a justifiab and proper procedure. But there is another class cases in which surgical intervention may be just as ben ficial; these are the cases where the sloughs and deco posing discharges are unduly retained in the large bow producing distention of the colon with temporary paral sis of its muscular walls. The passage of a rectal tu is usually of little avail, and the patient passes into state of typhoid depression, with distention of the abd men and failure of the heart. In such cases the auth suggests that an opening be made into the large bow through which it could be washed out. In such ca we have to deal with septic poisoning rather than wi typhoid fever; by washing out the bowel as described t septic material would be removed and the distended col would return to its normal size, but the operation shou not be delayed until the patient is *in extremis*. The a thor has had no opportunity so far to put this sugg tion into practice. If left alone such cases surely d while the risk attendant upon the operation suggest would be almost *nil*.

A Case of Typhoid Arthritis Proper. By J. Buchan, M. B.—The author reports a case of typh fever occurring in a boy aged eleven years, which w complicated by arthritis of the left elbow joint. T effusion soon suppurated, and the joint was opened a drained. The pus contained only streptococci and st phylococci; no typhoid bacilli. There was nothing point to rheumatism beyond the pain and swelling of t joint.

On Anæmia in Typhoid Fever. By Dr. T. Houst —The author has carefully studied the anæmia and h poleucocytosis of typhoid fever, and reaches the concl sion that the anæmia is not due to destruction of the r corpuscles, but to an excessive dilution of the blood blood plasma. In the same way the diminution in nu ber of the leucocytes is not due to the action of toxin but to the dilution of the blood. The multinuclear el ments are apparently diminished, but in reality rema stationary, the same being true of the eosinophiles. T

nuclear elements apparently remain stationary, but in lity are increased. The leucocytes respond to any ammatory stimulus, but, owing to the dilution of the od, their response is apparently slight. The fall of multinuclear elements is roughly proportional to the rease in hæmoglobin, the percentage of which may be en as an index of the dilution of the blood. The tenıcy to dilution of the blood in typhoid fever may be to increased activity of the lymphatic system. This ıld account for the increase in number of the lymphoes in the blood.

Simple Continued Fever in South Africa. By F. J. Porter, R. A. M. C.

On the Protection from Water-borne Disease Afford- by the Pasteur-Chamberland and Berkefeld Filters. W. H. Horrocks, M. B.—The author's observations ıear to justify the following conclusions:

1. Typhoid bacilli are not able to grow through the ıls of a Pasteur-Chamberland candle, and if proper e is taken to prevent the bacilli from passing through vs or imperfect fittings, such a filter should give comte protection against water-borne typhoid fever.

2. Typhoid bacilli can grow through the walls of rkefeld candles, the time required being between four l eleven days. When employing this filter, the cans should be sterilized in boiling water every third day.

Hæmaturia Following the Administration of Uro- pin. By Dr. W. L. Brown.—The author reports the urrence of hæmaturia in two cases of typhoid fever er urotropin had been given for eight days, and its id subsidence after the drug was stopped. The bladd appeared to be the source of hæmorrhage. Discomt, which preceded the hæmaturia, should be considd a danger signal when using urotropin. Ten grains the drug was given three times a day.

A Fatal Case of Hæmatoporphyrinuria. By Dr. H. ldo.—The author reports the case of a man, aged rty-three years, who had been in the habit for some rs of taking sulphonal for insomnia. He developed astritis, followed by delirium and convulsions, and ic paresis; he died on the twenty-fourth day of his ess. The urine was very dark-red in color, and specscopic examination showed bands corresponding to se produced by hæmatoporphyrin.

Hibernation of Anopheles in England. By Dr. G. F. Nuttall.—The author reviews the various observaıs that have been made as to the hibernation of the eral species of anopheles in England. He himself has erved the larvæ of *Anopheles bifurcatus* to hibernate. le larvæ of *Anopheles maculipennis*, which were in same tank, invariably died as the winter progressed.

On a Common Source of Diphtherial Infection, and eans of Dealing with it. By Dr. R. T. Hewlett and H. M. Murray.—In this communication the authors w the frequency with which children whose throats presumably healthy may serve as sources of diphria. The Klebs-Loeffler bacillus and pseudo-diphthebacillus exist in the throat in many children without lucing symptoms. Of 385 children examined by the ıors, only 235 were free from both kinds of bacteria. Klebs-Loeffler bacillus was present in fifteen per of the cases.

Mouth cleaning in infants, and teeth cleaning in ng children, should be vigorously insisted upon, and ing should be discouraged.

Klinisch-therapeutische Wochenschrift, May 26, 1901.

Medical Treatment of Perityphlitis. By Professor Bourget.

Treatment of Anorexia by Crymotherapy.—Dr. Izso Hönig records remarkable results from the use of "carbonic-acid snow," *i. e.*, carbonic acid at a temperature of 65° below zero (C.). For the anorexia of acute infectious diseases or of the chronic ailments, the local application of this snow is said to restore the appetite almost immediately.

Münchener medicinische Wochenschrift, May 21, 1901.

Technics of Amputation of the Vermiform Appendix.—Dr. Otto Lanz recommends squeezing of the site of amputation of the appendix before its incision by the angeiotribe. By this means the muscular and mucous coats are sharply retracted and the serous covering alone requires ligation. He regards this method as infinitely superior to inversion of the stump and says that it is the safest means of amputating the appendix.

Cholecystogastrostomy.—Dr. F. Krumm reports two successful cases and considers it a very desirable operation in cases in which a fistula cannot be established between the gall-bladder and the duodenum.

The Prophylaxis of Venereal Diseases.—Professor Thomas von Marschalko, who was a member of the Brussels conference, urges the instruction of the laity in methods of self-protection. Men should be taught that an intact skin, before and during intercourse, is the safest measure against contracting syphilis. He feels very doubtful as to the effects of State regulation upon the spread of venereal disease, and he is very certain that it cannot be improved upon. He does not believe that prostitution can be abolished.

Inhalation of Rarefied Fluids.—Dr. M. Sænger says that we must accept as proved the inhalation of rarefied fluids within the larynx and in the respiratory passages below it. The inspiratory effort no doubt carries the fluid into the deepest parts of the lungs. He thinks, however, that the amounts inhaled are so minute that their therapeutic value is almost worthless.

Different Forms of Degeneration. By Dr. Adler.

Case of Precipitate Labor. By Dr. H. Witthauer.

Portable Aseptic Hypodermic Case. By Dr. Salm.

Acute Yellow Atrophy of the Liver. By Dr. Aby Bey Ibrahim. (*Concluded.*)

May 28, 1901.

Vaporization of the Uterus.—Dr. H. Fuchs advises the use of narcosis for atmocausis of the uterus to avoid the pain of cervical dilatation as well as to enable a thorough pelvic examination to be simultaneously made. In twenty-two cases the results of vaporization were far more satisfactory than curetting for combating profuse menstruation at the menopause, with which alone his paper deals.

Vaporization of the Uterus. By Dr. S. Lachmann. (*Continued article.*)

Injurious Results of Amputation of the Cervix.—Dr. M. Græfe protests against amputation of the vaginal

portion whenever there is an erosion of that portion of the cervix. When erosions do not heal under prolonged treatment, however, they had better be carefully watched for fear of malignant degeneration. The operation performed upon nervous and hysterical women is likely only to increase their infirmities.

Causes and Treatment of Dysmenorrhœa.—Dr. A. Theilhaber says that a real stenosis of the cervix rarely accompanies even a severe anteflexion. Stenosis usually arises from medical treatment by caustics. Moreover, stenosis has nothing to do with the ætiology of dysmenorrhœa. He does not regard metritis or endometritis as causes of painful menstruation, if they are not complicated by some peritoneal involvement. Oöphoritis alone cannot evoke dysmenorrhœa unless there is a coexisting perimetritis. He speaks encouragingly of Fliess's work in cocainizing the so-called "genital spots" in the nose, and thinks it due to a vasomotor paralysis leading to anæmia of the uterus. (*To be continued.*)

Prolapse of the Urethra in the Female.—Professor Glæveckе says that acute prolapse of the urethra must be treated by reposition and by the application of some apparatus to keep it in place until it remains so spontaneously. Caustics and astringents should also be applied to the urethral mucous membrane. Chronic cases are to be treated like cases of rectal prolapse, by radial incisions with the actual cautery.

Instrumental Perforation of the Uterus. By Dr. F. Schenk.

Agnathia.—Dr. Kuse reports five cases of congenital absence of one or both jaws, with special reference to the defects of the tongue. In two cases the hyoid ring was also absent, with a saccular dilatation of the pharynx. In all the cases with a well-developed hyoid ring the indications of a tongue were present, the posterior portion of the tongue being plainly in evidence, the anterior part, however, absolutely wanting. The thyroid gland can develop well, despite a high degree of malformation of the pharynx or the hyoid ring.

Presse médicale, May 22, 1901.

Hæmoglobinuric Bilious Fever in Paludism.—M. Troussaint concludes that such a condition has been actually proved to exist in the tropics, and can be shown to be due to hepatic changes in malarial fever, acting upon the blood by some form of demineralization. Its treatment consists in the administration of salts of quinine in small doses, but sufficiently large to destroy the hæmatozoa. Intravenous injections of sodium chloride are also necessary to restore the blood to its normal condition by increasing its isotonic power and by eliminating from the blood the sugar, the urea, and the bile, which are the deleterious agents.

Radical Cure of Cervicitis.—M. Petit describes Poncy's method of excising a conical piece of the cervix with its mucosa, and uniting the raw surfaces with a purse-string suture.

Gazette hebdomadaire de médecine et de chirurgie, May 19, 23, and 26, 1901.

Lead Colic.—M. Bernard gives a lengthy clinical study containing a mass of detail, which should be read by those interested.

Intestinal Obstruction Due to Vicious Position of the Intestines.—M. Frœlich reports two such cases, one due to a torsion of the entire mesentery about its pedicle, the other to rotation of the cæcum about its own vertical axis. In these cases there was absence of fæcal vomiting, few signs of obstruction, the occlusion not being absolute, and there was considerable ascites.

Rocking of the Scapula in the Reduction of Subcoracoid Dislocations.—M. Berthaut says that by careful and slow manipulation of subcoracoid dislocations of the shoulders, the reduction becomes easier than usual, if the scapula can be made to move or rock upon its long axis simultaneously with the other approved manœuvres.

Riforma medica, May 9, 1901.

Drug Rash after the Use of Phenocoll Hydrochloride. By Dr. Giuseppe Cao.—The author has observed an interesting case in which the use of phenocoll hydrochloride in a man aged twenty-eight years gave rise to an eruption. He had been suffering from an attack of malarial disease, which proved resistant to quinine, even after subcutaneous injections. One gramme of phenocoll hydrochloride was given in two doses, and, to the author's surprise, an eruption appeared on the neck, the flanks, and the arms, consisting of bright-red macules of the size of a hempseed, discrete, with clean-cut margin, disappearing on pressure. There was slight pruritus, and the malarial paroxysm recurred at the usual hour without change. The eruption disappeared soon after this paroxysm, but on the next day it reappeared three or four hours after the administration of a gramme of phenocoll. The same series of events followed on the third and fourth day. Two grammes of the drug produced a more intense eruption, which lasted longer. The patient was finally cured by change of climate and a stimulating treatment. The drug must therefore be added to the list of drugs that may produce eruptions.

May 10, 1901.

"Lavage of the Organism" in Experimental Tetanic Infection. By Dr. C. Tonzig.—"Lavage of the organism" consists in the introduction into the circulation of an indifferent fluid such as normal salt solution, in large quantities, in order to "wash out" the toxines produced by pathogenic germs. This method of treatment presents attractive possibilities in tetanus, which is an essentially toxic disease. Sanquirico, in 1888, proposed the use of this method in alkaloidal poisoning, *e. g.*, with strychnine. In this way he saved dogs from alkaloidal poisoning by causing the poison to be eliminated in the excretions, the volume of which was increased by the injection of salt solution. Since then Gomez has successfully used this method in a child with tetany from influenza; Lasletta, in grave cases of diphtheria, with threatening heart failure; Bose and Baylae, in typhoid fever; and Coilland, in tetanus. The author performed a series of experiments on tetanized animals some months before the publication of Coilland's case, and now publishes his results. He concludes that: (1) Lavage of the organism through the peritoneal cavity in tetanus cannot be said to give absolutely certain curative results; (2) this fact helps to prove that the virus of tetanus does not circulate in the blood, but is fixed in the tissues; (3) when the penetration of the toxine into the organism is not very rapid, lavage with artificial serum retards the appearance of tetanic symptoms and delays death for

few days. Hence this method of treatment should not be rejected entirely and may serve as an adjuvant to serumtherapy, especially when the serum cannot be obtained at once.

May 11, 1901.

On the Toxicity of Strychnine when Injected into the Body, with Special Methods and Procedures. By Dr. Leopoldo Baruchello.—Czyhlarz and Donath (*Centralblatt für innere Medicin,* April 13, 1900) have shown that if an extremity of a guinea-pig is ligated and a fatal dose of strychnine is then injected at the peripheral part of the limb, the guinea-pig will not die, even though the ligature is removed in four hours. They conclude that the muscles, lymph, and blood of the guinea-pig produce a substance which is capable of neutralizing strychnine. The author has performed a series of experiments on animals and has studied the various questions which arise in this connection. He concludes that the special resistance to strychnine which, under certain conditions, may be created in guinea-pigs, depends principally on the slowness of absorption which is secured by the method of injection and on the antitoxic properties of the tissues. The delay in the absorption of the poison is very important, for it renders possible the development of the complex antitoxic action of the tissues.

May 13, 1901.

Formation of Calculi around a Catheter which had for a Long Time Remained Forgotten in the Bladder. Unsuccessful Attempt at Suprapubic Cystotomy. Extraction after Peritoneal Vesical Incision. By Dr. L. Rizzo.—A case, the features of which are given in the title. The patient was a man, twenty-eight years of age. The calculus was discovered by means of a sound; the catheter had remained in the bladder for several years.

May 14, 15, and 16, 1901.

Notes on Gastric Semeiology. By Dr. Guglielmo Memmi.—A series of short articles on the diagnosis of gastric affections. The author considers two questions: (1) The chemism of the stomach with the various test meals; (2) sarcinæ and the bacillus of Oppler-Boas in cancer of the stomach.

He has studied the results of administration of the various test meals, *i. e.:* (*a*) The test meal of Ewald and Boas (100 grammes of bread and 100 grammes of water); (*b*) the test meal of Andrea Ferraunini (100 grammes of lean meat and 150 grammes of water; (*c*) the test meal of Sée, a modification of the breakfast of Leube-Riegel (100 grammes of bread, 100 grammes of lean chopped meat, and 150 grammes of water); (*d*) the test meal of Talma-Troller (200 grammes of broth, made with Liebig's beef extract. He concludes as follows as regards these test meals: 1. With the meals of Talma-Troller and Ewald-Boas, phanerochlorhydria is almost constant, while with those of Sée and Ferrannini, particularly with the latter, cryptochlorhydria predominates. 2. With Talma-Troller's meal a gastric juice is obtained which gives the smallest total hydrochloric acidity; with that of Ewald-Boas, one that gives a medium total hydrochloric acidity; with the other meals, one that gives the maximum total hydrochloric acidity. 3. In order to get a true estimate of the conditions in a stomach, one must try the various test meals and form a judgment according to the results obtained.

The author's researches on cancer of the stomach are summed up in the following conclusions: 1. *Sarcina ventriculi* may be found with considerable quantities of lactic acid and absence of hydrochloric acid in cases of cancer of the stomach. 2. The coexistence of the sarcina and the filiform bacillus is not infrequent. 3. The bacillus of Oppler-Boas cannot be regarded as a pathognomonic sign of gastric cancer.

Vratch, April 28th (May 10th, new style.)

Changes in the Blood in Animals with Intestinal Self-intoxication. By Dr. A. J. Krasnoff.—The number of red cells is diminished by from 15.6 per cent. to 72.5 per cent. The number of white cells is sometimes increased, sometimes diminished. The maximum decrease was 80 per cent., the maximum increase 60 per cent.; the minimum increase was 10 per cent., and the minimum decrease was 10 per cent. The quantity of hæmoglobin was considerably decreased. The specific gravity falls, but this fall is not always proportionate to the number of red cells. The quantity of iron is diminished.

On Sporadic Elephantiasis. By Dr. L. V. Orloff. —*(Concluded).*

Haffkine's Lymph and other Remedies that Produce Active Immunity against the Plague. By Dr. A. F. Vigur.—In speaking of the action of Haffkine's serum upon man, the author states that the results of numerous experiments in India have shown that this serum produces immunity in the majority of persons inoculated. This statement is based upon the results reported by a number of authors. The first attempt at inoculation of human beings with "killed" agar cultures of the plague bacillus was made by Kolle in 1897. Lustig and Galeotti, in Florence, also experimented on men with plague cultures. In view of the small number of inoculations with Lustig and Galeotti's serum, it is impossible to give statistics which would show the efficiency of the treatment and the duration of the immunity with this substance. Injections of the Italian serum in doses of from two to three milligrammes are probably followed with less fever than the injection of the other serums. After the injection of Haffkine's serum in the ordinary dose for immunization there is a rise of temperature, usually to 102° F., sometimes to 104° F., and rarely to 105° F. The fever remains for from fifteen to forty-eight hours, sometimes longer, and at the site of the injection there is considerable pain, swelling, and redness on the following day. The local symptoms remain for from three to five days, and then disappear. (*To be concluded*).

Kumyss Treatment and some Kumyss Settlements in Ufa. By Dr. P. V. Zesarievsky.—(*Concluded*).

Journal Akouscherstra y Gienskich Boliesney, February, 1901.

The Bacteriology of the Uterine Cavity and of the Falloppian Tubes in Non-pregnant Women. By Dr. P. V. Michine.—The author gives statistical data concerning the various germs that have been found in the uterus and Falloppian tubes of non-pregnant women. He concludes that the significance of germs in the causation of inflammations of the internal genitals in women has not yet been settled, except as regards the *Micrococcus gonorrhœæ* and the *Bacillus tuberculosis.* In order to study this question further, he examined the internal genital organs in a number of cases, and made forty-nine observations, including twenty-four uteruses. Of these, eight showed glandular endometritis, ten interstitial endome-

tritis, four mixed forms, and two hæmorrhagic. In one case of diffuse endometritis there were streptococci, and in two cases the Falloppian tubes contained streptococci, and in both these germs were found in one tube only. *Staphylococcus pyogenes aureus* was found in one uterus, and in two cases in the Falloppian tubes; in one case, in one tube only, in the other, in both tubes. *Micrococcus flavus liquefaciens* (Fluegge) was found once in the uterus in diffuse endometritis. A diplococcus resembling closely that described by Tchaikovsky was found in one case in a uterus showing diffuse endometritis. *Micrococcus tetragenus* (Koch-Gaffky) occurred three times in tubes, in each case in one tube only. In one tube there was a diplococcus, the nature of which could not be well determined. The gonococcus occurred in one case in diffuse endometritis in the uterine cavity. The uterus could not be examined in all the cases, as a solution of iodine was always injected into the cavity before hysterectomy. The cultures were always obtained pure, and there was no synbiosis. The virulence of the germs was only tested in two cases. In the Falloppian tubes the germs were found in the presence of old catarrhal changes, and also in some cases with healthy mucous membrane, so that nothing can be said as to their significance. The author has also studied the microscopical features of these specimens. In a subsequent article he will study the anaerobic bacteria found in the uterus and appendages under various conditions.

Fifty-three New Cases of Inflammatory Conditions of the Uterine Appendages Treated with Electricity. By Dr. I. S. Kalabine.

The Treatment of Diseases of Women in Franzensbad. By Dr. L. Th. Nenadovitch.—The author has investigated the methods of treatment employed in Franzensbad for diseases of the female generative organs, especially the course of "moor" or mineral mud baths. He concludes that (*a*) the existing data as to the physiologic effects of mud baths are not sufficient to place this method of treatment on a scientific basis; (*b*) all methods of therapy with mud baths can be classified into two categories—baths with heat and sweating, and baths that do not raise the temperature of the body or cause increased perspiration; (*c*) when compared with the laws of absorption of blood and lymph it is evident that both methods act in the same way, namely, according to the principle of wave-like action on the organism, the conservation of energy, and the balance of chemical affinity; (*d*) the sweating method is more effective than the other, both in theory and in practice; (*e*) Franzensbad belongs to the class of watering places where the non-diaphoretic method is used; (*f*) in the treatment of diseases of women there, the ferrous waters that the patient drinks have a great deal to do with the result; (*g*) the combination of mineral-water drinking and mud baths, as used in Franzensbad, is practically equivalent to the diaphoretic method of treatment, as is proved in practice; (*h*) the non-diaphoretic method is perfectly harmless, while the diaphoretic method is accompanied with a certain amount of risk; (*i*) the waters of Franzensbad may be prescribed in various conditions of the digestive tract. The climate there is adapted to the treatment, and the management of the place is satisfactory.

On the Treatment of Postpartum Parametritis with Weight Pressure. By Dr. S. A. Gliadkoff.—The author reports his experience with this method, which was first suggested by Schauta. The patient is placed on her back, with elevated pelvis, a colpeurynter is introduced into the vagina, and the bag is filled with mercury. A bag of shot is placed on the lower part of the abdomen. This pressure is said to cause absorption of exudates, etc. Later, massage, with or without baths, is used to remove infiltrations. In three cases, the histories of which he cites, the author seems to have attained satisfactory results with this plan.

An Attempt to Apply the Laws of Evolution to the Study of the Causes of Determination of Sex (*concluded*). By Dr. N. Schipoff.—The author has studied 368 pregnancies in order to discover the nature and laws of sex determination. He studies the question from a number of points of view, giving statistics for each factor which may play a rôle in the determination of sex. He distinguishes "two types of pregnancy," one for boys and one for girls. The pregnancy leading to the birth of a boy, according to his statistics and a comparative study of other writers, is characterized as follows: The parents are comparatively poor, physically healthy, sober, and do not use tobacco, the father is somewhat older than the mother, the wife is over nineteen years of age, the husband over twenty-four. The wife is a brunette and has certain masculine characteristics in her mental sphere. She is comparatively tall, menstruation has begun comparatively late, and her psychic nature exhibits marked energy and passion. Both parents love each other passionately. Conception has taken place in a sober state on the part of both parents, and on a day which approached the full moon (?). During the first months the wife suffers from nausea, vomiting, and retching, and she grows fastidious about her food, preferring strongly flavored articles of diet. She eats little and grows thin. She gets spots on her face. Mentally she is cheerful, of equable temper, has little desire for sleep, and shows a tendency to work and exercise. The sexual function is not markedly changed. She sleeps on the right side and feels the first movements of quickening on the left. The labor is comparatively short, and milk usually appears on the third day.

In a typical pregnancy "with a girl," the parents present exactly the opposite conditions from those stated in the foregoing paragraph, *e. g.*, they are comparatively wealthy, weak, inclined to alcoholic drink and to tobacco (in Russia tobacco is used frequently by women of the higher classes), and they are often under age. The wife is frequently a blonde, is intensely womanly in her character, etc., etc. The author has found that "typical" pregnancies are more often found when the child is a girl, while mixed, or atypical ones, are more frequently met with when the child is a boy. Thus he thinks that a change in a single factor is sufficient to "turn the scale," so to speak, in favor of a boy. The development of sex in the embryo does not depend upon a contest between the male and female elements, but upon the mutual capacity of the parents of developing a greater or lesser energy and vital activity. All properties and peculiarities of the human soul are common to both sexes, but the forces of atavism and heredity act more markedly on the female. Variation is more common to the male. The Schenck theory is not founded on facts, as a meat diet produces girls, and not boys. The study of popular notions regarding this question will give a better guide for prognosis of sex than all modern theories (?). The author places in the first rank of factors influencing sex the psychical qualities of the parent, in the second rank their physical qualities. He sums up by saying that "a boy must be *earned* by the personal efforts of the parents, while a girl is given to them *gratis*."

Proceedings of Societies.

AMERICAN MEDICAL ASSOCIATION.

Fifty-second Annual Meeting, Held in St. Paul on Tuesday, Wednesday, Thursday, and Friday, June 4, 5, 6, and 7, 1901.

Section on Laryngology and Otology.

(Concluded from page 1009.)

The Relation of the Middle Turbinated Body to Chronic Nasal Diseases. By Dr. C. S. Baker, of Bay City, Mich.—The author said that the nasal chambers could be considered as mere ducts, and we must regard them as avenues for cleansing the upper air passages. By nasal operations we drained the upper cavities by removing the obstructions. The ethmoidal cells pressed against the sæptum; by opening the cells we obviated the necessity for a second operation.

Dr. W. E. Casselberry, of Chicago, said that we should not interfere with the middle turbinated unless it was diseased or obstructed drainage. In most cases of empyema, drainage by operation alone could not be relied on. The operation was not devoid of danger; there was liability to severe hæmorrhage or infection. After the use of suprarenal capsule or cocaine the tissues became shrunken and parchment-like, and often their incision was followed by violent and persistent hæmorrhage. Adrenaline, however, was of great assistance, its one drawback being its liability to cause secondary hæmorrhage.

Packing with iodoform gauze for twenty-four hours could be resorted to after removal of the middle turbinated. The speaker said he considered it unsafe to send a patient home without this provision.

Dr. Warden considered the middle turbinated the chief seat of trouble in the nose. The antrum could be drained by removal of this bone. A deviation of the sæptum was of minor importance. He thought the initial lesion of catarrhal disease could be traced to the conditions of the middle turbinated.

Dr. Cobb, of Lynn, considered drainage of paramount importance. He said that there was no difference between chronic discharges from the nose and those from other parts of the body. By removal of the middle turbinated we secured efficient drainage.

Dr. E. Fletcher Ingals, of Chicago, said that the operation under discussion relieved the cerebral and mental symptoms, as well as the pressure and obstruction incident to chronic nasal disease. He objected to the use of gauze, as it insinuated itself into small cavities and could not be easily removed. He found the use of cotton preferable.

Dr. Redmond W. Payne, of California, also favored the use of cotton. He believed that the repeated use of adrenaline would prevent hæmorrhage. It could be continued for several days. He also advised the removal of the middle turbinated beneath the mucous membrane; by this method there was less bleeding and the incision was easily sealed.

Dr. E. Mayer, of New York, spoke of the danger of permitting patients to go home without packing the nose after removal of the turbinated body. In some cases, instead of employing packing, he used the adrenaline every two or three hours, and found the effect satisfactory. He recalled the treatment resorted to previously to the days of hæmostatics: The patient, after operation, was put to bed and kept there for three or four days; no packing was used and the result was even more successful than by the present method.

Dr. Baker, in closing, said that, from his experience, gauze did not insinuate itself into the smaller cavities any more than cotton did. He did not think it was always possible to put the patient to bed. He had been obliged to resort to packing in many cases, but considered it dangerous, as pus might thus be retained and produce infection.

Asthma as a Result of Nasal Conditions. By Dr. J. H. Farrell, of Chicago.—Dr. Farrell said that all nasal affections had a tendency to produce asthma. As regarded treatment, abnormal nasal conditions should be corrected, preferably by cutting, and cardiac and rheumatic conditions should receive attention. The reader cited three cases of asthma which were relieved by operation on the nose. He expressed the belief that the majority of cases of asthma were due to abnormal nasal conditions.

The Effect which the so-called "Catarrhal" Diseases of the Nose and Throat may have upon the General Health. By Dr. C. M. Cobb.—The reader said that by relieving the local catarrhal conditions the general health would improve.

Dr. Casselberry thought the local conditions would improve if the general health was good and was relieved of dyscrasia.

Empyema of the Frontal Sinus. By Dr. E. Fletcher Ingals, of Chicago.—The author regarded this as a rare condition. The prominent symptoms were pain and swelling in the region of the affected sinus, and nasal discharge. When pus was present, there was an elevation of temperature.

In some of these cases he found bony defects; in others the mucous membrane was swollen, closing the outlet of the sinus. The defects were sometimes congenital. Septic meningitis followed caries of the bones with possible rupture into the cranial cavity. This condition, the speaker said, was not found in patients under seven years, as the sinuses did not develop before that age. Chronic cases were the result of polypi and other nasal obstructions. The pain usually extended to the eye and photophobia was a prominent symptom. The pain might extend along the supra-orbital nerve. Relief was afforded by the discharge of pus. In some cases the diseased area might be outlined by transillumination, but as a diagnostic point this was of little value, unusual density of the walls of the sinus or absence of the sinus interfered with the value of the test, and in rare cases the light failed to reveal the presence of pus.

Anomalies of the Frontal Sinus and their Bearing on Chronic Sinusitis was the title of a paper by Dr. Redmond W. Payne, of California. The author cited several cases of anomalies that had come under his observation, together with the difficulties encountered in finding the source of the pus.

Dr. Casselberry referred to three cases in which there was no opening between the two sinuses, and in one case there was no sæptum. In two cases there was a direct passage to the maxillary canal.

Carcinoma of the Nasopharynx.—Dr. Chevalier Jackson, of Pittsburgh, cited thirteen cases of this rare disease, which was found in about equal proportion in males and females. In fifty per cent. of the cases, the patients were over forty years of age. The disease was not specially localized, and had a tendency to extend downward. Pain, fœtor, and hæmorrhage were the early symptoms. He favored early and complete ex-

tirpation as the best means of relief. Unfortunately, most cases were operated on too late. Death usually occurred within a year, even after total extirpation. The palliative treatment added to the comfort of the patient. The growth could be snared and the surface dusted with aristol. Extirpation of the glands afforded some relief.

Sarcoma of the Nasal Passages, with Report of Case.—Dr. Dunbar Roy, of Atlanta, Ga., stated that sarcoma of the nasal passages was on the increase, and is encountered with greater frequency in the region of the turbinated bodies. It was not as malignant here, however, as in other localities. He attributed the disease to a disturbance of embryonic tissue, and spoke of one case where disease was apparently carried by instruments. The prominent symptoms were closure of the nasal cavity and gradually increasing difficulty in breathing.

Dr. John N. Mackenzie, of Baltimore, objected to small parts of a suspicious growth being removed for microscopical examination. This subjected the patient to the risk of infection, caused profuse hæmorrhage and stimulated the growth. This was more especially true in growths of the larynx. The removal of a piece usually means the beginning of the end.

The Diagnosis and Treatment of Mastoiditis. By Dr. E. B. Dench, of New York.—No delay should be countenanced in dealing with mastoiditis. Opening the mastoid cells, under proper antiseptic precautions, is not a dangerous operation. Every cell should be scraped and the sharp scoop should be used until the firm bone is touched. When the symptoms are not prominent, an exploratory incision is justifiable. Paracentesis does not give the necessary results, as the cells are not properly drained by this measure. Washing out of the cavity is essential.

Dr. Sherman, of Cleveland, considered it unnecessary to operate in many cases. He regarded the operation as a dangerous procedure, causing severe hæmorrhage and even death. He called attention to the intimate relationship between the circulation of the mastoid and that of the meninges. He regarded paracentesis as safer and equally effective.

Dr. Cobb said that if pus was present artificial means of escape must be resorted to. When the drainage was good there was no necessity of opening the mastoid cells.

Dr. French, of Illinois, said that cases with severe pain or with pus escaping from the meatus required an operation. Operation was usually delayed too long, and meningitis resulted. He did not consider it a dangerous operation.

Dr. Baker said that there was usually more delay in resorting to operation in mastoiditis than to any other surgical operation. By not operating, the surgeon neglected his duty.

Mastoiditis after Subsidence and without Recurrence of Tympanic Disease.—Dr. Hiram Woods, Jr., of Baltimore, related a case in which mastoiditis occurred twelve days after the disappearance of inflammatory symptoms. Pus was found in the mastoid cells. He did not believe cold would abort mastoiditis. It masked the symptoms and increased the danger of hæmorrhage. A sufficient degree of cold could not be maintained to kill all the germ formation.

Dr. Dench favored the use of cold, having seen cases aborted by it.

Dr. Hollander desired to call the attention of the members to the good results of allowing the wound to fill up with blood clot and sewing up the wound after operation.

Section in Diseases of Children.

(*Continued from page 1063.*)

Prolonged Intubation. By Dr. Edwin Rosenthal.—With the advent of diphtheria antitoxine the operation of intubation obtained a fixed position. Before that time it was an expectant procedure and in a great measure experimental. To the antitoxine are also due the very many accurate results obtained in the study of the progress, as well as of the sequelæ, of diphtheria, especially those of the laryngeal type and those most serious cases requiring intubation. By this procedure we are not only able to relieve the impending suffocation, but we can cure the patient. Where before we were expectant, now we are more certain. The author goes into the various difficulties, taken up by different authors, in intubating and extubating, but sums up his general rule of practice as follows: "The tube should be removed within five days, unless it is removed by expectoration before, and should then be no longer required. If the patient requires the tube longer than this time it will be impossible to state when it will no longer be required. Cases in which the tube must be replaced, even after a week, should be considered abnormal, and should be classed under the head of prolonged intubations. Welch reports a case in which the patient required the tube for eleven months, finally dying of suffocation. Engelmann and others report the same results."

A case in a patient aged two years and seven months is reported. After the primary evidence (faucial diphtheria) had disappeared under the administration of antitoxine, a reinfection of the laryngeal type occurred on the seventh day. Intubation was performed, and a fortieth of a grain of strychnine given. The tube was taken out on the fifth day, but after thirty-six hours had to be replaced on account of stenosis. The tube was worn, being removed occasionally, for a period of thirty-six days. The tube is to be removed every two or three days, using progressively smaller tubes till the child no longer requires a tube.

Discussion.—Dr. Shurly referred to 240 cases of diphtheria, with a mortality of sixty. Of this number, eight were intubated. Prolonged intubation might be considered as those cases in which the tube remained in position more than six days, whereas ordinarily it should be removed on the fourth day. In these cases 3,000 units of antitoxine were always given immediately. Of the eight cases intubated, all recovered except one. The causes of bad results were usually traumatism or cicatricial bands. Plated tubes should be dispensed with.

Dr. Golden used the suprarenal glands wherever there was œdema. A small piece of silk thread was always attached to the tube so as to enable it to be easily withdrawn. It was often not necessary to withdraw the tube because the child would cough it up or pull it out.

Dr. I. A. Abt thought that the sooner the tube could be taken out the better it was for the child. It should be removed every morning; to allow it to remain in continuously caused œdema, trauma, etc. His custom was to remove it in twenty-four hours if possible. There were cases in which a tube could not be introduced into the larynx. This might sometimes be due to the fact that all of the tubes sold at the shops were not properly made.

The Prevention of Pulmonary Tuberculosis in Predisposed Children. By Dr. John A. Robison.—Before the discovery of the bacillus, hereditary tuberculosis was supposed to be of great importance, but in the light of

modern scientific inquiry infection has supplanted heredity. Direct transmission is extremely rare. Cases of tuberculosis occurring during childhood are in nearly all cases due to direct infection, so many statisticians claim, though an equal consideration of the two factors, heredity and the bacillus, must, I think, be maintained. Healthy individuals possess certain degrees of immunity to tuberculosis as well as other infectious diseases, and this immunity is transmitted to the offspring. If one parent is tuberculous the immunity is weakened. If both parents are tuberculous, the immunity is lessened to a greater degree, and there is engrafted on the progeny a cellular nutritional weakness. Children of tuberculous parents are easily affected, both directly and indirectly. Preventive treatment should commence with the ancestors. The education of the people would mean the improvement of the coming generations. A child should never be suckled by a tuberculous mother; as the babe grows, the diet should contain more fat. Early, a taste for hydrocarbons should be cultivated. Pure candy in moderation is beneficial to growing children if given after, not between meals. Children do not drink enough water, which is a great aid to nutrition and acts as a solvent for the effete material in the body. The diet should contain plenty of nitrogenous food. The period of puberty is a critical one. Enforced ignorance of the sexual laws oftentimes allows youth to fall into vices which weaken the cellular and organic structure of their bodies. The youth should be educated in such necessary physiological laws as tend to preserve the integrity of all the tissues and maintain nutrition at its highest point. Better hygiene should be secured in our schools. Those youths with a tendency toward tuberculosis should choose vocations that necessitate their being out of doors a large part of the time. The question of clothing is a most important one, especially if the patient is a girl. The patient should be warmly and loosely clad. A child with a predisposition toward tuberculosis should not wear a corset, which cannot help interfering with the processes of nutrition and development of the respiratory functions of the lungs. Thin shoes, insufficient head covering, or deficient underclothing are the stepping stones to tuberculosis. Cleanliness is a great preventer of germ infection. Hydrotherapy is of great value. Perfect hygienic surroundings, with a maximum of fresh air and sunshine, are prerequisites. Parents should be warned as to the danger of neglecting such diseases as measles, whooping-cough, influenza, amygdalitis, adenoids, etc. The feeble-minded are especially liable to a tuberculous disease.

Discussion.—Dr. Wood thought that there was a great necessity for the stricter enforcement of laws regarding the marriage of tuberculous people.

Dr. Work referred to the supreme importance of proper clothing. People should change their clothing as the weather changed. The two great objects of clothing were equal warmth and equal pressure.

Dr. Slagle pointed out that tuberculosis began in the stomach, through the influence of impaired nutrition, with consequent weakening of the power of resistance.

Protracted Influenzal Pneumonia in Infancy. By Dr. Frank X. Walls.—It has been observed that infants are in a high degree immune to influenza. Influenza, however, in infants frequently runs into protracted pneumonia. Nursing children are almost absolutely immune, even though their mothers are seriously stricken with the grippe. This immunity is explained by assuming that a potent antitoxine is eliminated in the maternal milk. Infants artificially fed are more susceptible to this disease as well as to others. Comby reports a case of grippe in an infant only seventeen days old. Relapses among children are not rare. The symptoms often come on very much like severe gastro-intestinal infections. Later, involvement of the respiratory tract occurs. Cough is at first short, but later increases in intensity until it is paroxysmal and continuous, similar to that of pertussis. Breathing is rapid, hurried, and jerky. More or less coryza is present in most of the cases. Oftentimes, inflammation of the middle ear, rupture of the drum, and discharge of mucopus complicate matters. The sputum was examined in all cases and the influenza bacilli were demonstrated. The pneumonia was clinically lobar. The consolidation was slow in development, with diffuse bronchitis over the remainder of the lung. The nervous system was signally exempt in the cases coming under the author's notice. The occurrence of an exanthem closely simulating the scarlatina rash, which has been pointed out by many authors, was wanting in the cases under consideration. Diagnosis is sometimes difficult, and the disease may easily be confounded with gastro-intestinal infections, ordinary bronchopneumonia, malaria, sepsis, or miliary tuberculosis. There is no specific treatment for influenza, but the little patient should be kept quiet and be fed on a nutritious diet suited to the digestive capabilities of the infant. Nauseating cough mixtures should be avoided. In the event of cardiac or respiratory failure, stimulation should be given as indicated. Cold applications to the skin frequently act in a happy manner in cases of threatened suffocation.

Congenital Malformations. By Dr. Carl Beck.—The author presented a very interesting paper on this subject and showed numerous Röntgen-ray photographs to demonstrate the cases reported. The most frequent abnormity of the upper extremity, he said, was polydactylism. Congenital deficiencies were naturally hard of correction, but even in such cases surgery was not without resources. Eiselsberg had successfully transplanted, for instance, a toe to the hand. The Röntgen rays were manifestly of great value in determining just what were the conditions present.

Membranous Colitis. By Dr. Charles Douglas.—Membranous colitis occurs most frequently in infants over six months old and less than two years. The stools resemble those of catarrhal enteritis, except in the amount of blood. The only feature which establishes a diagnosis is the occurrence of the pseudo-membrane. The severity of the attack and the gravity of the prognosis are in proportion to the amount of mucus passed daily and the length of time it continues. If for longer than ten days, the prospect of recovery is not good. It is rarely seen in nursing infants. A microscopic examination of the membrane shows that it is structureless and like a mass of fibrin, with no mucus or epithelial cells.

The cases presented show that different bacilli have the power, by their irritative qualities and the result of their toxines, to form this false membrane on the mucous membrane of the bowels. It is important to recognize that the character of the food is the principal ætiologic factor in the beginning of this trouble.

A Case of Ureteral Calculus. By Dr. W. W. Keen.—In this case the calculus was accurately located by the x rays before the operation was performed. The patient gave the usual history of stone in the ureter and, since a recent attack of scarlet fever, the paroxyms of pain in the left side have been more frequent and severe.

The patient was ten years old. On admission the left side of the abdomen was so painful that a diagnosis was impossible as to location of the stone, though the diagnosis of calculus, which had already been made by his physician, was perfectly clear. The photograph shows a calculus about one half the size of the last joint of the little finger. In the left ureter, a little below the level of the pelvic brim near the bladder, there was considerable difficulty in finding the ureter at the operation, as it was imbedded in a hard mass in which the ureter was apparently lost. On an examination the stone was found to be dark in color with a reaction for mucin; the shell was of calcium phosphate with a trace of organic matter. On the opening of the ureter about one quarter of an ounce of urine escaped from the somewhat hydronephrotic kidney. The ureter was packed with iodoform gauze, which was removed on the second day, and recovery was uneventful.

Dr. Keen also referred to four cases in which he had skiagraphed forty-seven cases of stone in the ureter. In most of these cases the stone had been subsequently passed, so that it was advisable to wait in most cases unless the stone was large, rather than resort to surgery, since the surgical operation was difficult, and in nearly all cases where the calculus was small it usually passed off itself.

Dr. Clifton Scott agreed to the extraordinary value of the x ray in these cases, but thought its value was negative as well as positive. He had operated on a case diagnosticated as calculus from the clinical symptoms. The diagnosis seemed perfectly clear, but at the operation it was found to be an endothelial growth and no calculus at all.

Dr. Keen also referred to four cases on which he had operated for stone and the stone had not been found.

Diabetes Mellitus in Childhood. By Dr. A. C. Cotton.—The author reported a very interesting case and called attention to the care with which these cases should be managed. He also pointed out the importance of examining the urine as a part of the routine practice in the diagnosis of the disorders of childhood, so rarely done by the average physician. This perhaps acounted for the seeming rarity of this disorder in young children. That heredity played a rôle in the predisposition of diabetes there seemed to be little doubt. It seemed to the writer that the inclination of many to attribute to the infectious diseases of childhood a causal relation to diabetes was not based upon careful analysis of the evidence and that the glycosuria following such diseases was usually of the transient class. The advanced case of diabetes presented a picture of extreme inanition, emaciation, muscular weakness, dry skin and hair, brittle nails, extreme irritability, and extreme sensitiveness to cold, while the urinary symptoms were always present. Furunculosis and other skin lesions rarely appeared in children. No routine treatment was applicable to even the majority of cases. At the present time the regulation of the diet seemed to be the most important therapeutic measure. The death certificate followed hard upon the diagnosis and the rate of mortality was very high. Elimination was most important in these little patients, while they should be protected from mental strain, shocks, frights, trauma, and exposure to inclement weather. The importance of an early diagnosis was evident since success in treatment bore an inverse ratio to the previous continuance of the disease. Too much stress could not be laid upon the importance of always protecting the child from any sudden lowering of the temperature.

Discussion.—Dr. C. F. Wahrer emphasized the view that medical treatment had little or no influence on the progress of diabetes, nor could much more be expected from the diet. Both might have some effect in improving things and holding the disease in check, but not in curing it. He could not recall any cases in which patients under ten years of age had recovered. Why should we take away from the patient, he asked, things that he could eat and insist upon him eating things that it took a strong adult stomach to digest? We should not commit ourselves to a routine treatment that might do more harm than good.

Albuminuria in Infancy and Childhood. By Dr. John R. Rathmell.—Diseases of the kidney in infancy and childhood are chiefly hyperæmias and nephritis following the contagious diseases, especially scarlet fever. Physiologically, albuminuria may occur at any period of infancy and childhood. It is most common between the ages of five and fifteen years and rarely persists; while albumin in the urine does not necessarily indicate serious organic disturbance in the kidney, yet its presence, in however slight a degree, demands the utmost watchfulness and care. Albumin is found in the urine after a rich meal, heavy muscular exertion, intense emotion, and cold bathing. Even when every other constituent of the urine is normal and functional albuminuria can be put aside, yet these cases require the most careful consideration, for, sooner or later, it may be after months or years have passed, grave lesions may show themselves, and we wake up to the fact that insidious degeneration has been going on in the meantime. It is very important, therefore, to decide whether the albuminuria is simply functional or is due to organic change. The prominent symptoms are albumin, high specific gravity, and œdema. These symptoms are especially found in interstitial and chronic parenchymatous nephritis, active hyperæmia, catarrhal nephritis, parenchymatous degeneration, passive hyperæmia, and acute nephritis. In acute nephritis the amount of albumin depends upon the extent of involvement of the glomeruli, and the amount of casts depends upon the extent of tubules affected. To meet the symptoms of œdema and ascites and treat them requires some thought concerning the condition of the patient. When threatening uræmia exists, diaphoretics, diuretics, and cathartics are indicated. Podophyllin, compound jalap powder and other watery purges may be used. Hot baths and hot packs should be used to cause profuse sweating where ascites is extreme and tapping is of value. For stimulation, teaspoonful doses of infusion of digitalis every four hours for a child five years old may be given. *(To be continued.)*

AMERICAN ACADEMY OF MEDICINE.

Twenty-sixth Annual Meeting, Held in St. Paul, on Saturday and Monday, June 1 and 3, 1901.

The following were among the papers read at this meeting:

The First-year Medical Curriculum. By Dr. Thomas D. Davis.—The author refers to the changes in the past few years in all medical courses. The change from a three-year to a four-year course is not necessarily an advance in medical education and there is an absolute necessity for higher admission requirements. The graduate in arts and sciences should have some advantage over those whose

preliminary education stops with the high school. The first year in the course in medicine should approach the last year in college. There are many of the college studies that are a great advantage to the medical man, especially logic, psychology, botany, and rhetoric.

SYMPOSIUM ON RECIPROCITY IN MEDICAL LICENSURE.

Is the Demand for Reciprocity Based upon Fact or Fancy? By Dr. Charles McIntire.—This paper is mainly an examination of the reports of various State boards of medical examiners to determine what percentage of physicians desire to remove from one State to another.

The Desirability of Reciprocity in Medical Licensure. By Dr. J. N. Hall.—The author refers to the fact of many physicians of excellent reputation wishing to locate in Colorado on account of their health or for personal reasons. These men are often men of experience and well fitted to practise medicine, but are rusty on the foundation studies, such as anatomy and physiology. Reciprocity would be of benefit to these men, but reciprocity should not be established except among those States whose requirements are essentially equivalent.

Reciprocity in Medical Licensure from the Standpoint of a Physician who Changes his Residence. By Dr. Edward Jackson.—About one in every four or five physicians changes his residence from one State to another some time in his career. Some give up the practice of their profession on account of the difficulties involved in such a change. The difficulty is not with the practical branches, which they are constantly in the habit of using, but rather with the preliminary studies, such as chemistry, anatomy, etc., whose technicalities they do not feel able to pass a stringent examination upon. The physician who wishes to remove cannot be expected to keep better posted upon those branches than he who does not wish to remove. The acceptance of the certificate of another State board as evidence of a proper acquaintance with such studies would remove the chief hardship. The fear of lowering the standard seems to be the greatest obstacle in the way. The standard in many States is placed "so high" that evasion in the form of special legislation lets in all sorts of irregular practitioners and threatens the permanence of medical practice laws.

Away with Reciprocity. By Dr. Charles McIntire.—The author thinks reciprocity will perhaps lead the profession far astray. Physicians already possessing the legal qualifications to practise medicine in one State should have certain privileges granted them in removing to another State. These privileges should be both fair to the people of the State as well as the physician, and the physicians already practising in that State.

SYMPOSIUM ON INSTITUTIONALISM.

Institutionalism: What is it? By Dr. Elmer Lee.—The Church was the first to start refuges for the sick and the afflicted. It was followed by corporate systems, State charities, and private enterprises. The individual fits himself for dependence by vicious habits and ignorance of knowing how to care for himself, also by misdirected energies and misfortunes. The author describes the classes that apply for institutional charities, and mentions some of the abuses connected therewith.

The Soul of Institutional Oversight. By Dr. John Curwen.—Under the present organization of society there is a necessity for institutions for the care of certain of the defectives. In order to protect society and to care for these defectives, it is necessary that the State give its aid to properly accomplish it.

Abuses of Institutionalism. By Dr. Eugene C. Carpenter.—Institutionalism is an outgrowth of organization. The result is routinism. Routinism begets perfunctoryism, which leads to automatism. Automatism is not different from that which is mechanical. Mechanical action is in fixed lines and does not depend upon experience and reflection. Opposition to innovations follows such action and is therefore opposed to progress. The result is that the institutionalist is dominated by the institution instead of dominating it, and so becomes its victim. The true institutionalist must always remain master of the institution and strive to keep out of too strict routinism. If he is narrow, all the participants in the institution will follow his narrowness. His policy, therefore, should be one of broadness and liberality, so that the institution may be known for its progress and breadth of purpose.

Tendencies in Hospitals for the Insane, with some Suggestions. By Dr. J. E. Robbins.—The author points out that too much isolation and lack of competition tend to make an institution inefficient. The medical staff is liable to become ultraconservative and the employés of all grades degenerate. It is necessary to keep in touch with the outside world and prevent the caste spirit of estimating men and women by themselves and not by their positions.

The Advantage of Civil Service Principles in the Conduct of the Insane Hospitals.—Dr. Gersom H. Hill read a paper with this title in which he describes the plan of the organization of the State institutions in Iowa, and treating of the benefits resulting from the system and the principles underlying it.

Evils in some Hospitals and Nurses' Training Schools that Might be Avoided by Proper Requirements, Regulations, and Inspections by the Board of Health of Each State. By Dr. Albert Goldspohn.—It is important that the administrative body of hospitals, asylums, etc., should be composed of both laymen and medical men. Competition is one of the greatest evils of the hospital system. The author also enters into the question of How can the abuse of medical charitable service in hospitals be reduced and regulated?

The Need of National Cooperation in the Establishment of Sanatoria for Tuberculosis. By Dr. A. Mansfield Holmes.—Sanatoria increase the chances for recovery and afford an opportunity for the carrying out of rigid sanitary regulations, which they do not have at home. They also educate the friends of those infected against the source of the infection, and thus prevent the spread of the disease. Sanatoria should be graded so as to suit those for whom they are instituted. They may be conducted entirely for profit or on the cooperative plan, or purely for charity alone. They may be located in climates known to possess beneficial influences or near large centres of population. The State could not direct its energies into a more useful channel than in the establishment and maintenance of sanatoria for tuberculosis.

Hospitals and Sanatoria Founded, Owned, and Controlled by the Medical Profession: A Case in Hand. By Dr. H. Bert Ellis.—The author divides hospitals into three classes—charitable, private, and mixed—and describes these classes and another owned and controlled by physicians alone. For the latter plan he claims many advantages and commends its adoption to physicians.

Institutional Life for Epileptics and for the Feeble-minded. By Dr. A. C. Rogers.—The family is unable to cope with certain abnormal conditions found in the life

of epileptics. These can only be properly managed in institutions. The organization, equipment, and management of these institutions should have in view the necessities and requirements of the particular class of people for whom they are intended. All institutions are remedial, custodial or a combination of the two. The community life is necessary for the feeble-minded and the epileptics in order to supply the variety of physical, mental, moral, and religious opportunities suited to their needs amid the most home-like conditions.

The Care of Epileptics in Massachusetts. By Dr. Everett Flood.—This paper is a history of institutional care of epileptics in Massachusetts, dealing more especially with statistics and the administration of the institutions.

A Suppressed Educational Problem. By Dr. James A. Taylor.—The author urges an "enlightened" natural selection in lieu of the ignorant, haphazard methods of selection practised by the majority of people, which result so generally in physical as well as intellectual deterioration.

Necessity for Revising Medical Fees. By Dr. P. Maxwell Foshay.—Medical services are not adequately remunerated, and a plea is made for changing the method of computing the value of professional services. The custom of charging a fixed sum is a relic of antiquity and is illogical. Charges should be made according to the importance of the service rendered, as is done in other callings. The greatest advantage would be the removal of all conditions that at present serve as an excuse to justify the offering of commissions by the surgeon and the specialist.

The Relation of the Clinical Laboratory to its Hospital. By Dr. Henry W. Cattell.—The author discusses this paper from a personal experience of twelve years and intimate connection with hospitals during that time in various capacities.

Letters to the Editor.

THE PRINCIPLES OF THE PHYSIOLOGICAL STANDARDIZATION OF DRUGS.

DETROIT, MICH., *May 9, 1901.*

To the Editor of the New York Medical Journal:

SIR: In his very excellent and scientific paper in the *Journal* for February 9, 1901, Dr. Leon L. Solomon makes some remarks upon the subject of physiological standardization of drugs which, to my mind, indicate that the gentleman is laboring under a misconception of the *rationale* of this, the only available method for estimating the medicinal worth of certain powerful drugs.

The writer says: "Conclusions concerning pharmacodynamics are reached with experiments upon animals or fowls *invariably* in a state of more or less perfect health; and these conclusions are intended to afford the student and practitioner of medicine a definite idea of the action to be expected from the same drug when administered in the same dose to a human patient, the latter presumably an individual with deranged secretions and in a pathological state."

The first statement is substantially correct; only healthy animals are employed in making physiological tests. The second statement is entirely erroneous. The action of a drug upon a healthy animal and the action of the same drug upon a human being, in health or disease, may be similar, or they may be dissimilar to the extent of marked contrast. It is not to be presumed that the effect of a definite dose of any drug upon the frog or the cock will yield the same or similar results, in the same or any other dose, in human beings, sick or well. The results may be and often are similar, but such is not the case invariably.

Proceeding along the same line of argument, the writer says: "From the effect obtained by the administration of one fourth of a grain of morphine sulphate, for instance, to a healthy dog (or even to a healthy man) we are left to gauge the probable effect that will be obtained when the same dose of one fourth of a grain is administered to a person suffering let us say, from renal colic."

It so happens that opium is one of the drugs which can be standardized by chemical assay. Its alkaloid, morphine, when pure, may be expected always to yield a definite result. I say always, making due allowance, of course, for personal idiosyncrasies, because I do not know of any medicinal agent that yields more uniform physiological or therapeutic results. What these results are, and how exact they are, the physician is presumed to know. With whatever effect the drug has upon the dog, in this case, the physician has nothing to do. That need not concern him, because we are not obliged to standardize morphine physiologically. Pure morphine is always morphine; half a grain of one brand of pure morphine will have precisely the same effect as half a grain of an other make, equally pure. The question which confronts the clinician at the bedside in a case of renal colic is not "Will one half grain of A.'s morphine relieve this pain, or shall I use B.'s?" The question is "How much *morphine* shall I give?" and the answer must be evolved from the physician's practical knowledge of the disease and its indicated remedy.

To quote again, the author of the paper under discussion remarks: "A thirty-drop dose of fluid extract of ergot must act identically in the case of post-partum hæmorrhage as it does on the bright red comb of a healthy young brown leghorn hen." Truly, it would appear that the doctor has set up a man of straw for the fun of knocking him down. *Good* ergot will cause contractions of the uterine muscle and blacken the comb of the leghorn fowl. *Poor* ergot will do neither. Each effect is a metric indication of the quality of the ergot. It is not necessary that the effect should be the same in both cases. The physician has the assurance, however, that a specimen of ergot that will blacken the cock's comb *will also cause uterine contractions.* Conversely, a specimen that fails to produce the former effect may be safely assumed to be therapeutically valueless. Is it not wise, therefore, to test our ergot upon cocks before we submit it to the arduous test of administration in a case of post-partum hæmorrhage, when a valuable human life may be at stake? Although this drug produces dry gangrene of the cock's comb, is it true that it "must act identically in the case of post-partum hæmorrhage"? (*Sic.*)

The situation may be stated thus:

First.—It is manifestly better and more scientific practice to administer to our patients standardized preparations only; *i. e.*, preparations whose strength has been fixed by some reliable method. Otherwise their strength must be determined by the physician. How? Upon

the body of his sick patient—a veritable physiological test—but under circumstances often of grave danger.

Second.—Many preparations can be standardized by chemical assay; that is, by estimating the amount of active principle which they contain and, by suitable corrections, making them conform to fixed standards of strength.

Third.—A number of the more important drugs, such as ergot, cannabis indica, digitalis, strophanthus, aconite, and others cannot be chemically standardized. There is no room for disputation upon this point. It is impossible to make a reliable chemical estimate of their medicinal value. How, then, shall their activity be tested? Manifestly upon animals.

I shall not consume time and space in discussing the first and second propositions. The third interests us most. A question now arises: Do these drugs, not amenable to chemical assay, produce the same effects on animals as on human beings? Some do, others do not. For the purpose of a physiological test, it makes no difference what their effects may be upon animals, so long as those effects are charcteristic, constant, and capable of definite estimation. Under those conditions *they serve as tests of the physiological activity of the drugs.* From the results thus obtained it is perfectly proper and scientifically correct to assume that any drug which manifests a predetermined, characteristic, physiological effect upon a selected animal or group of animals may be placed in the hands of the physician with the assurance that it can be depended upon to yield its reputed therapeutic effects.

Finally, I must enter a protest against the statement that "the conclusions are invariably reached along false lines." They are reached on accurate scientific lines, and in the only available manner known to us. It is useless to discredit physiological standardization in the hope that eventually we may study drugs by "a consideration of their influence as exerted in diseased states." Imagine the manufacturer being compelled to determine the value of each lot of ergot which he produces in actual cases of post-partum hæmorrhage! Our knowledge of ergot in general might be and has been enriched by clinical study, but it should be borne in mind that whatever method of standardization we adopt must be practicable. Every single pint of fluid extract which the maker puts out must be subjected to some practical test of its activity.

Physiological standardization is one of the landmarks of modern medical progress, and without its beneficial aid the practitioner would be groping in the dark, so far as certain important drugs are concerned, as did his predecessor of a century ago.

CUVIER R. MARSHALL, M. D.

Miscellany.

The Right to Expectorate.—A correspondent of the *Medical Press and Circular* for June 5th says that, on reading a leaderette on the above subject in the *Medical Press and Circular* of May 29th, he is tempted to ask why spittoons are not provided for the convenience of the public, more especially in the States, where promiscuous expectoration is punishable by law. The Sal(i)vation Army, he says, should naturally take the lead in this movement, which, of course, would not apply to such a district as Spitalfields. He is inclined to think that the only portion of the public having the right to promiscuous expectoration are town councillors, who only expect a rate once a year. [To which we may add that the writer must expect irate remonstrances for his bad habits of speech.]

The Nerve and Vascular Associations of the Kidneys.—Edmund Owen (*Lancet*, June 8th), in an address recently delivered before the Cardiff Medical Society, said that in a large proportion of cases of renal disease the most prominent symptom was the subjective one of *pain.* At any rate, it was usually this which brought the patient to the surgeon, and made the latter set to work to discover objective signs which might lead him to a correct conclusion as regarded its cause. In speaking of the anatomical associations of the kidney, therefore, particular attention must be paid to the nerves, which not only associated the kidney with the neighboring parts, but also kept the kidneys in harmonious working with each other. The nerves were derived from the sympathetic plexus in front of the upper part of the abdominal aorta, and into this plexus ran branches of the splanchnics, the pneumogastrics, and also, indirectly, of the spinal nerves. These various filaments joined in an entanglement from which the instruments of the most skilled dissector were unable to sort or to unravel them, and each abdominal viscus took filaments from this interlacement according to its needs. Remembering that the testis was developed in close association with the kidney, it was not surprising that the nerves of the renal plexus were intimately connected with those of the spermatic plexus. And to this association of nerves was due the explanation of the pain in the testicle to which renal calculus often gave rise.

With an innervation scheme, in which medullated and sympathetic filaments were thrown with ganglia into a central pool from which each viscus helped itself, as it were, it could hardly be matter of surprise if the result did not always work out quite satisfactorily in a clinical sense, and when disturbance arose in the affairs of any individual viscus, confusion was apt to occur, and errors of diagnosis and treatment were apt to ensue in consequence. Supposing that a calculus was forming in one kidney, a somewhat urgent and disquieting message was transmitted to the solar plexus. This was an unwonted occurrence, and the plexus was unprepared for its reception and incompetent to deal with it. All was muddle and confusion, and when an explanation was demanded as to why and where the disturbance arose, and as to the precise cause of it, answer came that it was on this side or on that side—it might be right and it might be wrong. In the clinical case related the answer was as incorrect as it could be:

"A healthy-looking man, thirty-six years of age, was admitted to St. Mary's Hospital on October 7, 1897. The notes say that he first felt dull pains in his back ten years previously, and that about five years later he had a bad attack of renal colic on the left side; that he had several like attacks each year (which were always associated with vomiting), and that he had passed blood and many small calculi on various occasions. For the purpose of this paper, I wrote the other day to the patient for his own account, and this is what he said: 'These later attacks were very severe and always confined to the right side, and relief was only procurable by apply-

ing linseed poultices and turpentine to the back and then to the front, the marks of which were on me when I was examined.' Yes, this was so; at the time of his admission the skin of the front and back of the right renal region was deeply stained by the marks of fomentations, and the patient was quite satisfied in his own mind that the small calculi, which he had passed from time to time, had come from the *right* kidney. Objective signs gave no help in the matter of localization. On October 13th the bladder was sounded, with a negative result, and a few days afterward I explored the right kidney from behind, finding it larger than normal, but otherwise healthy. The patient, a highly intelligent man, was, like myself, a good deal disappointed at this blank operation; but he promised to come into hospital again in a few weeks, so that I might explore the other kidney. . . . He came back toward the end of the following month, saying that since the operation he had been 'perfectly comfortable,' but that on one occasion he had passed some blood. On November 29th I cut down upon the posterior surface of the *left* kidney, extracting a branching, coral-like calculus and several small calculi, and also evacuating a renal abscess of considerable size. The stone was phosphatic, and it weighed over 400 grains. Seeing how extensively this kidney was diseased, I hesitated whether I should take it away or not, but eventually decided to give it a chance. So I deluged its interior with hot sterilized water, and in this way washed out some more small stones. A drainage-tube was introduced into the kidney and the surface wound was closed. While in the hospital the man occasionally passed small calculi *per urethram;* his urine contained some pus and at times a little blood. There was, moreover, constant leakage from a sinus which persisted in the loin. He left the hospital in January fairly well, except for the annoying sinus. This sinus continued to leak, so he came into the hospital again in February, 1898, in order that I might relieve him of that annoyance by removing the kidney. But when I examined him under an anæsthetic, and had explored the kidney with my finger, I had not the heart to perform the nephrectomy, as I found that a considerable amount of firm and apparently healthy tissue still remained. So I chased out a few more small stones, and determined to give the damaged organ yet another chance. The man stayed only a few days in hospital, and shortly afterward resumed work at the bank, where he continued at business for a little over a year, the sinus oozing all the time into pads of absorbent dressings. To use his own words, 'After the Easter holidays, 1898, I continued daily to travel up and down to the city, without a single exception, changing the bandage at midday, and on going to bed my wife used to thoroughly wash and irrigate the wound and to pass a probe down. I never became offensive, and I had fairly good health until April, 1899. Then I came to see you, when you immediately operated, and removed the kidney, April 17, 1899, after which the wound healed completely.' He is now perfectly well, his large right kidney being quite up to the work thrown upon it —even after a twenty-five-mile bicycle ride."

An interesting feature of this case, Mr. Owen continued, was that, though the man was working in a city office through the hot months, his fellow clerks never noticed any unpleasant odor; if an intelligent man with a renal fistula took care of himself, his wound need not become septic or his leaking urine offensive.

Mr. Owen was well aware that it was not a very unusual occurrence for a surgeon to operate upon the wrong kidney in his search for a stone, but he did not think that a more conspicuous instance than this, of the untrustworthiness of the subjective symptom of *pain* in renal calculus, was likely to be forthcoming. Subjective signs were proverbially untrustworthy through the whole range of surgery; but in the case of the kidneys, which had drawn their nerves blindfold from the epigastric pool, it was small wonder if, in the absence of objective signs, patient and surgeon were sometimes led by them to make serious mistakes.

In one matter in particular the vascular associations of the kidney were important from a surgical as well as from a medical point of view. Take, for instance, the case of a man with old-standing stricture of the urethra, that was to say, a surgical case of damaged kidneys, or a man with early Bright's disease—a sufficiently vague term. The kidneys were just able to do the amount of excretory work demanded of them, but they had absolutely no reserve of physiological energy. If the man indulged in a drinking bout, or, out of work, he got wet through, and was suddenly attacked with sub-acute nephritis, and, perhaps, with complete suppression of urine, what was to be done for him? The intestinal canal and the skin were always ready to assist the kidneys if properly called upon, and, therefore, a full dose of calomel and jalap and a hot-air bath might suffice to help the comatose patient over this very serious crisis. But there was something yet that might be done toward relieving the vascular engorgement of the kidneys and putting them in working order once more. The practitioners of bygone days would have resorted to venesection, and Mr. Owen was not sure that he would not do so himself, for he was a keen advocate for this "old-fashioned remedy out of date," as the late Dr. Hare called it. But the method to which he desired to refer was the application of a score of leeches or the efficient employment of wet or dry cupping over the loins.

In his valuable work upon *The Arteries*, published in 1828, Robert Harrison specially called attention to the fact that the lumbar branches of the aorta helped in the supply of the kidneys—that was to say, that a free communication took place between the vessels of the abdominal wall and those of the abdominal viscera. Sir William Turner, also, in the *British and Foreign Medico-chirurgical Review* of 1843, gave an account of the parietal and visceral anastomoses from diaphragm to perinæum. He found that the renal artery from the abdominal aorta, having given the kidney all that it needed, sent branches through the fibrous capsule to join in an extensive anastomosis, which Turner named the sub-peritoneal arterial plexus. The chief vessels in this anastomosis of parietal with visceral arteries were the phrenic and the lower intercostal arteries and the upper lumbar branches of the aorta. Together with this arterial anastomosis there was a free communication between the venous plexus of the parietes and that of the kidney. And thus it came about that the application of leeches or cupping glasses to the loins had an equally direct and important influence in the relief of renal engorgement. A knowledge of this piece of anatomy explained, moreover, how it was that a turpentine fomentation or a mustard plaster, by causing a dilatation of the surface capillaries and getting them filled from the renal vessels, thereby relieved the congestion of the kidneys, and produced a valuable diuretic effect.

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